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Special Issue on Trauma-Informed School Psychology Practices

Guest Editors: Julia Englund Strait, Kirby Wycoff, and Aaron Gubi

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Research and Practice in the Schools is a publication of the Texas Association of School Psychologists (TASP). It is an online, peer-reviewed journal that provides TASP members with access to current research that impacts the practice of school psychology. The primary purpose of *Research and Practice in the Schools* is to meet the needs of TASP members for information on research-based practices in the field of school psychology. To meet this need, the journal welcomes timely and original empirical research, theoretical or conceptual articles, test reviews, book reviews, and software reviews. Qualitative and case-study research designs will be considered as appropriate, in addition to more traditional quantitative designs. All submissions should clearly articulate implications for the practice of psychology in the schools.

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All manuscripts should be submitted in electronic form to either of the co-editors (jeremy.sullivan@utsa.edu or aeherna8@uiwtx.edu) as an email attachment. Manuscripts should be submitted in MS Word format and labeled with the manuscript's title.

It is assumed that any manuscript submitted for review is not being considered concurrently by another journal. Each submission must be accompanied by a statement that it has not been simultaneously submitted for publication elsewhere, and has not been previously published.

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Submissions should be typed, double-spaced with margins of one inch. All articles should meet the requirements of the *APA Publication Manual, 7th ed.*, in terms of style, references, and citations. Pages should be numbered consecutively throughout the document. Illustrations should be provided as clean digital files in .pdf format with a resolution of 300 dpi or higher. Tables and figures may be embedded in the text. A short descriptive title should appear above each table with a clear legend and any footnotes below.

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After receiving the original manuscript, it will be reviewed by the Editors and anonymously by two or more reviewers from the Editorial Board or individuals appointed on an *ad hoc* basis. Reviewers will judge manuscripts according to a specified set of criteria, based on the type of submission. Upon completion of the initial review process, feedback will be offered to the original (primary) author with either (a) a preliminary target date for publication; (b) a request for minor editing or revisions and resubmission; (c) significant revisions with an invitation for resubmission once these changes are made; or, (d) a decision that the submission does not meet the requirements of *Research and Practice in the Schools*.

Call for Special Issue Proposals

We invite proposals for special issues of the journal, with the goal of publishing one special issue each year in addition to the general issue. Special issues will include collections of papers related to some cohesive theme in the field of School Psychology, and will be edited by Guest Editors who will take the lead in soliciting contributions and coordinating the peer review process. In addition to special issues that focus on research and scholarship in School Psychology, we welcome special issues that cover important practical and applied issues in the field.

Special issue proposals should include a brief description of the theme to be covered by the issue, approximate number of articles to be included, qualifications and expertise of those who will serve as Guest Editors of the issue, and a plan for soliciting manuscripts and conducting the reviews. Proposals for special issues, and questions about the process, should be sent to jeremy.sullivan@utsa.edu.

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The Graduate Student Section is devoted to publishing the work of graduate students, including research studies, comprehensive literature reviews on relevant topics, and reviews of books or psychological/educational tests published within the past two years. As with all submissions to the journal, graduate student manuscripts should highlight implications for practice in the schools. If you are a graduate student and you have questions about how you can best contribute to the journal (as an author, reviewer, or both), please email jeremy.sullivan@utsa.edu.

Please note: all manuscripts submitted to the Graduate Student Section must include either a faculty co-author or a faculty sponsor who provides the student with mentorship on the process of preparing and submitting their work for peer review. When submitting their manuscripts for review, student authors should include a cover letter verifying that their work has been vetted by a faculty co-author or sponsor.

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A Note from the Editors

As those who have been following the development of the journal know, we have been working towards expanding its contents to include student work and periodic special issues in addition to our regular issues. Thus, we were thrilled when our present guest editors (Drs. Julia Englund Strait, Kirby Wycoff, and Aaron Gubi) approached us with their idea for a special issue on trauma-informed services in the schools. It is clear from a review of the contents that the present volume represents significant work by the guest editors, authors, manuscript reviewers, and our editorial team and we are proud to present this first special issue with contributions from experts from across the United States. We received more submissions than are included and those that reached publication were vetted by a rigorous blind peer review process. The result clearly demonstrates the value and potential impact of a focused contribution to scholarship and practice.

We expect you will find many ideas in this issue that will inform your practice, change your thinking, or simply generate additional questions to explore, and we hope this is the first of many special issues to come.

Please let us know if you have feedback about this issue. We look forward to hearing from any of you who may have ideas or proposals for future special issues.

Thanks for reading!

Jeremy Sullivan and Art Hernandez
Editors, *Research and Practice in the Schools*

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Article

Introduction to the Special Issue on Trauma-Informed School Psychology Practices

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This article introduces the *Research and Practice in the Schools* special issue on trauma-informed school psychology practices. Given the high prevalence of traumatic exposure alongside the pervasive impacts of traumatic stress, particularly among those children affected by complex trauma, it is imperative that we identify and critically evaluate trauma-informed practices that will be acceptable, feasible, and effective in the school setting. This special issue provides a sampling of studies and case examples that illustrate training, practice, and school-based considerations for moving the field of trauma-informed schools forward.

Keywords: trauma, trauma-informed care, school-based mental health, complex trauma

Over the past several decades, there has been a growing consensus that experiences of maltreatment and trauma in childhood are widespread and pose a multidimensional threat to well-being. It is now widely accepted that trauma can undermine a child's ability to learn, develop healthy relationships, and effectively modulate emotions and behaviors (Santiago et al. 2018). School psychologists increasingly recognize the importance of addressing the impact of trauma in educational settings, but they do not know how to go about it. Recent survey data indicate that school psychologists both need and want to increase the knowledge and skills required for engaging in trauma-informed assessment, consultation, and intervention in schools (Gubi et al., 2018; Overstreet & Chafoleaus, 2016).

A major gap between school psychologists' current and needed knowledge and skill sets is that, while most school psychologists are familiar with the signs and symptoms related to single incident traumatic events—such as exposure to a school shooting, involvement in a weather-related natural disaster (e.g., hurricane), car accident, or unexpected staff or student death—they are less familiar with more chronic and pervasive forms of trauma.

Complex trauma refers to chronic exposure across development to adverse experiences such as interpersonal maltreatment (abuse or neglect), witnessing domestic violence, and caregiver instability (Cook et al., 2017). Complex trauma typically occurs early and often in the primary caregiving system and can lead to a cascade of mental health, educational, social, occupational, and health disruptions across development and the life span. The mental and public health literatures have grown rapidly in recent years with increasing

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accounts of the connections among adverse childhood experiences (ACEs)—a term that includes but is not synonymous with complex trauma or maltreatment—and negative adult outcomes such as decreased cognitive, mental health, and vocational functioning; increased disease susceptibility; and even earlier mortality (Felitti et al., 1998).

Complex trauma results in behavioral and psychological sequelae that are more insidious and harder to spot and treat than symptoms that arise from single-incident traumatic exposures. Single-incident traumatic stress symptoms are typically readily identifiable by family members, medical staff, and school professionals, in part because these traumatic reactions are clearly conceptualized and can therefore be captured within the *Diagnostic and Statistical Manual* (DSM-5) criteria for Posttraumatic Stress Disorder (PTSD). Victims of single incident traumas are more likely to come from backgrounds with higher family cohesion, safer environments, and with more extensive financial and social support systems (D'Andrea, Ford, Stolbach, Spinazzola, & van der Kolk, 2012). Complex trauma, on the other hand, may result from factors unknown or stigmatizing to others (e.g., sexual abuse, maltreatment) and thus can be much more unclear, uncertain, and/or difficult to identify than single-incident trauma. The symptoms and sequelae are simply not as readily identifiable or as clearly linked to an individual adverse experience.

Unfortunately, complex forms of trauma may often be overlooked or inaccurately identified, possibly due to a systematic lack of understanding or sensitivity regarding the nature and impact of trauma on subsequent development and behavior. Only recently has the empirical research demonstrated how unaddressed prior traumatic experiences can result in challenging behaviors years later; that behaviors tied to chronic traumatic stress can be mistaken for a variety of common childhood behavioral disorders; or that children who were impacted by interpersonal trauma are disproportionately represented in school discipline, juvenile detention, and criminal justice systems (Ford, 2017; Szymanski, Sapanski, & Conway, 2011).

Complex trauma is also much more prevalent than is PTSD from single-incident trauma exposures. Specifically, the Children's Bureau of the United States Department of Health and Human Services reports that 3.4 million children were the subject of at least one report alleging child maltreatment or abuse in 2015, with approximately 683,000 of these children later substantiated as having experienced abuse or neglect (United States Department of Health and Human Services, 2017). At the state level, Figure 1 shows the number of CPS allegations—both substantiated and unsubstantiated—per 100 children ages 0-17 in each Texas county for the 2015 reporting period.

Considering that not all incidents of child maltreatment are reported, that official records underestimate the prevalence of child maltreatment (Swahn et al., 2006), and that CPS abuse and neglect reports do not capture some aspects of complex trauma (e.g., ongoing domestic violence or caregiver instability), childhood exposure to trauma is likely even more common than these figures suggest. Given the prevalence of complex trauma in the general child and adolescent population, along with the fact that youth with disabilities are more than three times more likely to experience maltreatment than their typically developing peers (Sullivan & Knutson, 2000), most if not all school psychologists will work with children impacted by some form of trauma at some point in their careers.

Despite the increasing attention paid to ACEs and complex trauma in the research literature and public health spheres, little infrastructure exists within school systems to support children who have experienced complex trauma. Many school professionals are not aware of the prevalence or pervasiveness of trauma exposure, or of how both single-incident and complex trauma can impact development, learning, and behavior in myriad ways (Blodgett & Lanigan, 2018). School psychologists, due to their knowledge base and skill set, are uniquely positioned in schools to support families, collaborate with community providers, and provide direct support to young people who have been impacted by traumatic stress—particularly that arising from complex trauma (McIntyre, Baker, & Overstreet, 2019). The first step to working effectively within the school system to improve trauma-informed care is to understand what *trauma-informed care* is and what it involves.

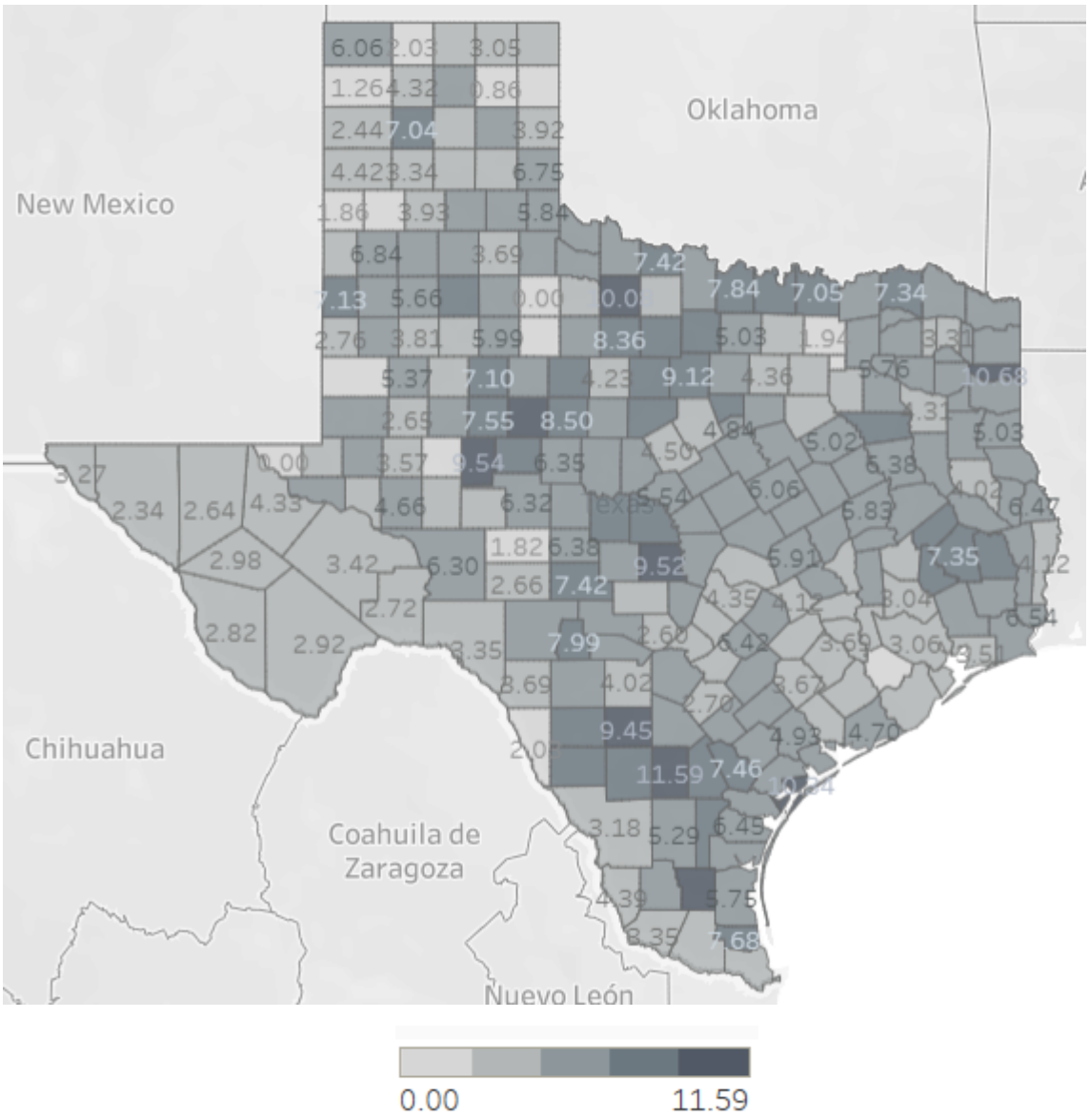

Figure 1. This map illustrates the number of Child Protective Services (CPS) allegations per 100 children in each Texas county (ages 0-17 years) for 2015. An interactive visualization is available at https://public.tableau.com/profile/julia.e.strait#!/vizhome/CPSallegationsper100childreninTexascounties/Sheet1

Note. This visualization was created in Tableau Public using publicly available data from https://www.dfps.state.tx.us/About_DFPS/Data_Book/.

In brief, Trauma-informed care (TIC) refers to an approach to addressing the impacts of traumatic stress by systematically integrating trauma-informed knowledge and practices throughout entire systems—in this case, throughout entire schools and school systems (Cole, Eisner, Gregory, & Ristuccia, 2013; Overstreet & Chafouleas, 2016). This approach is deliberately more systematic and comprehensive than prior efforts to support children impacted by maltreatment and complex trauma, in which individual mental health providers contract with or receive referrals from schools to identify and treat students (usually individually or in small groups) only if they appear to meet criteria for DSM-5 disorders, such as PTSD (e.g., Motta, 1995). Because of their systems focus, TIC approaches are likely better suited for addressing the insidious and

often hidden impacts of complex trauma than are more post-hoc approaches designed for treating the rare but clearly symptomatic individual student with PTSD.

Historically, much of our knowledge on trauma-informed practices originated within the grey literature, including government reports and policy statements originating from organizations like the Substance Abuse and Mental Health Services Administration (SAMHSA). SAMHSA's original model (2014) drew on the existing literature and sought to address the need for systems and models of practice that went beyond the treatment of the "identified patient." The primary task of SAMHSA was to convene a national panel of experts, including researchers, service providers, policymakers and survivors, and conduct a comprehensive review of the various definitions of trauma and models of TIC. In their original Trauma-Informed Approach framework manual, SAMHSA noted

> Trauma researchers, practitioners and survivors have recognized that the understanding of trauma and trauma-specific interventions is not sufficient to optimize outcomes for trauma survivors nor to influence how service systems conduct their business. The context in which trauma is addressed or treatments deployed contributes to the outcomes for trauma survivors, the people receiving services, and the individuals staffing the systems. Referred to variably as "trauma-informed care" or "trauma-informed approach" this framework is regarded as essential to the context of care. (p. 9)

SAMHSA identified principles and assumptions and offered guidance on developing a trauma-informed approach across a wide range of settings. The "Four Rs" or Key Assumptions in a Trauma-Informed Approach from SAMHSA included Realize, Recognize, Respond, Resist Re-Traumatization. The first "R" references the idea that all people connected to an organization realize what trauma is and understand how it can impact individuals, families, and communities. The second is that all of those people also recognize the signs of trauma, and the third is that they can respond to the needs of those exhibiting signs of trauma. The fourth "R" refers to the concept that the organization and system will not re-traumatize the individuals it serves or the staff who provide those services (Dekel, Ein-Dor, & Zahava, 2012).

With its conceptualization of TIC, SAMHSA provided a robust base from which organizations, including schools, could consider moving towards integration of trauma-informed practices. Many blueprints and frameworks have emerged (e.g., Chafouleas, Johnson, Overstreet, & Santos, 2016; Kataoka et al., 2018; Overstreet & Chafouleas, 2016), training has been conceptualized (McIntyre, Baker, & Overstreet, 2019), and evidence-based interventions have been highlighted for use within the schools (e.g., Jaycox, Langley, & Hoover, 2018; Reinbergs & Fefer, 2018). But the gaps among research, frameworks, and action remain large. Districts and schools continue to struggle with "front line" implementation, and rigorous research is lacking. We still need coherent theoretical models and falsifiable hypotheses to be proposed and tested in the literature. We still need large-scale, system-wide approaches, models, and frameworks to be developed, implemented, and rigorously studied in the schools.

This special issue presents a sampling of manuscripts that illustrate possible pathways for moving forward. The included articles add to the emerging science, complementing recent special issues on the topic (e.g., Overstreet & Chafouleas, 2016). The current issue presents a deliberately wide range of perspectives and foci, from a review of the impact of trauma on early childhood (Sauer, Wilkinson, Fishbein, Giordano, & Gubi, this issue), to broad examinations of available resources (Cruz & Dove, this issue) and possible barriers and facilitators to providing TIC in schools (Wittich, Rupp, Overstreet, Baker, & The New Orleans Trauma-Informed Schools Learning Collaborative, this issue), to empirical evaluations of piloted trauma-informed school programs (Pfenninger Saint Gilles & Carlson, this issue; Waggoner, Hess, Maher, & Estrada, this issue), and finally, to special considerations for youth with intellectual and developmental disabilities—a frequently and disproportionately impacted but frequently overlooked population in the trauma literature (Talapatra, Parris, & Snider, this issue).

We hope that this early sketch advances the

literature in highlighting the growing importance of TIC in schools, and in inspiring more rigorous and critical evaluation of trauma-informed school systems, including their component parts and associated assumptions. It is also our hope that the challenges and early work outlined in this special issue forges further development and refinement of scientifically and ecologically valid approaches. Although the field of trauma-informed schools is in its infancy in terms of construct consensus and scientific rigor, we cannot underestimate its importance for ensuring that our most vulnerable students receive a free, appropriate public education that not only recognizes but responds—thoughtfully and skillfully—to their most urgent, and often least visible, needs.

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Article

Complex Trauma in Early Childhood: The School Psychologist's Role in Trauma-Informed Care

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Complex trauma, also known as interpersonal trauma, often occurs when the child is exposed to traumatic events that are severe, interpersonal, and pervasive in nature, such as child sexual or physical abuse. This form of abuse is especially insidious as it often occurs within the child-caregiver relationship, thus threatening the ability of the child to attach to caregivers or form healthy relationships with others, and can lead to a cascading spectrum of effects that impact subsequent emotional, behavioral, and overall mood responses. These experiences can have long term, negative effects on a child's development. Since the school is often a primary place of care outside of their homes for young children, school psychologists have a crucial role in identifying early trauma and assisting school personnel in implementing trauma-informed care practices that are both sensitive to the child's current needs and help promote resiliency and post-traumatic growth. This article examines the impact of complex trauma and the resultant behavioral signs and symptoms among preschool-aged children, which can differ from those in older children. Strategies, approaches, resources, and professional development opportunities to help the school psychologist support the development of trauma-informed schools are reviewed.

Keywords: complex trauma, preschool, early childhood, school psychologists, trauma-informed schools

Given the empirical findings that link adverse early childhood experiences with lifelong mental health disorders and mental health impairment, it is important that early childhood professionals strive to broaden trauma-informed research and practice within preschool and early childcare settings (Osofsky, Stepka, & King, 2017). In general, there appears to be a heavier focus in research and literature on childhood trauma in school-aged and older children, as well as interventions that can be used with these older age groups, rather than preschool aged children (Choi & Graham-Bermann, 2018). Unfortunately, this lack of examination into complex trauma among younger children contributes to a dearth of available evidence-based treatments and resources for this vulnerable population. Those who are extensively trained in the area of developmental psychology recognize that early childhood exposure to trauma is particularly damaging because not only can it impact a child's attachment relationships and behavior, but it can even impact a child's overall personality development, which may have a life-long impact on the individual (Lieberman, Gosh Ippen, & Van Horn 2015). Knowledge of basic symptoms, effective measures to assess for trauma symptoms, and prevalence rates of trauma in preschool aged children is also less understood than in older children, which further widens the gap and belies the need for greater knowledge of trauma-informed care practices within early childhood settings (Choi & Graham-Bermann, 2018).

Even though the symptoms of complex trauma in young children may be less understood, preschools and early childhood settings regularly encounter and serve children who demonstrate severe behavioral problems which may actually be related to trauma. Trauma-informed specialists

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increasingly understand that many of these behavioral problems are related to unaddressed behavioral health needs, oftentimes to early traumatic experiences that have not been verbalized by the youth or addressed with these young children. Unfortunately, school personnel in these early childhood settings are often under-qualified or unprepared to address these needs and often misinterpret these issues as problems of delinquency rather than trauma, which may be contributing to expulsion rates in these settings that eclipse levels of expulsion by youth within the primary or secondary school settings (Gilliam, 2005). While school psychologists may have the skills to address the traumatic experiences of their clients, they are not always given the specialized training and professional development needed to work effectively, recognize, and treat trauma within this specific population (Gubi et al., 2019). Additional training can make school psychologists effective and valuable resources for children coping with trauma, and these professionals can work to differentiate children who have experienced complex trauma from those with other behavioral conditions that may require and benefit from different interventions.

While the impact of trauma is becoming more fully understood within the profession of school psychology (Diamanduros, Tysinger, & Tysinger, 2018), the high expulsion rates and lack of empirical understanding related to how to address such challenges within early childhood settings remains an issue. Preschoolers in general are getting expelled approximately three times more than those in grades K-12 (Statman-Weil, 2015). Of these children, disproportionate numbers of minority children are being expelled than their white peers. Based on research conducted by Skiba, Michael, Nardo, and Peterson (2002), while it is still unclear what the cause of this disproportion is, it is likely to be an indication of systematic bias in the implementation of school discipline. According to the U.S. Department of Education Office for Civil Rights, black students are suspended and expelled at a rate three times higher than white students of the same age group (U.S. Department of Education, 2014). Due to the externalized behavioral and emotional symptoms present in traumatized children, they are two-and-a-half times more likely to fail a grade and have higher expulsion rates than their peers who have not experienced a trauma (Statman-Weil, 2015). It is therefore critical for educators of these young children to not only be aware of these statistics, but also be aware of how best to address and manage these students who have been impacted by trauma. This lack of knowledge of best practice belies the need for greater involvement by school psychologists in these educational settings to understand and promote trauma-sensitive care practices (National Association of School Psychologists, 2015).

Single incident traumatic events are easier to discern and are often more well known by school professionals and laypersons. These involve such traumatic experiences as school shootings, natural disasters, and a weather-related event such as a hurricane that results in loss of lives. These forms of trauma are readily discernible to school officials and are better captured in the posttraumatic stress disorder (PTSD) diagnosis in the *Diagnostic and Statistical Manual-Fifth Edition (DSM-5)*. Trauma-informed schools recognize single incident traumatic experiences as a form of traumatic stress that needs to be recognized and addressed by school officials. Unfortunately, there are other forms of traumatic stress that are less discernible, and are therefore frequently unacknowledged, and thus unaddressed within early childhood settings. For instance, complex trauma, also known as interpersonal trauma, is often described as a stress reaction to prolonged and ongoing trauma of an interpersonal nature. Such experiences often occur during early childhood, though they can occur later as well, and are best summarized as an extended and ongoing series of abusive treatment experiences (e.g., sexual abuse, physical abuse) at the hands of parents, caretakers or others whom are expected to be a source of safety and protection (Briere & Lanktree, 2012). While prevalence rates are difficult to definitively establish for complex trauma, findings have shown that one in ten children throughout the United States have experienced three or more adverse childhood experiences (Sacks & Murphey, 2018). Around 26% of US children endure traumatic experiences before the age of four with almost 80% of those traumas occurring in the child's own home with their parents as perpetrators

(Statman-Weil, 2015). Although further understanding is needed with regard to the complex trauma presentation among young children, preschools do nonetheless hold great potential as systems of support to uplift young children who have experienced such early abuse. While there is little research to clearly guide the establishment of trauma-informed care in early childhood settings at the present time, knowledge regarding trauma-informed care can be examined alongside best practices in working with young children, to promote the optimal development of all youth.

Adding to the complexity, the warning signs are not always as clear or noticeable in preschoolers, since young children often do not have the cognitive skills or capabilities to realize what has happened to them or the language skills to verbalize and notify others of what is happening (Koplow & Ferber, 2007). This can make early and accurate identification of complex trauma especially difficult to discern within early childhood settings. Preschoolers with histories of complex trauma are also at risk of experiencing lifelong difficulties that can impede subsequent development, making the youth more likely to experience emotional and behavioral difficulties, problems forming healthy relationships, family difficulties, educational dropout, and even place such youth at-risk for greater health problems and lower life expectancy (Felitti et al., 1998). However, the research overall suggests that implementing trauma-informed interventions can mitigate the adverse effects for children who have experienced complex trauma (Fitzgerald & Cohen, 2012). Therefore, the recognition of specific symptoms that preschoolers may endorse if experiencing complex trauma is a crucial component to establishing trauma-informed preschool and early childhood care settings.

School psychologists potentially hold a key role in establishing such trauma-informed systems of care within preschools, due to their knowledge of child mental health and typical versus abnormal development. Furthermore, their training prepares them for work roles as both therapists and consultants within school settings (Castillo, Curtis & Gelley, 2012; Newell, 2016). That being said, in order to effectively work with this specific population, some additional training should be considered in order for the school psychologist to feel fully competent and effective. Fortunately, there are evidence-based trainings that are effective, easily accessible, and not overly time consuming. This paper gives several evidence-based recommendations for school psychologists in providing trauma-informed care in school settings for preschoolers who have experienced complex trauma. This paper provides a scoping overview of the presentation and impact of complex trauma in young children, so that school personnel can become more aware of the signs and behaviors of a young child who has experienced complex trauma. The paper also examines the potential roles of school psychologists in working with children, teachers, and other school personnel in promoting trauma-informed practices within early childhood and preschool settings. Finally, this paper provides resources for these individuals to learn more about trauma-informed care and enhance their professional development.

Presentation and Impact of Complex Trauma in Preschool Children: Case Vignettes

The following descriptions highlight the ways in which complex trauma may present in the preschool population:

Whenever another child tries to give three-year old Charlie a hug or high five, he bites them.

Four-year old Margie is constantly daydreaming and cannot seem to focus during circle time.

When a teacher asks five-year-old Daniel to answer a question, he says he cannot remember the answer and then starts to have a tantrum.

Four-year-old Eliza goes to the nurse's office almost every day complaining of stomachaches and headaches.

While school professionals may interpret these as behavior problems, ineffective parenting, learning disabilities, or mental health disorders like attention-deficit hyperactivity disorder (ADHD), in reality, the symptoms could also be attributed to the experience of trauma. Children with histories of complex trauma experience a constellation of differing symptoms, which makes it challenging to recognize complex trauma among young children. A child's defiant behavior, or a sudden change in

behavior, may indicate that they have experienced or are currently experiencing complex trauma, potentially in the form of child abuse or neglect (Krasnoff, 2017). Signs and symptoms can also include sudden behavioral changes, disturbances in attention and concentration, difficulty expressing emotions, decreased self-worth, and negative affect (D'Andrea, Ford, Stolbach, Spinazzola, & van der Kolk, 2012). Young children may also develop new fears, regress in their development, or suddenly become highly irritable and whiny (Santiago, Raviv, & Jaycox, 2018). Although these are all signs of complex trauma, it is important to note that such developmental changes, even with a sudden onset, are not always related to a complex trauma. Sudden changes in some of these areas, for example, can be related to an adjustment disorder or alterations within the home or school environment. In addition, not all preschoolers who have experienced trauma will exhibit these signs or symptoms, and some may demonstrate these and other related mood symptoms differentially (Szymanski, Sapanski, & Conway, 2011).

Impact of Complex Trauma on Early Childhood Development

The 2016 Child Maltreatment report, released by the United States Department of Health and Human Services, indicates that over 90% of child abuse cases were perpetrated by at least one parent (U.S. Department of Health, 2018). The child-parent relationship revolves around the ongoing developmental process of attachment. Attachment is the quality of the bond formed between the young child and the primary caregiver(s), and it is a pivotal developmental task that supports subsequent capabilities of the child to modulate moods and behaviors, attenuate, and form healthy relationships with others among the primary life skills (Schore, 2017). Therefore, attachment is a core feature that can be impacted by child maltreatment and trauma (Cook et al., 2005; D'Andrea et al., 2012). Given that attachment is foundational in learning to trust others and interact within the world, a disruption in the child-parent or caregiver relationship can have a detrimental impact on ongoing developmental processes across the spectrum of child functioning (Stubenbort, Cohen, & Trybalski, 2010).

The damaging impact of experiencing complex trauma at a young age can hold lifelong repercussions. For instance, as children reach school age, a number of academic related delays and difficulties may arise as a result of the experienced trauma. Students will often experience delayed development of language and communication skills which may cause difficulties in processing verbal, nonverbal, and/or written instruction, which poses challenges to subsequent learning (Statman-Weil, 2015; Hertel & Johnson, 2013). Trauma similarly impacts executive functioning, making it more difficult for children to anticipate consequences, evaluate outcomes and generate alternatives, and can result in difficulties for the child in effectively regulating moods or behaviors within school and other social realms (Davis, Moss, Nogin, & Webb, 2015). These students may also struggle in school with memory, impaired thinking, trouble focusing, and lapses in decision making due to difficulties with executive functioning, interference from trauma reminders, or other related challenges (Hertel & Johnson, 2013). Such children with a history of complex trauma may also have difficulty reporting to others what is bothering them, and may often complain of physical symptoms, such as headache, stomachache, or other pains without a medical explanation (Santiago et al., 2018). Other mental health symptoms, including depressed mood and a constant fight or flight stress response, can emanate from child maltreatment or complex traumas and can also be extensive and impactful across the range of functioning.

Child maltreatment can also affect children socially, impairing their ability to form healthy and nurturing relationships (Lubit, Rovine, Defrancisci, & Spencer, 2003). Children who have experienced trauma may exhibit aggressive or sexualized behavior, partake in repetitive post-traumatic play, and constantly talk about their traumatic experiences. As a result, preschoolers who have experienced trauma may have poor peer relationships where they are either controlling or overly permissive, or exhibit responses to the trauma that come across to others as behavioral problems in schools (Lubit et al., 2003).

To those who are not familiar with the expression of early childhood trauma, the behaviors exhibited by those affected young children can be

difficult to discern or differentiate from other common childhood behavioral and neurodevelopmental disorders (van der Kolk, 2005). Careful attention must also be paid to differentiate if the child's symptoms are due to trauma, to a diagnosable disorder or disability, or to another cause. School personnel may wrongly misconstrue behaviors as other challenges or disorders, when in reality, they are related to the child experiencing complex trauma. Mental health conditions that also commonly get misdiagnosed as a result of this can include ADHD, oppositional defiant disorder, conduct disorder, anxiety disorders, depression and mood disturbances, eating disorders, and other childhood disorders (Gubi et. al., 2019). These inaccurate classifications or diagnostic labels can result in additional challenges or barriers to getting these children the appropriate help and services that they need (Metzler, Merrick, Klevens, Ports, & Ford, 2017). To best differentiate whether these symptoms are trauma-related or are the result of another mental health condition, administering assessments such as the Child PTSD Symptom Scale, the Short Moods and Feelings Questionnaire, and the Pediatric Symptom Scale may provide useful information for the school psychologist, as well as the results obtained from self-report measures completed by the child and rating scales completed by parents/caregivers and teachers (Hanson, Moreland, & Orengp-Aguayo, 2018). In-depth interviews of the child, caregivers, and possibly teachers are also crucial requirements of the assessment process in order to receive more information on the child's experiences and distress. Thus, the school psychologist can hold a particularly meaningful role as a leading facilitator of trauma-informed preschools and classrooms, due to their ability to implement the use of assessment and interviewing procedures in helping to differentiate symptoms emanating from complex trauma from symptoms associated with other childhood disorders or problems.

Trauma-Informed Schools and Classrooms

Trauma-informed schools require that teachers, administrators, nurses, and other student providers understand the impact of violence, victimization, and traumatic experiences on individuals, as well as recognize and implement systems and services designed to accommodate various needs and promote recovery for those affected by trauma (Carello & Butler, 2015). According to the Substance Abuse and Mental Health Services Administration (SAMHSA), trauma-informed care occurs when every part of a program, including management and service providers, is trained to be knowledgeable in recognizing trauma, supportive to those impacted by trauma, and can intervene and guide these individuals in their effort to seek help or services (SAMHSA, 2015). It is crucial for these settings to incorporate what research has found to be the foundational principles in promoting trauma-informed care: ensure safety, establish trustworthiness, maximize choice, maximize collaboration, and prioritize empowerment (Fallot & Harris, 2009).

For young children, schools are commonly found to be a primary provider of mental health services (Cavanaugh, 2016). It is therefore critical for school professionals to not only recognize and acknowledge the prevalence of trauma, but also put in place mechanisms to identify, screen for, and support those who have experienced trauma (Gubi et al., 2019). This can be done through establishing multi-tiered systems of support that address trauma through a public health model. In schools, this frequently occurs through the Response to Intervention (RTI) or Multitiered Systems of Support (MTSS) framework, and involves primary, secondary, and tertiary identification, intervention planning, and systematic treatment (Hazel, 2016). To accomplish this, a trauma-informed school will provide ongoing, trauma-informed workforce development, strategies to enhance relationships between parents and schools, interventions to support the student-teacher relationship for trauma-exposed youth, and access to referrals for targeted mental health services (NASP, 2015).

A commitment to trauma-informed preschools must begin at the top, as buy-in and support from administrators and school leadership is critical to successful implementation throughout the school (Loomis, 2018). Leadership and administration should strive to create and maintain an environment in which students feel safe and secure. To do so, members of the administration

should receive training in trauma, work with school mental health staff to set up supportive systems that identify, provide counseling and support services as needed, develop and implement security procedures, and participate in ongoing staff education geared towards the recognition and identification of symptoms of trauma (Wiest-Stevenson & Lee, 2016). While these school-wide efforts are needed, individualized efforts with classroom teachers and others who come into frequent and daily contact with children are also critical.

Similar to learning, teachers are a critical interlocutor within the trauma-informed preschool. The school psychologist can hold a paramount role in facilitating trauma-sensitive classrooms by consulting with teachers and related instructional staff to promote trauma-informed practices within the classroom. Through consultation and ongoing professional development, the emphasis must be on prioritizing the trauma-informed classroom as a safe and supportive space. To accomplish this, the National Child Traumatic Stress Network's (NCTSN) Child Trauma Toolkit for Educators suggests that teachers promote a sense of normalcy for these children by maintaining a routine in the classroom. This may include setting aside time during the school day to talk to the child about the events, and allow them a safe place to share their thoughts, feelings, and experiences. Providing short, simple responses to questions the child may ask, as well as setting clear and direct boundaries and consequences for the child will also prove beneficial for both the teacher and child within the classroom. Similarly, should the child need additional care and assistance within the classroom or school, it could be useful to assign them a classroom aid or create a 504 plan (NCTSN, 2008). Other resources, such as *The Trauma-Informed Curriculum for Social-Emotional Learning: Preschool Through Early Elementary*, written by Kara Rogers and Heather T. Forbes, have been created to provide structure and curricula for educators working with children impacted by trauma in order to foster, develop, and promote social and emotional skills in these young students. A reference and purchase link for this book has been provided below in the section for professional development for school psychologists, teachers, administrators, and caregivers.

The trauma-informed classroom educates all about trauma by providing classroom wide (Tier I) services to teach children about complex trauma within a developmentally appropriate framework, and by providing basic coping skills and strategies to help all youth thrive. The school psychologist can work with the classroom teacher to ensure that children learn about safety and how to seek help (NASP, 2015). Children may also benefit from learning more about what abuse is, why it is unacceptable, why it should be reported to trusted adults, and who children can speak to if abuse is occurring and affecting them. School psychologists can support classroom teachers in teaching their students a variety of coping skills and related mechanisms in a coherent, planned, and developmentally appropriate curriculum (e.g., deep breathing, positive imagery, and self-regulation skills such as therapeutic timeouts to regroup). They can also help teachers implement effective classroom management strategies, which promote a sense of safety, normalcy, and routine within the classroom, and develop boundaries for appropriate behavior by incorporating positive behavioral models and positive behavioral supports (McKevitt & Braaksma, 2008). Lastly, school psychologists can provide psychoeducation to promote awareness of the behavioral signs and symptoms associated with complex trauma in the classroom, and to help teachers effectively refer students exhibiting such potential signs or symptoms of trauma to the school psychologist or the proper referral resource (Wiest-Stevenson, & Lee, 2016).

A major role of school psychologists, teachers, and school staff members is preventing further maltreatment or trauma affecting children. It is important to note that all school personnel are mandated reporters, holding a legal obligation to report suspected child maltreatment or abuse to the appropriate child protective service agency (Lusk, Zibulsky, & Viezel, 2015). Teachers and school staff members should be trained in how to look for and report suspected child abuse and neglect. While teachers and school administrators are often equipped with skills and tools to care for and support children who have experienced traumatic events, these professionals often do not have the training or expertise to teach, train, or support staff,

children, or others who experience ongoing complex trauma. School psychologists are therefore often called upon to provide additional supports to assist struggling students. Thus, school psychologists can work and collaborate with children and caregivers in forming safety plans and in making sure that teachers and school staff are aware of these safety plans (Dezen, Gubi, & Ping, 2010). Safety plans should address possible triggers that can lead to behavioral problems or re-traumatization within school, with re-traumatization being understood as "the reemergence of symptoms previously experienced as a result of the trauma" (Duckworth & Follette, 2012, p. 191). School psychologists can help prevent behavioral problems or re-traumatization by creating stable and structured classroom environments and working collaboratively to aid in the reentry of the impacted child into the classroom (Von der Embse, Rutherford, Mankin, & Jenkins, 2018).

The Role of School Psychologists in Facilitating Trauma-Informed Schools

School psychologists are broadly trained as behavioral health service providers within the schools. This includes training in the use of integrated and evidence-based assessment, intervention, case conceptualization, and consultation practices within school settings to address mental health needs of youth (NASP, 2015). Thus, the professional preparation, wide scope of practice in behavioral health with youth, and their roles within school settings makes school psychologists ideal school-based professionals to facilitate trauma-informed care practices within the schools (Chafouleas, Johnson, Overstreet, & Santos, 2016). While recent findings suggest that many school psychologists would benefit from additional training and professional development in the area of trauma-informed clinical care practices (Gubi et al., 2019), even these critics acknowledge that school psychologists' comprehensive training as mental health service providers make them ideal conduits to facilitate trauma-informed care practices within school settings (Gubi et al., 2019).

Trauma-informed care approaches are a relatively new area of practice within school and behavioral health settings (Maynard et al., 2019). While school psychologists are well prepared to facilitate behavioral health services systematically within the schools, many school psychologists may need additional training and professional development in this relatively new scope of practice to effectively serve as trauma-informed care specialists within early childhood and school settings. Such additional professional development and training opportunities will allow school psychologists to broaden their professional toolbox, so as to be able to effectively recognize and differentiate different types of trauma, screen, assess and conceptualize for trauma, consult, and apply evidence-based practices most effectively within school settings (Gubi et al., 2019).

Early Childhood Mental Health Consultation

As competence and knowledge in the area of trauma-informed care improves, school psychologists can begin to prepare the infrastructure for a trauma-informed preschool. School psychologists can provide training sessions to teachers and other school staff members, so that trauma-informed care can be implemented in all areas of the school. They begin by training teachers and school staff about the warning signs and symptoms in children, as well as expanding awareness regarding the high prevalence of trauma experienced by children. When teachers become more aware of how trauma can impact behavior, they will become more competent and confident in identifying children whose challenging behavior may actually be due to traumatic experiences (Ford, Spinazzola, van der Kolk, & Grasso, 2018). Literature suggests that school psychologists help teachers recognize that challenging behaviors, such as outbursts, tantrums, defiance, and aggression, can sometimes actually be a result of trauma (Cole et al., 2005). School psychologists can support teachers in responding to challenging behaviors in ways that are supportive, rather than punitive; punishing a child for being the victim of a traumatic event hardly makes sense and can result in additional negative outcomes. Such work, similar to school-wide establishment of positive behavioral supports and related social-emotional systems implemented schoolwide, will involve setting up systems of support through an RTI/MTSS public health framework to promote trauma-informed care

practices. The research suggests that such work can be beneficial for all children, whether they have a trauma history or not and whether their trauma history has been identified or not (Kataoka et al., 2018).

Conceptualizing and Treating Trauma in Preschoolers

Children who have experienced trauma frequently have co-occurring mental health problems, such as depression, anxiety, or behavior problems (Hanson et al., 2018). Thus, a thorough assessment by the school psychologist can identify related areas that can benefit from treatment. Comprehensive collateral information from the family, the teachers, and other relevant people in the child's life is critical, due to the difficulty of the young child to fully articulate himself or herself and the challenges surrounding a traumatic stressor. Family history of mental health problems, sudden behavioral changes, and developmental information discussed previously is also critical (Hanson et al., 2018).

There is an increasing infrastructure of treatment options within the mental health community to assist children and families exposed to trauma that are easily accessible, can be utilized by school psychologists, and have the potential to be implemented directly in the schools. When using any intervention, it is critical that the school psychologist remain cognizant to the developmental age and cognitive capacity of the young child. With that in mind, school psychologists are well positioned to provide robust supports, including emotional and behavioral regulation skills, coping skills, social skills, psychoeducation on help-seeking and related skills, and problem-solving skills.

Emotion Regulation. As discussed, children who have experienced complex trauma often struggle to express their emotions, so school psychologists should learn the needs of the children and help them learn how to express them to others (Lawson & Quinn, 2013). By learning how to best regulate their emotions, as opposed to having an outburst that may be mistaken as "acting out" behavior, these children will learn how to communicate their needs to others more effectively. School psychologists can work with children in teaching them about feeling identification by using feeling charts and discussing scenarios where the child will have to identify specific emotions and discuss ways to appropriately express them with the school psychologist (Scheeringa, 2016). By doing this, the child will learn how to recognize and identify specific emotions, gain insight into why they are personally experiencing these feelings, and will learn to utilize constructive methods to effectively modulate and process difficult emotions and feelings.

Behavior Regulation Skills. As discussed, preschool aged children who have experienced complex trauma may express behavior that is viewed as oppositional or aggressive by others (Lubit et al., 2003). School psychologists can work with these children and try to identify the role and function of these behaviors to determine if they are produced as a response to a past or ongoing trauma, or the result of other antecedents. After these potential triggers are identified, school psychologists can work with both teachers and caregivers to promote awareness and understanding of any specific triggers, and work to modify how cues are processed and interpreted by the child (Cole et al., 2005).

Coping Skills. Coping with complex trauma can be extremely difficult, especially for young children who lack the cognitive abilities necessary to fully understand and process the trauma they experienced. It is important for school psychologists, teachers, school staff, and caregivers to promote the use of adaptive coping skills because coping with aversive experiences can help lead the child to resilience in overcoming their past traumas (Masten, 2001). School psychologists can talk to the child about his or her traumatic experiences and have them identify the feelings that were experienced in those moments, and the feelings that arise when reflecting on these traumas by using feeling charts or scary feelings scores that allow the child to indicate how scared he or she is when thinking about past experiences (Scheeringa, 2016). The school psychologist should also support the child by working with him or her to develop a small toolbox of coping skills. These coping skills should be useful for the child and easily accessible. The school psychologist should practice these skills with the young child. Such coping skills can include

deep breathing techniques, visualization or guided imagery exercises to help the child find a happy or safe place, related mindfulness techniques for young children, the benefits of a therapeutic "time out," or other coping skills that the child enjoys and that help him or her calm down when upset, such as listening to music, dancing, drawing, or seeking help from a trusted adult (Scheeringa, 2016). Preschool children will be better able to process their past traumas and to strive towards resilience if school psychologists, teachers, school staff, and caregivers support and promote the use of adaptive coping mechanisms.

Social Skills. Social support is crucial for a child that has experienced complex trauma because it may help the child's resilience (Blodgett & Lanigan, 2018). A school psychologist can help a child improve upon social skills by attempting to improve upon emotion and behavior regulation, which may lead to an increase of positive interactions with other children. A school psychologist can also work with the child in improving areas of attachment with caregivers and social peers, and have them participate in social skills workshops to help them develop skills that will allow them to learn how to form positive relationships.

Help-Seeking Skills. Safety planning and teaching the child how to seek help when needed is crucial to keep the child safe from further trauma. The school psychologist should ensure that the child knows he or she is in a safe environment when working in therapy, so that if the child feels unsafe, he or she has someone to talk to that will protect them (Santiago et al., 2018). Creating safety plans with children and their caregivers and teaching the child about who at school is safe to talk to if he or she feels unsafe are some ways to help children protect themselves from future trauma.

Problem-Solving Skills. Psychologists and teachers can also support these children by teaching them problem solving skills. Problem solving skills serve as the cornerstone of subsequent learning for young children, and involve learning how to identify a problem, discuss possible solutions, pick the best solution, and reflect on their decision (Malouff & Schutte, 2014). Such skills can help the child avoid making impulsive or unhealthy decisions and can be especially helpful for children who are not taught effective problem-solving techniques at home. When working with preschool children, these interventions should be tailored to the abilities of the child. While learning these skills is important, it is crucial to work on building positive self-esteem and resilience within the child, because these attributes will help children feel empowered and can lead them to a more positive outcome even after living through some troubling experiences.

Specific Frameworks and Interventions for Preschoolers and Their Families

The interventions and frameworks discussed below are just a few examples of evidence-based treatment frameworks that can be implemented by school psychologists when treating preschoolers affected by complex trauma. Practices from these approaches can be put into effect in schools with the guidance of school psychologists, who would work with teachers and other staff at school as well as caregivers to implement related treatment components at home. It is also important for school psychologists to acknowledge and incorporate contextual influences such as culture, socioeconomic status, and other variables into consideration when implementing any treatment (Hays, 2016).

ARC Framework – A Relationship Based Strategy. The Attachment, Self-Regulation, and Competency (ARC) Framework is specifically tailored to meet the needs of young children who have experienced trauma (Arvidson et al., 2011). In general, when young children experience complex trauma their sense of trust in relationships can be threatened, their attachment relationships with caregivers can become damaged, and their ability to build and maintain healthy relationships throughout life can be compromised (Osofsky, Stepka, & King, 2017). The ARC Framework is an evidence-based treatment that uses, and works to rebuild and strengthen, the child's attachment system as a crucial component of treatment, and emphasizes three domains that can be impacted by trauma: attachment, self-regulation, and developmental competencies. These domains address the emotional functioning of both the child and their caregivers, as well as provide the caregivers with ways to help the child succeed at home. A school psychologist can

use elements of this framework in the school by addressing the attachment relationship between the child and caregivers, and by working with the child on emotion regulation skills and specific competencies of executive functioning and self-development and identity (Arvidson et al., 2011). One example of how this can be directly implemented is by building routines for the child both in school and at home. The preschool environment typically has rigid schedules and planned daily activities, but it may be useful for parents to implement similar routines at home such as feeding routines, clean up routines, and bedtime routines. Building routines allows the child to feel safe in that their daily schedule is predictable and it prevents the child from engaging in problematic behaviors in order to try to best control their environment (Arvidson et al., 2011). Caregiver involvement in these routines should aim to foster security, predictability/consistency, and warmth in order for the child to feel protected by the caregiver and safe in a nurturing and loving environment. More information on this framework can be found here: https://arcframework.org/what-is-arc/

Child-Parent Psychotherapy (CPP). This treatment is another attachment-based method that works on improving the caregiver-child relationship (Reyes & Lieberman, 2012). CPP involves targeting and reducing stress responses, improving on social and relationship difficulties, and learning problems of the child (Weiner, Schneider, Lyons, 2009). This treatment also addresses trauma-specific presentations such as problematic externalizing behaviors, as well as troubling internalizing difficulties such as separation anxiety, emotional withdrawal, and fears within the child (Lieberman et al., 2015). A school psychologist can use components of this framework to promote more effective responses to distress, improve the child's abilities to sustain attention, utilize their social skills more effectively in the classroom, modulate their anger, and work on other skills or capabilities that relate to attachment that may be impairing the child's ability to perform in school or related settings. For a basic factsheet and further details on this evidence-based approach, please visit https://www.nctsn.org/interventions/child-parent-psychotherapy

Parent-Child Interaction Therapy (PCIT). PCIT works directly with the interpersonal relationship between the child and caregiver in improving upon the attachment between these individuals. This treatment works on children's problematic externalizing behaviors by using behavioral management techniques, and works with parents in teaching them how to handle their children's behavior by promoting the use of positive reinforcement and reducing negative parental responses (Thomas & Zimmer-Gembeck, 2011). School psychologists can take some of the behavioral management strategies within this treatment to address problematic behaviors in the classroom. For more on this approach and details on how to get trained and certified in PCIT, visit http://www.pcit.org/

Trauma-Focused Cognitive Behavioral Therapy (TF-CBT). This is an evidenced based treatment that also works with both children and their caregivers. This treatment utilizes a series of evidence-based cognitive and behavioral components to promote a sense of safety and security, help the child develop coping skills to process distress, and exposure related techniques to help the child process and heal from their trauma (Lawson & Quinn, 2013). Some of these phases such as relaxation skills, coping skills, and safety planning, can be implemented directly in the schools and even in the classroom with the help of school psychologists, teachers, and other school staff members. School psychologists can access a comprehensive online training on this topic, which includes video demonstration of different skills and techniques that can be helpful in promoting healing: https://tfcbt2.musc.edu/

The Pyramid Model for Promoting Social and Emotional Competence in Infants and Young Children. The Pyramid Model is an evidence-based framework aimed at supporting the social-emotional development of young children (birth-5; Perry & Kaufmann, 2009). It is a tiered framework that includes interventions to support young children and their caregivers at three levels: universal prevention strategies, supports for those students at risk for developing social-emotional or behavioral problems, and treatment strategies for students requiring individualized interventions or supports. Pyramid Model materials are available for free (http://csefel.vanderbilt.edu/) and low-cost,

online training in the model is available (http://www.pyramidmodel.org/services/online-training/).

Professional Development for School Psychologists

Psychologists frequently work with young children who have been impacted by trauma, yet many express that they do not feel fully competent in understanding and treating trauma (Gubi et al., 2019). It is useful for psychologists to receive training before seeking to promote comprehensive trauma-informed school practices. School psychologists can obtain this level of knowledge through specialized training sessions, continuing education classes, and related professional development in this area. It is important to note that participating in these trainings will help to improve and expand knowledge in the area of complex trauma, but the trainings alone will not produce expert-level psychologists, as it is only part of an ongoing learning process. The following are some potential resources that school psychologists and associated school staff can use to increase awareness and understanding of trauma in preschoolers, how to best provide support for these children, and where to seek out, learn, and utilize evidenced based treatments to aid preschoolers impacted by trauma. There are no conflicts of interest associated with the references discussed below.

- The National Child Trauma Stress Network (NCTSN) provides information regarding awareness of childhood trauma, trauma-informed care, and useful tools to better understand childhood trauma. Content can be used by clinicians, victims, family members of victims, educators, and others. This is available at https://www.nctsn.org
- Cognitive Behavioral Interventions for Trauma in the School (CBITS) is a school-based program that incorporates trauma-informed care. More information on this program and how it can be implemented in schools is available at https://cbitsprogram.org/
- Center for Early Childhood Mental Health Consultation provides a tutorial titled, "Tutorial 7: Recognizing and Addressing Trauma in Infants, Young Children, and their Families." This aims to help early childhood professionals understand childhood trauma, learn how to recognize it, become aware of the impact trauma has on development, and apply this knowledge to implementing effective interventions. This tutorial is available at https://www.ecmhc.org/tutorials/trauma/index.html
- The Incredible Years is an online tool that offers various evidence-based treatment programs, training sessions, resources, and research information on children's emotional, behavioral, and academic functioning. These programs can be implemented in schools and mental health clinics and can be utilized by children, parents, teachers, administrators, and mental health professionals in the prevention and treatment of emotional and behavioral problems in children. These programs also work to promote the social, emotional, academic, and behavioral health of children across various cultures and socioeconomic statuses. More information can be found at http://www.incredibleyears.com/
- Second Step is a program whose foundation is based on social-emotional learning in children (SEL). This program provides educational information on the social-emotional functioning of children and how to promote this growth in an environment that fosters success and support to families, teachers, administrators, mental health professionals, and anyone who has an active role in a child's life. This program can be found at https://www.secondstep.org/
- The Pyramid Model Consortium is an online resource that provides content to support the social-emotional development of young children. This can be accessed at http://www.pyramidmodel.org/
- "Trauma-Informed Care: Perspectives and Resources: The National Technical Assistance Center for Children's Mental Health" is an online resource that discusses trauma-informed care. JBS International, Inc. and Georgetown University National Technical Assistance Center for Children's Mental Health have collaborated in creating this resource tool that includes videos, issue briefs, and other sources of information that explore trauma-informed care practices and how they can be implemented in certain settings such as schools. This is available at https://gucchdtacenter.georgetown.edu/TraumaInformedCare/index.html

- *The Trauma-Informed Curriculum for Social-Emotional Learning: Preschool Through Early Elementary* (2018) is a book-based curriculum created by Kara Rogers and Heather T. Forbes to provide tools and skills for teachers working with young students impacted by trauma to foster healthy social and emotional development.
- National Association of School Psychologists (NASP) offers a variety of resources that describe Trauma-Sensitive Schools and discuss how school psychologists can support these schools. NASP's discussion of trauma-sensitive schools is available at http://www.nasponline.org/resources-and-publications/ resources/ mental-health/ trauma-sensitive-schools

Conclusion

Traumatic stress can be devastating to the developing young child. Interpersonal trauma, also known as complex trauma, can be especially insidious due to its difficulty to discern and due to its nature of involving repeated traumas within interpersonal relationships. As discussed, complex trauma can, and unfortunately often does, impact preschool children, which due to their young age and maturity, inability to articulate their thoughts and feelings freely, and developmental level, can have major implications regarding the child's subsequent academic, social, and emotional development and functioning. School psychologists have the potential to help transform preschools, through their ability to consult with colleagues and establish school-wide norms and structures that promote a trauma-informed culture. Such a transformed school would involve staff at all levels who are knowledgeable about the prevalence, warning signs, and symptoms, and thus able to work constructively to mitigate the long-term impact of complex trauma by addressing these issues early on with preschoolers and their families. Within such a specialized school, the school psychologist themselves also holds skills and competencies in assessment, case conceptualization, and treatment that can directly aid children and families. It is thus incumbent that school psychologists actively seek out the skills and competencies to engage in trauma-informed preschool practices. Such work has the potential to support some of the most vulnerable children and families, and help them thrive despite their past traumas.

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Article

Review of State Departments of Education Resources for Trauma-Informed Practice

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Developing trauma-informed organizations has become a focus in the schools due to the research on the prevalence of trauma experienced by today's youth and the significant implications for social-emotional development and academic success. Due to growing pressure from legislation and increased awareness of the need for mental health services in schools, public schools are seeking resources to help implement trauma-informed approaches. The aim of this systematic review is to examine state departments of education's websites across all 50 states, as well as the District of Columbia and Puerto Rico, to identify trauma-informed resources that are readily available both to school divisions within and outside of their state. Findings indicate that 85% of states included some type of resource related to trauma-informed practice, with the largest representation of resource type being links to external resources (50%) and/or trauma-informed specific training materials (40%). The methods utilized were limited in scope to departments of education and did not explore other agencies within the state, or determine the quality or effectiveness of the resources noted. The findings suggest that some preliminary efforts are being made by most states to incorporate trauma-informed practices; however, the type and quantity varied significantly across the country. This suggests that states with limited resources can benefit from collaboration and utilization of already established resources from states that are further along in their development of practices.

Keywords: trauma informed, resources, state departments of education

Trauma is a topic that typically comes to the forefront when a national incident such as a school shooting or natural disaster occurs. A review of the National Survey of Children Exposed to Violence from the Treatment and Service Adaptive Center indicates that 60% of children have been exposed to some form of trauma (Wiest-Stevenson & Lee, 2016). These traumatic events can include witnessing violence; being physically, emotionally or sexually abused; experiencing homelessness; being in a serious accident; living in a home where family members abuse alcohol or drugs; or living in a home with family members with untreated mental illness. The Substance Abuse and Mental Health Services Administration (SAMHSA, 2014) defines trauma as experiences that result in intense stress reactions, physical or psychological, linked to an event/events or circumstances that are harmful or threatening and leads to prolonged negative effects on an individual's physical, social, emotional, or spiritual well-being. It is also important to remember that it is the individual's subjective experience that determines whether an event is or is not traumatic.

Trauma has significant effects on children and their learning outcomes. According to the Adverse Childhood Experiences (ACEs; Centers for Disease Control & Prevention, 2015) study, children who have experienced trauma are more likely to fail a grade in school, score lower on standardized achievement tests, struggle with receptive and expressive language, get suspended or self-injurious behaviors, substance abuse, depression, and eating disorders (2015).

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Given the prevalence and impact of trauma in school-age children it is important to consider ways in which schools can play a role with regards to prevention and intervention. According to the National Association of School Psychologists (2018), 70%-80% of mental health needs of children and adolescents are met within the schools. One way in which schools have begun to respond to this call is through the development of trauma-informed practices. SAMHSA (2014) indicates a trauma-informed organization:

> Realizes the widespread impact of trauma and understands potential paths for recovery; recognizes the signs and symptoms of trauma in clients, families, staff, and others involved with the system; and responds by fully integrating knowledge about trauma into policies, procedures, and practices, and seeks to actively resist re-traumatization (p. 9).

According to Oehlberg (2008), developing a school that is trauma-informed is an active process, which goes beyond simply identifying and referring students affected by trauma. Integrating trauma sensitivity into an educational system requires five components (2008): 1) administrative commitment to a safe and secure school where the power of relationship and students' feelings of connectedness are acknowledged and practiced; 2) disciplinary policies for trauma survivors that focus on restoring them to the school community; 3) staff development which includes all adults in the school community (e.g., teachers, bus drivers, cafeteria staff, office staff); 4) development and implementation of interventions and community health resources by counselors, school psychologists, and social workers; and 5) student education about the brain and its development, to include survival adaptations and resiliency.

While it was not the aim of this study to determine which states have made trauma-informed practice or elements of practice a legal requirement for schools, it is important to note that some school divisions may be required to minimally incorporate elements of trauma-informed practice as a direct result of state legislation. For example, beginning July 1, 2017, Missouri state legislature established the "Trauma-Informed Schools Initiative." This bill required the Department of Elementary and Secondary Education (DESE) to provide information and offer trainings for school districts to identify and respond to trauma. Additionally, five schools were to receive intensive training to recognize trauma in students, teachers, and staff. In North Dakota, there is a state provision (15.1-07-34) mandating school districts to provide a minimum of eight hours of professional development on youth behavioral health to elementary through high school teachers and administrators, based on a needs assessment and designated from eight categories which include trauma. In Maryland, Senate Bill 786 outlines the development of a task force, which will consider definitions of trauma-informed interventions and training requirements for school staff regarding the need to individualize trauma-informed interventions based on student background information. The bill also includes a requirement for public agencies to submit a report for the prior school year on the professional development provided, which includes trauma-informed interventions beginning the 2018-2019 school year.

States that have already developed a trauma-informed approach for their schools can serve as a resource for other states that are working towards implementation. This can be especially effective if states with implementation practices, training curriculums, and/or modules make their resources publicly available. Utilizing readily available resources from other states may also help reduce the burden and cost of developing similar resources or trainings independently. Additionally, shared resources and trainings can help develop a common language between states for establishing trauma-informed schools.

The goal of the current study was to identify and describe existing resources that have been provided by state departments of education. This was achieved by completing a state-by-state analysis using online searches within each state department of education's (DOE) website to determine the establishment, implementation, and accessibility of resources. Guiding the study, the following specific research questions were developed:

a) Which state DOE provide trauma-informed resources?
b) What types of trauma-informed resources do

state departments of education provide?

While the authors developed initial impressions of the quality of the content discovered, an examination of each located resource was not conducted to determine whether the resources aligned with best practices for trauma-informed care within the schools. Additionally, only resources available on each state DOE website were reviewed; however, other agencies within each state may also have resources related to trauma-informed practice that were not reviewed in this study.

Method

In February 2019, internet searches for trauma-informed practices and resources on the DOE websites for each of the 50 states, Washington DC, and Puerto Rico were conducted. Search terms utilized in the internet search box on the homepage of the DOE websites included: trauma, trauma-informed, and trauma sensitive. These search terms were derived from the current literature and conceptual framework for trauma supports in the school context. Data were collected from the first page of search results where results were displayed by relevance to the search term. This methodology was utilized given the suggestion by prior research that individuals will typically rely upon first page results. For example, a study conducted by Advance Web Ranking (2014), found 71.33% of internet searches using Google result in opening the first listed web link, with a dramatic reduction in clicks on the following pages. While content was identified and reviewed from the first page results if the relevant search terms were present, only those related to trauma-informed school practices were retained for further evaluation. Specifically, once identified as containing the relevant search terms, the web materials were examined by the authors for categorization. Additionally, only resources available on the state DOE's website were included. Therefore, the data collected may not represent all documentation or initiatives.

To collect the relevant data, each author completed initial searches on approximately half of the evaluated state DOE websites and then categorized search results according to seven categories. Each author was assigned 25 states, based on alphabetical order. Puerto Rico was initially reviewed by the Spanish-speaking author as that DOE website is primarily in Spanish. These seven categories were developed by reviewing and determining common themes within the resources, similar to steps taken in a generic inductive thematic analysis (Nowell, Norris, White, & Moules, 2017). After completing the review of the initial assigned half of DOE websites, the authors completed an analytic audit by switching lists of DOEs and independently categorizing this second list of DOE results. These steps were taken in an effort to establish interrater reliability within the study. An interrater reliability coefficient was not calculated for this study; however, interrater agreement was attained by conducting a joint review to address disagreements in the categorizations until an agreement was achieved. The categories were defined as follows: evidence of state or grant funded trauma informed state-wide initiatives (state/grant funded initiatives); state developed trauma informed guidance documents (state guidance documents); state developed training curriculum for trauma informed practices (curriculum); training or training documents that are specific for trauma informed practices (trauma informed specific training); training or training documents in which trauma informed practices were secondary to another topic (trauma informed secondary training); links to documents that included trauma informed practice information or trainings from websites or organizations that were external to the DOE (external links); or no evidence of trauma informed practices or trainings (no findings).

The methods in this review align with those noted within systematic reviews in which a database is identified, inclusion and exclusion criteria are established, and guidelines for examining the data are applied (Nowell et al., 2017). These reviews traditionally utilize research databases such as PubMed, Web of Science, Scopus, ProQuest, and Google Scholar; however, the current study utilized agency-developed databases. The researchers did not identify specific guidelines for classifying the resources provided within these types of databases. Therefore, a modified approach was taken, similar to one utilized by Woitaszewski, Crepeau-Hobson, Conolly, & Cruz (2018), in which the authors completed internet searches using Google for state-

Table 1
Total Number and Percentage of States with Specific Trauma-Informed Resources

Resource	States Included	Total Number of States with Identified Resource	Percent of States with Resource
External Web Links to Resources	AK, AZ, CT, DE, GA, IA, IL, IN, KS, MA, MI, MT, ND, NV, OH, OK, PA, SD, TN, TX, UT, VA, WV, WA, WI, WY	26	50%
Specific Trauma Informed Training	AR, AZ, CT, CO, DC, IN, LA, ME, MO, MS, NE, NH, NC, OK, OR, RI, UT, VA, VT, WA, WY	21	40%
Grant/State Funded Initiatives	AR, ID, MD, NC, NH, OK, OR, WA, WI	9	17%
State Guidance Documents	MN, MO, OH, OR, RI, WI	6	12%
State Developed Training and Implementation Curriculum	AK, ND, RI, WA, WI	5	10%
Training or Documents with Trauma Informed Practices as Secondary Topic	FL, IN, NY	3	6%
No Resources Found	AL, CA, HI, KY, NJ, NM, PR, SC	8	15%

based threat assessment policies, statutes, and related online resources available for schools in each of the 50 states.

Results

Which states provide trauma-informed resources?

The findings from this systematic review of state DOE websites indicate that currently 85% of states provide some category of trauma-informed resources. This leaves 15% of states without readily available trauma-informed resources located on the first page of their respective DOE website. States were classified as not having readily available trauma-informed resources if there was no content identified on the first page of the search results, within the state DOE website. Additionally, states were coded if the search did not yield results related to trauma-informed school practices. States without accessible resources include: Alabama, California, Hawaii, Kentucky, New Jersey, New Mexico, Puerto Rico, and South Carolina. Table 1 summarizes the total number and percentage of state DOE websites with identified trauma-informed resources, categorized by resource type.

What types of trauma-informed resources do states provide?

Of the 52 evaluated DOE websites that were reviewed, nine (17%) indicated evidence of state or grant funded trauma-informed state-wide initiatives. Six states (12%) were identified to provide guidance documents for implementation of trauma-informed practices. Evidence of state developed training curriculum for trauma-informed practices (curriculum) was identified on five (10%) state DOE websites. Approximately 40% of states had evidence of training or training documents that were specific for trauma-informed practices. This represents the second most common type of resource found on DOE websites. The most common resource (50%) found on DOE websites were links to resources and trainings found on

websites that were external to the DOE. Training or training documents in which trauma-informed practices were secondary to another topic were found in three states (6%). The specific resource types and their web locations are listed alphabetically by state in the Appendix.

Discussion

The Adverse Childhood Experiences Study conducted by the CDC brought the nation's attention to the significant impact that trauma has over the lifespan, as well as the high level of exposure to traumatic events that individuals experience beginning in early childhood. The impact on child and adolescent development and academic outcomes has also captured the attention of schools, leading to system change considerations in the form of adopting trauma-informed practices. The purpose of this review was to examine the available resources across the 50 states, including the District of Columbia and Puerto Rico.

The results suggest that the majority of states have recognized the need to address trauma within the school context and have provided varying levels of guidance or resources to support these efforts. Additionally, the findings in this study supported the idea that state departments utilize external sources, as evidenced by the high number of external links provided as resources. The findings from this review further indicate that many state departments of education provide some training on trauma-informed practices. A minority of states provide comprehensive curriculum or receive grant or state funding for implementation of such practices.

Limitations

While the web searches allowed the authors to identify those resources readily accessible on the state DOE websites, it is possible that there were additional resources that were not readily accessible within the first page of the search results, inaccessible due to broken links, and that may not have been effectively identified within the website itself. Future studies may want to include steps to archive the web results, which are collected within the data collection period, by integrating screenshots of results. While the authors were able to identify resources that were accessible, there is still a need to evaluate the quality of the resources by utilizing best practice characteristics for developing a trauma-informed approach. Additionally, effectiveness of training materials in the development of trauma-informed knowledge, practice, and student outcomes is currently limited. There may also be training initiatives and funding that are being provided to schools outside of the state DOE that were not captured in this study. The methods utilized could be improved in future studies through determining inter-rater reliability. Lastly, it is important to acknowledge the inherent limitations that exist with incorporating thematic analysis, as there is limited guidance on how to use this method with rigor (Nowell, Norris, White, & Moules, 2017).

Conclusions and Future Directions

SAMHSA (2014) noted that organizations and service systems have been driven to considerations for becoming more responsive to those affected by trauma given, "the increased understanding of the pervasiveness of trauma and its connections to physical and behavioral health and well-being" (p. 6). Currently, some states are further along with supporting this change. his study aimed to create a resource that could assist states that are considering changing their framework or working towards implementation of trauma-informed practices by connecting them to other state practices. Additionally, referencing other state practices can serve as support for advocacy efforts in one's own state, as well as facilitate the use of a common language for trauma-informed approaches. Results of the current study suggest that while the majority of states have some type of resource related to trauma-informed practice, only a small percentage had resources that were categorized as grant/state funded initiatives or state developed training and implementation curriculum.

Despite the authors' attempts to accurately identify available resources, limitations exist within the current methods utilized. Future studies may address these limitations by expanding their procedures to include follow-up phone calls to each state DOE to ensure that initiatives and resources were not missed. Future studies may also consider expanding their review to include state, local, and

federal initiatives supporting the development of trauma-informed approaches. To determine the quality of the resources provided, a study could be conducted that addresses best practice characteristics or that develops a rubric for rating the resources according to these best practice parameters. Lastly, a study could be conducted to determine training effectiveness, to include exploring knowledge gained, student outcomes, and application of skills.

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Appendix*: Selected Trauma-Informed Resources by State*

State	Type of Resource	Web location
Alabama	NA	
Alaska	Curriculum, External Links	https://education.alaska.gov/elearning/trauma-sensitive https://education.alaska.gov/schoolcounselbhlth/trauma
Arizona	Trauma-Informed Training, Links to External Resources	http://www.azed.gov/directorsinstitute/2018/09/19/invisible-wounds-understanding-and-working-with-the-traumatized-student/ http://www.azed.gov/specialeducation/parents/mental-health/
Arkansas	Grant/State Funded Initiative, Trauma-Informed Training	http://www.arkansased.gov/public/userfiles/news/2018/ADE_Receives_9_Million_Grant_for_School-Based_Mental_Health_Programs_September_19_2018.pdf http://www.arkansased.gov/public/userfiles/Public_School_Accountability/Federal_Programs/2017_M_V_Conference/trauma.pdf http://www.arkansased.gov/public/userfiles/Public_School_Accountability/Federal_Programs/2018_M_V_Conference/2018_School_Health_Report_Presentation_7_18_18.pdf
California	NA	
Colorado	Trauma-Informed Training	http://www.cde.state.co.us/mtss/bpegtrainingvideos
Connecticut	Trauma-Informed Training, Links to External Resources	https://portal.ct.gov/-/media/SDE/Alliance-Districts/Symposium/Implementing_Trauma_Informed_Practices.pdf https://portal.ct.gov/-/media/SDE/Alliance-Districts/Convening/Strategies_for_Developing_a_Comprehensive_Trauma_Informed_School_District.pdf https://portal.ct.gov/-/media/SDE/Alliance-Districts/Symposium/Trauma_Sensitive_White_Frese.pdf https://portal.ct.gov/SDE/Digest/Digest-items/Resources-for-Addressing-Trauma-Violence-and-Grief
Delaware	Links to External Resources	https://www.doe.k12.de.us//site/Default.aspx?PageID=3356

Florida	Training with Trauma-Informed as Secondary Topic	http://www.fldoe.org/core/fileparse.php/7506/urlt/RBTLHMSDD1117.pdf http://www.fldoe.org/safe-schools/
Georgia	Links to External Resources	http://www.gadoe.org/Curriculum-Instruction-and-Assessment/Curriculum-and-Instruction/Pages/Title-IV-Additional-Information.aspx
Hawaii	NA	
Idaho	State/Grant Funded Initiative	http://www.sde.idaho.gov/communications/files/news-releases/01-24-2019-Superintendent-Ybarra-outlines-plans-in-JFAC-budget-presentation.pdf
Illinois	Links to External Resources	https://www.isbe.net/Pages/Trauma.aspx
Indiana	Trauma-Informed Training, Training with Trauma-Informed as Secondary Topic, Links to External Resources	https://www.doe.in.gov/student-services/idoe-mental-health-systems-care https://www.doe.in.gov/safety/presenter-handouts
Iowa	Links to External Resources	https://educateiowa.gov/pk-12/learner-supports/mental-health/trauma-informedtrauma-sensitive-schools
Kansas	Links to External Resources	https://www.ksdetasn.org/smhi/trauma-informed-schools https://www.ksde.org/Agency/Division-of-Learning-Services/Special-Education-and-Title-Services/Social_Emotional_Growth
Kentucky	NA	
Louisiana	Trauma-Informed Training	http://www.louisianabelieves.com/schools/public-schools/discipline
Maine	Trauma-Informed Training	https://www.maine.gov/doe/calendar https://stateofmaine.adobeconnect.com/trauma051818/
Maryland	State/Grant Funded Initiatives	http://marylandpublicschools.org/about/Documents/DSFSS/SSSP/SafetyGrants/FY19SafeSchoolsFundGrantCategoriesGuidelines.pdf
Massachusetts	Links to External Resources	
Michigan	Links to External Resources	https://www.michigan.gov/mde/0,4615,7-140-74638-199286--,00.html

Minnesota	Guidance Document	https://education.mn.gov/MDE/Search/index.htm?query=trauma&searchbutton=Search&v%3Asources=mn-mde-live&qp=mn-mde-live
Mississippi	Trauma-Informed Training	https://www.mdek12.org/ocsa/2018-Summit-PowerPoint-Presentations
Missouri	Guidance Documents, Trauma-Informed Training	https://dese.mo.gov/traumainformed
Montana	Links to External Resources	http://opi.mt.gov/Educators/School-Climate-Student-Wellness/Child-Trauma-Mental-Health
Nebraska	Trauma-Informed Training	https://www.education.ne.gov/21stcclc/getconnected-nebraska-afterschool-workshop-iii-100-200/
Nevada	Links to External Resources	http://www.doe.nv.gov/uploadedFiles/ndedoenvgov/content/Boards_Commissions_Councils/StatewideSchoolSafetyTaskForce/2018/August/INVOMultiDisciplineInterventionPresentation.pdf
New Hampshire	State/Grant Funded Initiatives, Trauma-Informed Training	https://www.education.nh.gov/instruction/special_ed/documents/application-cover-letter.pdf https://www.opennh.net/course/view.php?id=515
New Jersey	NA	
New Mexico	NA	
New York	Training with Trauma-Informed as Secondary Topic	http://www.p12.nysed.gov/specialed/publications/2016-memos/documents/documents/pbis-regional-training-brochure-2016-17.pdf
North Carolina	State/Grant Funded Initiatives, Trauma-Informed Training	https://ec.ncpublicschools.gov/conferences-profdev/annual-conference/2013/conference-handouts/11-institute.pdf http://www.ncpublicschools.org/docs/cfss/home/cp-application.pdf
North Dakota	Curriculum, Links to External Resources	https://www.nd.gov/dpi/SchoolStaff/SafeHealthy/TraumaSensitiveSchools/
Ohio	Guidance Document, Links to External Resources	http://education.ohio.gov/Topics/Other-Resources/School-Safety/Building-Better-Learning-Environments/PBIS-Resources/Trauma-Informed-Schools
Oklahoma	State/Grant Funded Initiative, Trauma-Informed Training, Links to External Resources	https://sde.ok.gov/newsblog/2018-10-05/hofmeister-announces-school-mental-health-grants-totaling-125-million https://sde.ok.gov/trauma-informed-book-study https://sde.ok.gov/trauma-summit

Oregon	State/Grant Funded Initiatives, Guidance Documents, Trauma-Informed Training	https://www.oregon.gov/ode/educator-resources/2016fallconference/traumasensitivity.pdf https://www.oregon.gov/ode/educator-resources/2017fallconference/traumainformedpractices.pdf
Oregon *(Cont.)*	State/Grant Funded Initiatives, Guidance Documents, Trauma-Informed Training	https://www.oregon.gov/ode/students-and-family/GraduationImprovement/Documents/Trauma-Informed%20Practices%20in%20Schools.pdf https://www.oregon.gov/ode/about-us/Documents/TIP_SubCommittee_v4.pdf
Pennsylvania	Links to External Resources	https://www.education.pa.gov/Schools/safeschools/resources/Pages/Trauma-Information.aspx
Puerto Rico	NA	
Rhode Island	Guidance Documents, Curriculum, Trauma-Informed Training	http://www.ride.ri.gov/Portals/0/Uploads/Documents/Instruction-and-Assessment-World-Class-Standards/Early-Childhood/Growing%20Great%20Kids%20Curriculum%20Alignment.pdf http://www.ride.ri.gov/Portals/0/Uploads/Documents/2016%20Conf.%20TA%20workshop%20flyer%20Fall%202016%20-%20no%20room%20%23s%20-%20web.pdf
South Carolina	NA	
South Dakota	Links to External Resources	https://doe.sd.gov/pressroom/educationonline/2018/may/page4.html
Tennessee	Links to External Resources	https://www.tn.gov/content/tn/dcs/program-areas/child-health/aces.html
Texas	Links to External Resources	https://tea.texas.gov/About_TEA/Other_Services/Mental_Health/Grief_Informed_and_Trauma_Informed_Practices/
Utah	Trauma-Informed Training, Links to External Resources	https://www.schools.utah.gov/scep/traumasensitive https://www.schools.utah.gov/scep/trainings
Vermont	Trauma-Informed Training	https://education.vermont.gov/weekly-field-memo/volume-13-issue-6#understanding-trauma https://education.vermont.gov/weekly-field-memo/volume-10-issue-39#trauma-informed-care
Virginia	Trauma-Informed Training, Links to External Resources	https://www.google.com/url?q=http://www.doe.virginia.gov/administrators/superintendents_memos/2018/210-18a.docx&sa=U&ved=0ahUKEwiG-s3GxcrgAhWtPOwKHevWAAAQFggIMAI&client=internal-uds-cse&cx=000783915327965917031:ydjbl4xbjqo&usg=AOvVaw3AqDA3OspiuOd2VmgP_aXt http://www.doe.virginia.gov/support/virginia_tiered_system_supports/resources/2015_fall_institute/Applying_Trauma_Informed_Strategies_in_School_Settings.pdf

		http://www.doe.virginia.gov/support/virginia_tiered_system_supports/resources/2015_fall_institute/Applying_Trauma_Informed_Strategies_in_School_Settings.pdf
Washington State	State/Grant Funded Initiatives, Curriculum, Trauma-Informed Training, Links to External Resources	https://www.schools.utah.gov/scep/traumasensitive https://www.schools.utah.gov/scep/trainings
Washington D.C.	Trauma-Informed Training	https://osse.dc.gov/event/trauma-awareness-and-resilience-harnessing-brain-science-trauma-informed-healing-centered https://osse.dc.gov/sites/default/files/dc/sites/osse/publication/attachments/DEL_Mental%20Health%20&%20Social%20Emotional%20Development_Trauma%20Informed%20Care.pdf
West Virginia	Link to External Resources	https://wvde.us/wp-content/uploads/2018/08/school-counselor-newsletter-2018-6.4.pdf
Wisconsin	State/Grant Funded Initiatives, Guidance Documents, Curriculum, Links to External Resources	https://dpi.wi.gov/sspw/mental-health/trauma
Wyoming	Trauma-Informed Training, Links to External Resources	https://edu.wyoming.gov/in-the-classroom/federal-programs/homeless-ed/resources/

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Article

Barriers and Facilitators of the Implementation of Trauma-Informed Schools

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Research increasingly shows that trauma-informed schools hold promise as a way to address and prevent adverse childhood experiences. However, without unpacking the implementation process of trauma-informed approaches in schools, the success and sustainability of trauma-informed schools remains out of reach. The current study uses survey data gathered from 508 teachers and other school staff from five urban schools who participated in a multi-component trauma-informed schools initiative over three years. Teachers and school staff were asked to identify barriers and facilitators of using trauma-informed approaches in their schools, and these comments were coded using the Consolidated Framework for Implementation Research, an established framework used to evaluate the implementation of evidence-based practices. Teachers and school staff made comments about a variety of barriers and facilitators of trauma-informed schools. Key implementation drivers included having sufficient information about the intervention, having access to adequate resources to support implementation, experiencing a shared commitment to the work among staff and leadership, and possessing the belief that they were personally capable of implementing the program. Implications for research and practice are discussed.

Keywords: trauma-informed schools, implementation, facilitators, barriers, Consolidated Framework for Implementation Research

Over half of adults report experiencing one or more adverse childhood experiences (ACEs) during childhood (Center for Disease Control and Prevention [CDC], 2010; Felitti, 1998). ACEs include child abuse and neglect; violence, substance abuse, and mental illness in the home; incarceration of a family member; and parental separation (CDC, 2010). Individuals who experience more ACEs during childhood are more likely to engage in risky behaviors such as smoking and drug use, have poor physical and mental health, and even die earlier than their peers without ACEs (CDC, 2010; Felitti et al., 1998). ACEs can have intergenerational impacts (Sperlich, Seng, Li, Taylor, & Bradbury-Jones, 2017), and certain vulnerable populations, such as ethnic and racial minorities and those who live in urban settings, are at increased risk of experiencing ACEs (Adams, 2010; Alim et al., 2006).

Author Note: [1]The New Orleans Trauma-Informed Schools Learning Collaborative includes the following individuals listed by sites (sites are arranged in alphabetical order): Children's Bureau of New Orleans: Paulette Carter; Institute for Women and Ethnic Studies: Lisa Richardson, Denese Shervington; Louisiana Public Health Institute: Taslim van Hattum; New Orleans Public Health Department: Chris Gunther; Project Fleur-de-lis: Laura Danna; Strategies for Youth Development: Kathleen Whalen; Tulane University: Courtney N. Baker, Stacy Overstreet. We are grateful to funding from the Department of Justice (2012NYFXK008, 2015PBFXK006) and United Way.

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The experience of ACEs can have a significant negative impact on children's ability to function at school (Overstreet & Mathews, 2011; Rossen & Hull, 2013). Burke and colleagues (2011) reported that about half of their sample of low-income, urban youth with four or more ACEs displayed a learning or behavior problem, in contrast with one fifth of those experiencing one to three ACEs, and only three percent of those experiencing zero ACEs. This pattern extends across a myriad of academic and well-being outcomes. Children who have been exposed to trauma perform less well cognitively and academically, and are less connected to and engaged in school (Perfect, Turley, Carlson, Yohanna, & Saint Gilles, 2016; Porche, Costello, & Rosen-Reynoso, 2016). They are also more likely to be retained a grade, placed in special education, truant from school, suspended, or to drop out of school (Perfect et al., 2016; Porche et al., 2016; Porche, Fortuna, Lin, & Alegria, 2011). Given the considerable long-lasting physical and social consequences of ACEs, preventing and addressing ACEs is a public health priority (Women and Trauma Federal Partners Committee & United States of America, 2013).

Trauma-Informed Schools

Trauma-informed approaches describe service delivery that understands the prevalence and impact of trauma, recognizes the signs and symptoms of trauma in consumers and staff, and responds to this information by changing policies, practices, and procedures to ameliorate rather than exacerbate the effects of ACEs and trauma (Harris & Fallot, 2001; Overstreet & Chafouleas, 2016; Substance Abuse and Mental Health Services Administration [SAMHSA], 2014a; SAMHSA, 2014b). In order to create school environments that are physically and psychologically safe for students, there has been a push toward the implementation of trauma-informed approaches in schools (Department of Education: National Center on Safe Supportive Learning Environments [NCSSLE], 2015; Children's Law Center of Washington, D.C., 2015). Trauma-informed approaches have been shown to increase staff knowledge and move staff attitudes and behavior to be more trauma-informed (Brown, Baker, & Wilcox, 2012; McIntyre, Baker, Overstreet, & the New Orleans Trauma-Informed Schools Learning Collaborative, 2019; Purtle, 2018). Trauma-informed approaches are also associated with improvements in client/student and system outcomes, including fewer suspensions, expulsions, and student behavior issues; healthier treatment environments; improved mental health and substance abuse outcomes; and lower organizational costs as a result of less staff turnover, less use of sick time, and lower liability-related expenses (Dorado, Martinez, McArthur, & Leibovitz, 2016; Lebel, 2011; Morrissey et al., 2005; Rivard, Bloom, McCorkle, & Abramovitz, 2005; Von der Embse, Rutherford, Mankin, & Jenkins, 2018).

Guidelines have been developed that adapt trauma-informed approaches to education in order to support the implementation of trauma-informed schools (TIS; e.g., Cole, Eisner, Gregory, & Ristuccia, 2013). TIS looks different in each school, but components of the intervention typically include foundational professional development training about trauma, leadership consultation, teacher skill-building and coaching, and evidence-based clinical services for students who are identified as needing treatment. Although the last decade has seen an increasing call to implement TIS (Overstreet & Chafouleas, 2016), scientifically rigorous evaluations of TIS are lacking. Specifically, the lack of information about how TIS works when implemented in schools limits the potential benefits of TIS.

Context and Trauma-Informed Schools Implementation

Translating trauma-informed approaches into schools, where the primary goal is educating children rather than improving behavioral and mental health, has highlighted the natural fit between trauma-informed approaches and education. For example, TIS aligns well with multi-tiered systems of support (Chafouleas, Johnson, Overstreet, & Santos, 2016; von der Embse, Rutherford, Mankin, & Jenkins, 2018). In addition, one recent study showed that almost a quarter of primary school teachers reported clinically significant levels of psychological distress (Titheradge et al., 2019). TIS actively addresses burnout and secondary traumatic stress experienced

by teachers and other school staff.

However, the translation of trauma-informed approaches into schools has also presented challenges. For example, teachers and school staff who gained TIS-relevant knowledge after participating in a foundational trauma training found TIS to be differentially acceptable depending on system fit (McIntyre et al., 2019). Specifically, when teachers and school staff perceived the fit between TIS and their school to be high, they also found TIS to be acceptable. Practitioners across many systems adopting trauma-informed approaches also struggle to translate the information they learn in foundational trauma training to actual practices and behaviors that align with trauma-informed approaches (e.g., Sprague, 2008). Together, this research suggests the careful consideration of context, especially elements that serve as barriers or facilitators of implementation, is critical to effectively and sustainably implement TIS.

Consolidated Framework for Implementation Research

In addition to developing clear conceptual models (e.g., Cole et al., 2013) and beginning to evaluate the efficacy of TIS (Dorado et al., 2016; McIntyre et al., 2019), the field must begin to unpack the process of TIS implementation. The Consolidated Framework for Implementation Research (CFIR; Damschroder et al., 2009) is a tool that facilitates the systematic and comprehensive understanding of the role of context in evidence-based intervention implementation. The CFIR is a framework comprised of 37 evidence- and theory-based constructs associated with effective implementation. The CFIR is made up of five domains: *Intervention Characteristics, Inner Setting, Outer Setting, Characteristics of Individual, and Process of Implementation.* Each of the 37 constructs (e.g., *Complexity of the Intervention*, *Self-Efficacy*) is operationalized and embedded within one of the overarching CFIR domains.

Though applicable to multiple contexts (Damschroder et al., 2009), the CFIR is most commonly used to understand the barriers and facilitators of interventions in health care settings (e.g., Kadu & Stolee, 2015). The CFIR has also been applied to schools (e.g., Calvert et al., 2018; Leeman et al., 2018; Norman, Nyberg, Elinder, & Berlin, 2016). Though Baweja and colleagues (2016) did not use the CFIR framework, they reported factors that might ease the implementation of a Tier 3 intervention for students who have experienced trauma: Cognitive Behavioral Intervention for Trauma in Schools (CBITS). After conducting 40 semi-structured qualitative interviews with school staff, the authors concluded that perceived need for a program to address trauma, strong communication with clinicians, education for teachers about trauma, and the implementation of CBITS without students missing instructional time would all facilitate the successful implementation of CBITS (Baweja et al., 2016). A second investigation by the same team determined key organizational factors, such as school staff being aware of the impact of trauma on students, facilitated CBITS implementation (Vona et al, 2018). Other organizational factors differed by geographical region. Specifically, they found that CBITS was implemented by different change agents (i.e., school-level leaders vs. district leaders vs. community mental health agency partners) depending on the type of implementation policy that existed at the district level (Vona et al., 2018). Applying the CFIR to TIS implementation will expand this emerging research base in a systematic and comprehensive way to highlight the barriers and facilitators of TIS (Breimaier, Heckemann, Halfens, & Lohrmann, 2015).

Current Study

In sum, a growing empirical literature suggests that TIS holds considerable promise as an important way to address the public health problem associated with ACEs. However, failure to unpack the process of TIS implementation has limited the translation of conceptual trauma-informed approaches into on-the-ground policies, practices, and procedures in schools. Specifically, it is critical researchers and educators understand the context of TIS implementation in order to boost facilitators and address barriers, thus increasing the chances that TIS will be both effective and sustainable. The goal of the current study is to utilize the CFIR to better understand and address the barriers and facilitators of TIS implementation in five urban schools.

Method

Participants

Survey data were collected from 508 primary and secondary teachers from five New Orleans public charter schools who participated in a TIS demonstration project. Most participants were teachers (n = 298, 59.5%), followed by classroom support (e.g., paraeducator, teaching assistant; n = 83, 16.6%), school administrator (n = 43, 8.6%), and mental health staff (n = 20, 4%). The majority of participants were women (n = 365, 72.4%) and had completed college (n = 454, 89.9%). On average, participants had been in their current job role for five or fewer years (n = 422, 83.6%), with their school for five or fewer years (n = 483, 95.5%), and in the field of education for ten or fewer years (n = 437, 86.4%). Most participants identified as White (n = 241; 47.7%) or Black/African American (n = 235, 46.5%). See Table 1 for demographic information.

Table 1
Participant Demographics

Demographic Characteristic	*n* or *M*	% or *SD*
School Type		
Primary	303	59.6
Secondary	205	40.4
Job Role		
Teacher	298	59.5
Classroom Support	83	16.6
School Administrator	43	8.6
Mental Health Staff	20	4.0
School Support	10	2.0
Operations Staff	5	1.0
Charter Management Organization Administrator	4	0.8
Office Staff	2	0.4
Other	36	7.2
Gender		
Male	139	27.6
Female	365	72.4
Race/Ethnicity		
White	241	47.7
Black or African American	235	46.5
American Indian or Alaska Native	10	2.0
Asian	18	3.6
Native Hawaiian or Other Pacific Islander	2	0.4
Other	28	0.6
Hispanic or Latinx of any race	31	6.2
Education		
Completed high school or GED	12	2.4
Some college	39	7.7
Completed college	222	44.0
Some graduate school	77	15.2
Completed graduate school	155	30.7
Years in Job Role	1.92	.91
Years with School	1.61	.66
Years in Field	2.45	1.11

Note. N = 508; however, responses were missing for job role (n = 7), gender (n = 4), education (n = 3), years in job role (n = 3), years with school (n = 2), and years in field (n = 2). Percentages for Race/Ethnicity do not add to 100 because participants could select multiple options. The rating scale for years in job role, years with school, and years in field is as follows: 1 = < 1 year, 2 = 1-5 years, 3 = 6-10 years, 4 = 11-15 years, 5 = 16-20 years, 6 = > 20 years.

Procedure

In Spring 2015, schools responded to a Request for Proposals to join the New Orleans Trauma-Informed Schools Learning Collaborative (TIS-LC), which was coordinated by the New Orleans Health Department. Six schools (three primary and three secondary) were selected to participate from the 13 that applied. Within the first year of implementation, teachers and school staff participated in a 12-hour foundational trauma training at their schools during the summer before the school year began. After the foundational trauma training, one secondary school left the project. The individuals from this school are excluded from the sample used in the current study because they did not complete the TIS intervention or the measure. Additional skills-focused trainings were delivered throughout the school year to help the teachers translate what they learned in the didactic foundational trauma training into actual behaviors in the classroom. These trainings targeted, for example, the link between TIS and socioemotional learning, de-escalation techniques, and developmentally appropriate student expectations.

After the first year, schools chose whether to provide an 8-hour version of the foundational trauma training to their full staff or only to new staff. Schools also participated in learning collaborative meetings that were used as the primary mechanism for leadership consultation. They had access to additional technical assistance from the Collaborative faculty, which included partnerships to identify and treat students experiencing clinical levels of distress. Finally, schools were also granted funds to support their

trauma-informed action plans, which they spent on socioemotional learning curricula, staff time, and classroom materials. Due to budgetary constraints, coaching was not included in this demonstration project. More information about the demonstration project can be found in McIntyre et al., 2019.

The trauma-informed schools initiative was implemented across three years. In order to evaluate the initiative, surveys were gathered from the teachers and school staff before and after the foundational summer trauma trainings, as well as at mid-year (during year 1 only) and end-of-year time points. Surveys measured participant demographics, knowledge, attitudes, and behaviors relevant to trauma-informed care, perceptions of acceptability, and satisfaction with the initiative. Sustainability of the initiative was evaluated in the final year of implementation.

Measure

The study measure was completed as part of the larger evaluation plan at the end-of-year time points during years 1 and 2. At the end of the packet, teachers responded to several open-ended questions, including the following: 1) How has the TIS-LC changed the way you work with students and/or approach your job?; 2) What facilitated or helped you make these changes (referring to question 1)?; and 3) What are the barriers or challenges you have experienced with the TIS-LC and with using trauma-informed approaches with students? Teachers were free to leave the survey blank or to write "N/A", "nothing" or "none" as an answer response. Some participants completed this survey twice; however, only their first response to the survey questions was included in analyses. Questions 2 and 3 were analyzed in the current study.

Analytic Approach

The CFIR framework was used to code teacher and school staff comments. The CFIR Codebook and wiki page are publicly available resources that provide operationalized definitions and inclusion and exclusion criteria for the CFIR domains and constructs (CFIR, 2014). Together, these resources served as the coding manual for this study. The CFIR Rating Rules were not used. The raters were trained as part of a larger CFIR coding team.

First, comments that were not codable were eliminated from the dataset. These included comments, for example, that were illegible or nonsensical (i.e., "Overall."). Second, each distinct element within a comment was coded to the CFIR. This means that there are more codes than comments, because several comments contained more than one distinct element. For example, if a comment read, "The teachers did not talk to one another to provide support and there was not enough time," the comment would receive the codes *Networks and Communication* and *Available Resources*. In addition, distinct elements were never double coded; each distinct element was only ever coded with one CFIR code. The CFIR contains several constructs that also have subconstructs; in this study, all comments could be coded to either the umbrella constructs or their subconstructs. Lastly, information about whether the construct was indicated by the participant as a facilitator or barrier was also coded. With few exceptions, this aligned with the question number within the measure, with the first coded question relating to facilitators and the second coded question relating to barriers.

One rater coded 100% of the comments while the second rater coded 30% in order to calculate interrater reliability. Initial interrater reliability was 77%; after discussion, the raters reached 100% agreement (Miles, Huberman, Huberman, & Huberman, 1994). Finally, codes were tallied within domain and construct as well as within category (i.e., facilitator or barrier).

Results

Descriptive Statistics

Of the 898 comments collected, 269 were either left blank, responded some variation of "nothing", "N/A," or "none," or were not codable. This resulted in a total of 629 comments, which fell into 727 different codes. About half of these codes were facilitators of TIS (49%), while the remainder were barriers (51%). Codes most commonly fell within the *Inner Setting* domain (65%), followed by the *Characteristics of Individuals* (19%), *Intervention Characteristics* (8%), *Outer Setting* (7%), and *Process* (<1%) domains (see Figure 1).

Detailed information about barrier and

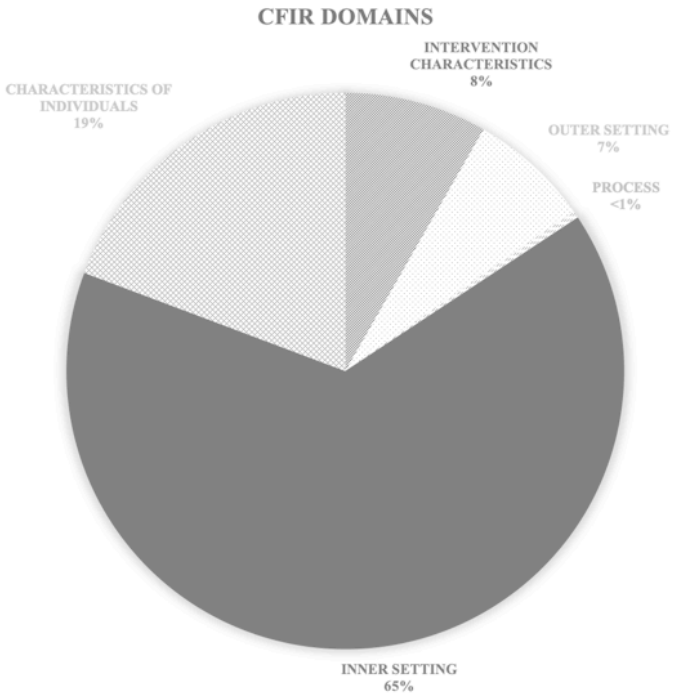

Figure 1. Codes by CFIR domain.

facilitator coding by CFIR domain and construct can be found in Tables 2-6, along with example comments for the most commonly coded constructs. In addition, the most commonly coded constructs are listed, along with their domains, in Figure 2.

Intervention Characteristics

The *Intervention Characteristics* domain is defined as the attributes of the TIS intervention that influence the success of implementation. This domain encompasses the constructs of *Intervention Source, Evidence Strength and Quality, Relative Advantage, Adaptability, Trialability, Complexity, Design Quality and Packaging,* and *Cost*. In total, teachers and school staff made 60 comments about *Intervention Characteristics*, comprising 8% of all comments made (see Table 2). The majority of comments made about *Intervention Characteristics* identified facilitators (n = 49), while only 11 identified barriers.

The most common domain used to code teacher and school staff comments about *Intervention Characteristics* was *Evidence Strength and Quality*, which was coded 46 times as a facilitator of TIS. These comments indicated that the teachers and school staff felt as though the quality and validity of the supporting information and evidence behind the TIS intervention was good. For example, one participant identified "everything we learned about the ways in which trauma our kids experience impact[s] their actions" as a facilitator of TIS at his or her school.

Complexity was the second most common code within this domain. All of the comments related to *Complexity* were coded as barriers, indicating that the intervention may have been difficult for the school to implement. Finally, *Adaptability* was also coded several times, with the majority of those codes falling into the category of barriers. Specifically, teachers and school staff noted concerns that TIS may not be adaptable to fit the specific needs of their school. The remaining five constructs within the *Intervention Characteristics* domain received fewer than two codes each.

Outer Setting

Outer Setting, which encompasses the economic, political, and social context of the school, includes the domains *Student Needs and Resources, Cosmopolitanism, Peer Pressure,* and *External Policy and Incentives*. Teachers and school

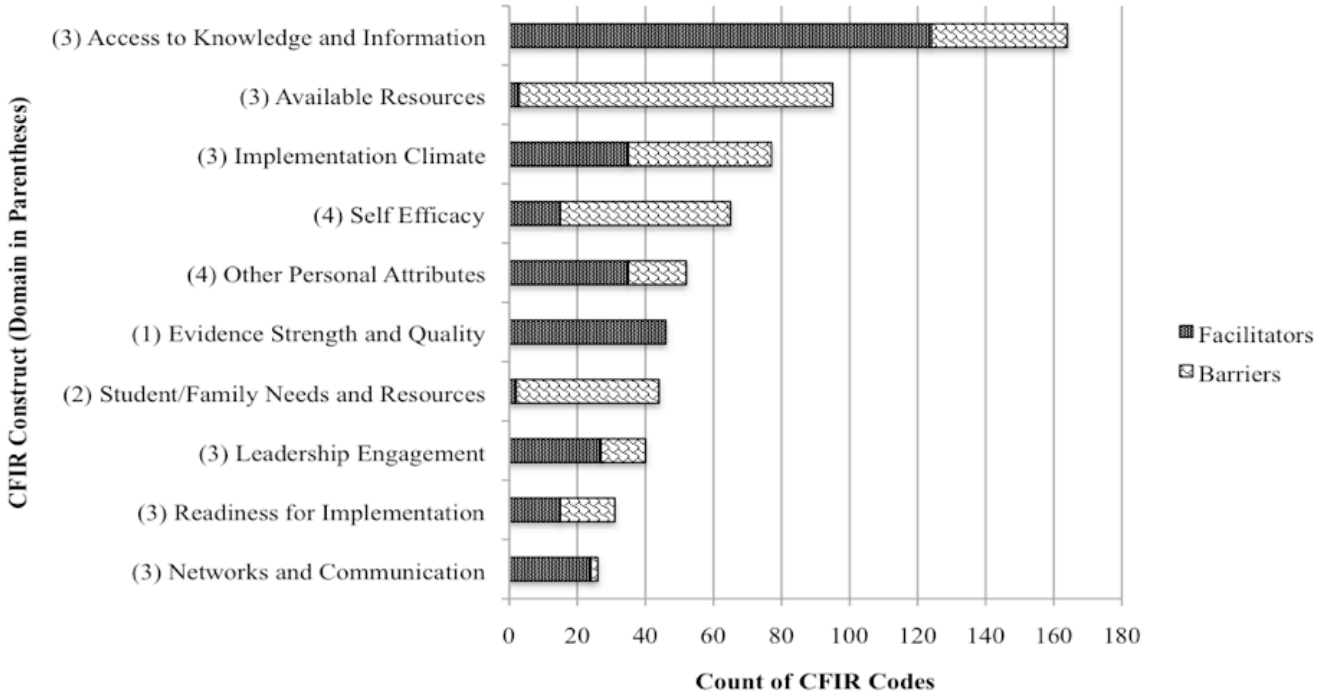

Figure 2. Most commonly coded CFIR constructs. Domain is indicated by the number in the parentheses; Domain 1 = *Intervention Characteristics,* Domain 2 = *Outer Setting*, Domain 3 = *Inner Setting*, Domain 4 = *Characteristics of Individuals*.

Table 2
Barriers and Facilitators for CFIR Domain I (Intervention Characteristics) with Example Comments

Domain/Construct	Codes (*n*)	Codes (% of total)	Facilitator (*n*)	% Facilitators within Code	Barrier (*n*)	% Barriers within Code	Example Comments
Domain I. Intervention Characteristics	60	8.3%	49	81.7%	11	18.3%	
Intervention Source	1	0.1%	0	0.0%	1	100.0%	
Evidence Strength and Quality	46	6.3%	46	100.0%	0	0.0%	Facilitator: "everything we learned about the ways in which trauma our kids experience impact[s] their actions"
Relative Advantage	2	0.3%	0	0.0%	2	100.0%	
Adaptability	4	0.6%	1	25.0%	3	75.0%	Barrier: “trauma-informed is difficult to use whole group”
Trialability	0	0.0%	0	0	0	0	
Complexity	5	0.7%	0	0.0%	5	100.0%	Barrier: "the amount of students/scale of applying the approach can be overwhelming"
Design Quality and Packaging	1	0.1%	1	100.0%	0	0.0%	
Costs	1	0.1%	1	100.0%	0	0.0%	

Table 3
Barriers and Facilitators for CFIR Domain II (Outer Setting) with Example Comments

Domain/Construct	Codes (*n*)	Codes (% of total)	Facilitator (*n*)	% Facilitators within Code	Barrier (*n*)	% Barriers within Code	Example Comments
Domain II. Outer Setting	51	7.0%	3	5.9%	48	94.1%	
Student/Family Needs and Resources	44	6.1%	2	4.5%	42	95.5%	Barrier: "some parents work against the progress made at school"
Cosmopolitanism	7	1.0%	1	14.3%	6	85.7%	Barrier: "lack of community mental health services"
Peer Pressure	0	0.0%	0	0	0	0	
External Policy and Incentives	0	0.0%	0	0	0	0	

staff made a total of 51 comments about *Outer Setting,* comprising about 7% of all comments made (see Table 3). The majority of comments made about *Outer Setting* identified barriers (*n* = 48), while only three identified facilitators. Most commonly, codes within *Outer Setting* captured teacher and school staff comments about the *Student/Family Needs and Resources*, which was coded 42 times as a barrier of TIS. The primary identification of *Student/Family Needs and Resources* as a barrier for TIS indicates that many teachers and school staff felt that TIS was not sufficiently tailored to the needs of their school population. For example, one participant commented, "some parents work against the progress made at school." *Cosmopolitanism* was the second most commonly coded construct within the *Outer Setting* domain. Specifically, six of the seven comments coded under the *Cosmopolitanism* code were barriers, indicating that the school was not well enough networked with other community organizations that could play an important role in TIS, such as community mental health clinics. The remaining two constructs within *Outer Setting* did not receive any codes.

Inner Setting

Inner Setting is defined as the structural, cultural, and political context within the organization and includes the following constructs: *Structural Characteristics, Networks and Communications, Culture, Implementation Climate* (with subconstructs *Tension for Change, Compatibility, Relative Priority, Organizational Incentives and Rewards, Goals and Feedback,* and *Learning Climate*), and *Readiness for Implementation* (with subconstructs *Leadership Engagement, Available Resources*, and *Access to Knowledge and Information*). Overall, teachers and school staff made 473 comments about the *Inner Setting*, with the comments falling relatively evenly between facilitators (*n* = 244) and barriers (*n* = 229) (see Table 4). *Inner Setting* comments comprised about 65% of all comments made by teachers and school staff.

Codes within *Inner Setting* most commonly captured comments about *Access to Knowledge and Information*, which was coded 124 times as a facilitator and 40 times as a barrier to TIS. In this case, though many teachers and school staff felt like they had sufficient, accessible, and practical information about TIS to implement it, approximately a third disagreed. For example, one teacher commented, "I feel like there is not enough training to give me the actual skills to fully implement trauma-informed approaches." The second most common code within *Inner Setting* was *Available Resources*. Almost all of the 95 codes in this construct were identified as barriers, demonstrating that teachers thought there were insufficient resources being dedicated to the intervention for it to be successful. For example, one teacher stated that there was "little to no time/ resources/structures implemented by the school to

Table 4. Barriers and Facilitators for CFIR Domain III (Inner Setting) with Example Comments

Domain/Construct	Codes (*n*)	Codes (% of total)	Facilitator (*n*)	% Facilitators within Code	Barrier (*n*)	% Barriers within Code	Example Comments
Domain III. Inner Setting	473	65.1%	244	51.6%	229	48.4%	
Structural Characteristics	`	0.0%	0	0	0	0	
Networks and Communication	26	3.6%	24	92.3%	2	7.7%	Facilitator: "group discussions with my coworkers"
Culture	13	1.8%	8	61.5%	5	38.5%	Facilitator: “We have a culture in which practice is essential” Barrier: “My school culture struggles to set logical consequences, routines, with students”
Implementation Climate	77	10.6%	35	45.5%	42	54.5%	Facilitator: “Other teachers/deans being on the same page" Barrier: "Lack of support or follow up from other adults"
Tension for Change	3	0.4%	2	66.7%	1	33.3%	
Compatibility	9	1.2%	0	0.0%	9	100.0%	Barrier: "our merit/demerit/send-out procedures are not compatible with TIS-LC"
Relative Priority	4	0.6%	0	0.0%	4	100.0%	Barrier: "It hasn't been a whole-school priority so I have forgotten it in general"
Organizational Incentives and Rewards	0	0.0%	0	0	0	0	
Goals and Feedback	10	1.4%	5	50.0%	5	50.0%	Facilitator: “Feedback from other adults and practice scenarios” Barrier: “No feedback on my implementation”
Learning Climate	1	0.1%	1	100.0%	0	0.0%	
Readiness for Implementation	31	4.3%	15	48.4%	16	51.6%	Facilitator: "the school-wide behavior and character structures that were trauma-informed care aligned” Barrier: "lack of systems/actionable methods"
Leadership Engagement	40	5.5%	27	67.5%	13	32.5%	Facilitator "coaching and support from the leadership team" Barrier: "no support, no oversight, no accountability"
Available Resources	95	13.1%	3	3.2%	92	96.8%	Barrier: "little to no time/resources/structures implemented by the school to allow for additional trauma-informed approaches"
Access to Knowledge and Information	164	22.6%	124	75.6%	40	24.4%	Facilitator: “The TIS PDs have been informative and allowed me to embrace various skills" Barrier: "I feel like there is not enough training to give me the actual skills to fully implement trauma-informed approaches"

allow for additional trauma-informed approaches."

The third most common code within the *Inner Setting* domain was *Implementation Climate*. This construct, with 77 codes split relatively evenly between barriers and facilitators, represents teachers and school staff who felt there was (or was not) a shared commitment to change within the school. For example, one teacher stated a barrier to TIS was the "lack of support or follow up from other adults." *Leadership Engagement*, with 40 total codes, represented the commitment, involvement, and accountability of the school leaders when implementing TIS. About two thirds of the comments were coded as facilitators. One teacher, for example, stated that "coaching and support from the leadership team" was a facilitator of TIS at his/her school. However, the remaining third of the comments in this construct were coded as barriers.

Two additional constructs within *Inner Setting* garnered more than 20 codes. First, *Readiness for Implementation*, which represented teacher perceptions that their school was (or was not) ready to implement TIS, including the natural alignment of TIS with the school's other systems. The 31 codes that fell under this construct were fairly evenly split between barriers and facilitators. For example, one participant wrote that his/her school's "lack of systems/actionable methods" was a barrier to TIS implementation. Second, *Networks and Communication* was coded 26 times as a facilitator. This construct indicated that the communication among the individuals in the school assisted in teachers' and school staff's ability to implement the intervention. Overall, individuals reported *Networks and Communication* was a facilitator, stating, for example, that "group discussions with my coworkers" helped with TIS implementation.

The remaining constructs in *Inner Setting* received fewer codes. *Culture*, for example, garnered 13 codes that were split fairly evenly between barriers and facilitators. *Culture* is defined as the compatibility of the norms of a school and the intervention. Barriers and facilitators were split evenly between the 10 codes assigned to *Goals and Feedback*, which represented the amount of feedback and communication teachers received with regard to TIS implementation. *Compatibility* received nine total codes, all of which were barriers, suggesting at least some teachers believed the intervention was not a good fit with their school. Finally, *Relative Priority* received four codes, all of which were barriers. This construct reflects teachers and other school staff who thought the TIS intervention was not important at the school relative to other initiatives. The remaining four constructs within the *Inner Setting* domain received fewer than two facilitator or barrier codes.

Characteristics of Individuals

The *Characteristics of Individuals* domain is defined as the characteristics of the teachers and other school staff responsible for carrying out the TIS intervention that may influence its success. This domain includes five constructs: *Knowledge and Beliefs about the Intervention, Self Efficacy, Individual Stage of Change, Individual Identification with the School*, and *Other Personal Attributes*. Overall, this domain accounted for about 19% of the total assigned codes and received 140 total codes, 61 of which were facilitators and 79 of which were barriers (see Table 5).

The most common code within *Characteristics of Individuals* was *Self Efficacy*, which is defined as teachers' beliefs that they were personally capable of implementing the TIS intervention. *Self Efficacy* was largely seen as a problem that may hinder TIS implementation, with 50 of the 65 codes classified as barriers. For example, one teacher worried, "the approaches [may go] wrong because I didn't use them well." The catch-all category of *Other Personal Attributes* was also coded frequently. Two thirds of the 52 codes were classified as facilitators, while the remaining third were classified as barriers. This code captured the idea that the personal traits of teachers, such as tolerance of ambiguity, intellectual ability, motivation, values, competence, capacity, and learning style, were generally helpful as they implemented TIS in their classrooms. For example, one teacher stated, "my own initiative -- I went out and figured out how to work with traumatized students on my own time and money," when asked about what had helped him/her implement TIS.

The remaining constructs within the *Characteristics of Individuals* domain garnered fewer than 20 codes each. *Knowledge and Beliefs about the Intervention*, which is defined as teachers'

Table 5
Barriers and Facilitators for CFIR Domain IV (Characteristics of Individuals) with Example Comments

Domain/Construct	Codes (*n*)	Codes (% of total)	Facilitator (*n*)	% Facilitators within Code	Barrier (*n*)	% Barriers within Code	Example Comments
Domain IV. Characteristics of Individuals	140	19.3%	61	43.6%	79	56.4%	
Knowledge and Beliefs about the Intervention	18	2.5%	6	33.3%	12	66.7%	Facilitator: "Deep understanding of TI approach / keeping a more open mind" Barrier: "The barrier has been my initial comfort with the approach"
Self Efficacy	65	8.9%	15	23.1%	50	76.9%	Facilitator: "My approach to different situations kids were facing" Barrier: "The approaches going wrong because I didn't use them well"
Individual Stage of Change	5	0.7%	5	100.0%	0	0.0%	Facilitator: "I was becoming more dissatisfied w/ work and w/ life as a result and decided to make a shift toward more self-care"
Individual Identification with School	0	0.0%		0		0	
Other Personal Attributes	52	7.2%	35	67.3%	17	32.7%	Facilitator: "my own initiative. I went out and figured out how to work with traumatized students on my own time and money" Barrier: "Personal biases of high-stress situations"

attitudes about the intervention and its effectiveness, was coded 18 times, about two thirds of which were barriers. Finally, *Individual Stages of Change* was coded five times, all of which were classified as facilitators of TIS. This construct captures teachers' readiness to make a change and adopt new behaviors, such as those associated with implementing TIS. The final code within *Characteristics of Individuals* was not used.

Process

The fifth and final domain of the CFIR is *Process*, which includes the constructs of *Planning, Engaging*, *Opinion Leaders, Formally Appointed Internal Implementation Leaders, Champions*, *External Change Agents*, *Executing*, and *Reflecting and Evaluating*. This domain received the fewest codes, with a total of only three codes overall (< 1% of all codes), one of which was a facilitator and two of which were barriers (see Table 6).

Discussion

The goal of the current study was to unpack the process of TIS implementation with a specific focus on operationalizing the barriers and facilitators of TIS. This study used the Consolidated Framework for Implementation Research (CFIR; Damschroder et al., 2009) to systematically and comprehensively synthesize the perspectives of teachers and school staff from five urban schools that implemented a multi-component TIS

Table 6
Barriers and Facilitators for CFIR Domain V (Process)

Domain/Construct	Codes (*n*)	Codes (% of total)	Facilitator (*n*)	% Facilitators within Code	Barrier (*n*)	% Barriers within Code
Domain V. Process	3	0.4%	1	33.3%	2	66.7%
Planning	1	0.1%	0	0.0%	1	100.0%
Engaging	0	0.0%	0	0	0	0
Opinion Leaders	0	0.0%	0	0	0	0
Formally Appointed Internal Implementation Leaders	1	0.1%	1	100.0%	0	0.0%
Champions	0	0.0%	0	0	0	0
External Change Agents	0	0.0%	0	0	0	0
Executing	1	0.1%	0	0.0%	1	100.0%
Reflecting and Evaluating	0	0.0%	0	0	0	0

intervention (Breimaier et al., 2015). Overall, teachers and school staff provided a rich array of comments, providing roughly equal numbers of comments about barriers and facilitators. Several themes are apparent from the findings, which have the potential to guide researchers and educators to boost facilitating contextual elements while removing barriers, with the goal of effectively and sustainably implementing TIS.

Key Implementation Drivers of TIS

The domain with the most codes, by far, was *Inner Setting*, which captures the structural, cultural, and political context within the school. Given that the majority of participants in the study were teachers, classroom support staff, or other school-level personnel, it is unsurprising that they attended to the context of the school as an important implementation driver. *Inner Setting* also contained the three most commonly coded constructs in the current study: *Access to Knowledge and Information*, *Available Resources,* and *Implementation Climate*.

Teacher and school staff comments regarding *Access to Knowledge and Information* focused either on having or not having sufficient information to implement TIS. A core component of TIS is foundational trauma training, in which the full school staff is trained on the prevalence and impact of trauma; the relationship between trauma and student behavior; the key principles of trauma-informed approaches; and staff self-care and well-being (Cole et al., 2013; McIntyre et al., 2019; SAMHSA, 2014a). This professional development training is typically the first introduction to trauma-informed approaches for many of the teachers and school staff. As such, it is designed to be the primary entry points to TIS during the installation phase of program implementation, in which "…new services are not yet being delivered, but the necessary individual and organizational competencies and supporting infrastructure are being established so that the new practice can be successfully put in place" (Metz et al., 2015, p. 12). The primary goal of the foundational trauma training is to build consensus for, and commitment to, trauma-informed approaches, thus preparing the school to effectively implement TIS (Fixsen, Naoom, Blase, & Friedman, 2005; Nutt, 2001).

Accordingly, the foundational trauma training focuses more on the "why" rather than the "how" of TIS. Across the remainder of the school year, additional skill-building trainings are provided, frequently accompanied by teacher coaching (Cole et al., 2013; SAMHSA, 2014a). Skill-building trainings on content central to TIS may include, for example, establishing safe and supportive environments; preventing and responding to student behavioral escalation; or fostering healthy and connected relationships. Ideally, teacher consultation increases teachers' use of specific skills in their classrooms, thus increasing

the effectiveness of the training (Garet, Porter, Desimone, Birman, & Yoon, 2001; Reinke, Stormont, Herman, & Newcomer, 2014).

Teachers in the current study also frequently made comments that fell into the construct of *Self Efficacy* within the domain of *Characteristics of Individuals*, which is defined as teachers' beliefs that they were personally capable of implementing TIS. In the current demonstration project, teacher coaching was not provided by the TIS-LC due to budgetary constraints. Full implementation of the TIS model, including teacher coaching, should reduce barriers related to both *Access to Knowledge and Information* and *Self Efficacy*. In contrast, solely implementing didactic professional development trainings on TIS should be avoided.

In addition, another common implementation driver used in TIS is to identify champions of the program within the school. Champions can have any role in the organization, and they provide key informal support to teachers and school staff who are carrying out the intervention. This can include advocating for the use of trauma-informed approaches instead of alternatives or reducing feelings of isolation in their peers. In sum, this study's findings emphasize the importance of implementing the full TIS model, including skill-building trainings targeting key areas of need within the school, teacher consultation to translate the information from the training into practice, and the appointment of champions of TIS to facilitate its on-the-ground implementation.

Available Resources was the second most frequently coded construct, and it was referenced to primarily be a barrier to the success of the TIS intervention. The majority of teacher and school staff comments in this construct focused on a lack of staff, space, and, most frequently, time. Rallying the necessary resources for TIS implementation can be a challenge. Cole and colleagues (2013) provide guidance on how to identify resources both within and external to the school, and school leaders can also prioritize TIS over competing initiatives.

In addition, teams working with schools to implement TIS can utilize a "cultural audit" during the installation phase (Metz et al., 2015). This "cultural audit" includes an interview with key school leaders with the goal of identifying the existing school values, language, and approaches that may be aligned with the foundational professional development trauma training (New Orleans TIS-LC, 2017). This effort to fit the TIS intervention into the existing structures and culture of the school helps teachers and school staff see that the TIS intervention is not a completely new program, but rather a new way of organizing their existing thinking and work.

Finally, *Implementation Climate*, representing whether teachers felt that there was a shared commitment to change within the school, and *Leadership Engagement*, representing the commitment, involvement, and accountability of the school leaders, were also frequently mentioned by teachers and school staff. In both cases, these codes captured both barriers and facilitators of TIS implementation. As mentioned above, the goal of the foundational trauma training is to build consensus for and commitment to TIS (Fixsen et al., 2005; Nutt, 2001). A second key component of TIS is leadership support and consultation. For example, teams supporting TIS implementation can help schools review their policies, procedures, and practices to evaluate alignment with trauma-informed practices. One tool that may be particularly useful for school psychologists is the Trauma-Responsive School Implementation Assessment, which covers eight key domains of a TIS (Treatment and Services Adaptation Center, 2019). Providing support and tools to the school leadership team so that they can evaluate their school's strengths and areas for growth related to TIS should ideally precede full staff foundational trauma training. This way, by the time full staff professional development occurs, the school's fit with and commitment to the initiative is clear (Cole et al., 2013). Once the leadership team has engaged in this needs assessment, they create a trauma-informed action plan which is individualized to the context of the school, and which systematically identifies actionable and measurable goals (Cole et al., 2013).

Limitations and Future Research

The limitations of the current study must be considered. First, the comments coded in this study were heavily weighted toward the voices of teachers and other staff who work at the classroom level. This is unsurprising given that the majority of the

staff in a school hold these types of job roles. That being said, some CFIR codes, such as the *Process* domain, were likely underrepresented because of the nature of our sample. Future research should explore the barriers and facilitators of TIS using targeted samples of school leaders, district-level staff, parents, and community members.

A second important limitation was the fit between the CFIR and the school environment. This is the first known study to apply the CFIR, which was originally developed for health interventions, to the implementation of a universal school-based intervention. Though noted to be comprehensive, the CFIR is not a perfect fit with every evidence-based intervention and setting (i.e., Breimaier et al., 2015). Future work with the CFIR and school-based interventions may address these minor misfits by identifying "catch-all" constructs, such as *Student/Family Needs and Resources* and *Other Personal Attributes*, and developing CFIR constructs specific to the educational setting.

Conclusions

Trauma-informed care originated in clinical settings. However, schools are notably different than clinical settings in both their focus on educational outcomes and their mission to serve the general population. The adaptation of trauma-informed approaches into schools has provided a unique opportunity to understand and leverage the key implementation drivers of TIS. The clear themes that resulted from the coding process used in the current study suggest teachers and school staff know what they need in order to successfully implement TIS. The insights gained from the current and similar studies provide researchers and educators with the information they need to ensure that TIS interventions are feasible, acceptable, effective, and sustainable (Nastasi et al., 2000). In sum, this study synthesizes information from the actual implementation of TIS in five urban schools that can be used during the development or implementation of TIS to enhance the likelihood of its success.

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Article

A Pilot Study on the Effects of a Supplemental Trauma Intervention Within a Head Start Preschool Program

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This study investigated the effects of a pilot implementation of a trauma supplement intervention, based on the Attachment, Regulation, and Competency (ARC) Model (Blaustein & Kinniburgh, 2019), on Head Start agency attitudes, teacher secondary traumatic stress, classroom climate, and child social-emotional functioning. One hundred and six children, ages 3-4, enrolled in a Head Start preschool in the 2014 school year, their teachers (*N*= 5), and teacher assistants (*N*=5) participated. Two half-day trainings on trauma-informed practice based on the ARC framework over a period of six weeks was provided. This was done as a supplement to the social emotional curriculum, Al's Pals (Geller, 1999), already in place (i.e., trauma supplement intervention group, *N*=3 teachers; *N*=3 teacher assistants). The comparison site implemented the social-emotional curriculum as usual (i.e., Al's Pals) but did not receive any training on trauma-informed practices (i.e., intervention-as-usual comparison group, *N*=2 teachers; *N*=2 teacher assistants). Results of agency-level analyses suggests that while administrators acknowledged the importance of trauma-informed practices, few practices were in place prior to or following the implementation of the intervention. Teachers in the intervention group (*N*=3) reported positive effects of the intervention on their knowledge regarding trauma informed care. Minimal differences in the domains of positive climate, negative climate, and sensitivity were noted at posttest in classrooms in both the intervention and comparison conditions. Children that had experienced trauma and received the trauma supplement intervention demonstrated marginal improvements in social-emotional functioning. Based on study results, utilizing trauma-informed interventions in school settings must first attend to administration (i.e., agency attitudes) and teacher buy-in.

Keywords: Trauma Intervention, Head Start, Preschool Trauma, ARC

Young children experience emotionally traumatic events at a much higher rate than the general population. One third of childhood maltreatment victims are under the age of four (United States Department of Health and Human Services [HHS], 2013). Children in low-income and ethnic minority families will experience an even greater number of traumatic events throughout their lifetimes (HHS, 2013; Turner, Finkelhor, Ormrod, & Turner, 2006). Research shows that even very young, preverbal children have the ability to encode and remember traumatic events (Kaplow, Saxe, Putnam, Pynoos, & Lieberman, 2006), and that experiencing trauma at a young age can lead to difficulties throughout development.

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Traumatic experiences may prevent young children from forming secure attachments with the primary caregiver, thereby inhibiting the child's ability to trust caregivers and develop normal coping skills (Lieberman & Knorr, 2007). This is magnified by the fact that caregivers of children who have experienced trauma may also be experiencing trauma themselves. Young victims of trauma tend to exhibit more internalizing and externalizing behaviors than their older peers, leading to school-related difficulties (Perfect, Turley, Carlson, Yohannan, & Saint Gilles, 2015; Scheeringa, Zeanah, Myers, & Putnam, 2003). Childhood trauma also affects brain development and neural connectivity, with physical differences evident in the brains of children who have experienced trauma compared with peers (Cook, Ciorciari, Varker, & Devilly, 2009). Further, child victims of trauma have a greater chance of being revictimized as adults (Classen, Palesh, & Aggarwal, 2005). Many children who experience trauma will never receive intervention, as mental health workers often do not properly identify young trauma victims (Graham-Bermann, Castor, Miller, & Howell, 2012). As an organization that reaches young children from low-income backgrounds, Head Start preschool programs care for young children who have experienced trauma, many of which are not receiving treatment. Two studies of trauma prevalence in Head Start populations in Michigan (77%, Pfenninger Saint Gilles & Carlson, 2015; 78%, Graham-Bermann & Seng, 2005) highlighted the need for interventions in this particular at-risk population.

The School as a Trauma-informed System

Literature on the school as a trauma-informed system is based on the model of the child welfare system. According to the National Child Traumatic Stress Network (NCTSN), a group of treatment and research centers funded by the Center for Mental Health Services, Substance Abuse and Mental Health Services Administration (SAMHSA), a trauma-informed child welfare system

> *"is one in which all parties involved recognize and respond to the varying impact of traumatic stress on children, caregivers, families, and those who have contact with the system. Programs and organizations within the system infuse this knowledge, awareness, and skills into their organizational cultures, policies, and practices. They act in collaboration, using the best available science, to facilitate and support resiliency and recovery"* (Chadwick Trauma-Informed Systems Dissemination and Implementation Project National Advisory Committee, 2011, p. 1).

Hopper, Bassuk, and Olivet (2009) offer another consensus-based definition of trauma-informed care as a "strengths-based framework that is grounded in an understanding of and responsiveness to the impact of trauma, that emphasizes physical, psychological, and emotional safety for both providers and survivors, and that creates opportunities for survivors to rebuild a sense of control and empowerment" (p. 133).

While Head Start agencies are aware that many students have experienced trauma, they may not be prepared to support those students with trauma-informed interventions. This is typically due to lack of coordination of services at the building level or above (Holmes, Levy, Smith, Pinne, & Neese, 2015). Preschool settings, specifically Head Start classrooms, can serve as an ideal early childhood education environment in which targeted social-emotional interventions can be implemented (Carlson et al., 2019; Loomis, 2018). The basic components of these social-emotional interventions include practices such as securing a safe environment, providing consistency in schedule and caregivers, and allowing for opportunities to process the traumatic event. These needs can be fulfilled by Head Start classrooms through training and supporting staff (Swick, Knopf, Williams, & Fields, 2013). Research shows that infusing the existing system with knowledge regarding trauma is the best way to provide child victims of trauma with appropriate services (Child Welfare Committee, National Child Traumatic Stress Network, 2008). A trauma-informed system targets all levels of the organization, including administrators, staff, teachers, parents, and students, and provides them with the necessary training, consultation, and referral processes to support those who have experienced trauma.

Table 1
Summary of ARC Model

Attachment	Regulation	Competency
(1) Supporting caregivers in managing their own emotional and physiological responses	(1) Supporting youth in understanding feelings, body states, thoughts and behaviors	(1) Increasing opportunity for choice and empowerment
(2) Enhancing rhythm and reciprocity in the caregiver-child relationship	(2) Helping youth tolerate and manage physiological and emotional experience	(2) Identify and explore aspects of self, and build narrative around key life experiences
(3) Building effective responses to behavior	(3) Helping youth build tolerance for and skill in building relational connection	

Note. Information derived from "What is ARC" (2016)

The Attachment, Regulation, Competency (ARC) Model

The Attachment, Regulation, Competency Model (ARC; Blaustein & Kinniburgh, 2019) is one model that has been adapted and implemented across contexts to create trauma-informed systems. ARC is a flexible, components-based, intervention framework that has been implemented across settings with children who have experienced trauma, including children in the child welfare system (Hodgdon, Kinniburgh, Gabowitz, Blaustein, & Spinazzola, 2013), those in an outpatient clinical setting (Arvidson et al., 2011; Ford, Blaustein, Habib, & Kagan, 2013), and those in preschool settings (Holmes et al., 2015). ARC is designed for use both as an individual and group intervention, as well as for use as an organizational framework ("What is Arc," 2016). The general goal of the ARC framework across settings is to "support children, adolescents, and caregivers in effective engagement in the world, in a manner that is *empowered* and ***future-oriented***, rather than focused on survival" ("What is ARC," 2016). See Table 1 for a list of ARC domains and targets and Blaustein and Kinniburgh (2019) for a more comprehensive explanation of these areas. In sum, ARC strives to strengthen skills across three domains: (1) attachment, (2) regulation, and (3) competency both in children and families who have experienced trauma, as well as systems that work with clients who have experienced trauma. Within these three domains, there are eight additional "treatment targets." Woven throughout the domains and targets are the concepts of *engagement, psychoeducation, and routine*. It is noted that the description of the ARC model presented above is based on the current updated model (Blaustein and Kinniburgh, 2019). The present study is based on the original version of the model, which is presented in Table 2, and is based on the earlier work of Blaustein and Kinniburgh (2012). While the concepts and targets of the model are the same, the terminology and structure of the model is slightly different.

Table 2
Summary of the Original ARC Model

Trauma Experience Integration		
Attachment	**Self-Regulation**	**Competency**
Caregiver Management of Affect	Affect Identification	Executive Functions
Attunement	Modulation	Self-development and identity
Consistent Response	Affect Expression	Trauma Experience Integration
Routines and Rituals		

Note: Information in table derived from: Blaustein and Kinniburgh (2012)

Evidence-Base for Interventions based on the ARC Model.

The implementation of the ARC Model (Blaustein & Kinniburgh, 2019) at the system-level has been used widely across treatment settings including the child welfare system and in residential treatment facilities (Hodgdon, Kinniburgh, Gabowitz, Blaustein, & Spinazzola, 2013). These studies show increases in placement permanency and a drop in T-scores on the Child Behavior Checklist (CBCL; Achenbach, 1991) indicating improvements in children's externalizing and internalizing behaviors. Recently, this framework has been adapted for implementation with young children in the outpatient clinical setting. Results also showed a statistically significant drop in CBCL total scores, as well as increased permanency placements for children who received treatment when compared with those who did not (Arvidson et al., 2011).

The ARC framework has also been adapted for use in the Head Start preschool setting through the Head Start Trauma Smart (HSTS) program, which has been implemented widely in the state of Missouri (Holmes et al., 2015). In order to achieve the goal of bringing trauma-informed supports into Head Start classrooms, HSTS uses four components: (1) training by HSTS therapists to all people who surround the child (e.g. teachers, parents, administrators, bus drivers) in the ARC model, translated for implementation with a lay audience, (2) referral of children who meet criteria based on measures of behavior and trauma symptomology to intensive trauma-focused interventions based on ARC and TF-CBT models, (3) HSTS therapist consultation to teachers and students on an as-needed basis, and (4) peer-based mentoring to teachers and supervisors that supports each other.

In the 2015 study, Holmes and colleagues implemented an ARC-based intervention in a Head Start center with 81 young children (mean age=4.25) who had been identified as in need of therapeutic intervention. In this study, more than half (60%) of this high-risk Head Start sample had been exposed to two or more traumatic events. Study findings indicated decreases in internalizing and externalizing behaviors of children enrolled in the program, as well as high teacher satisfaction with the intervention. However, in this study the impact on other variables associated with system-level interventions, such as agency attitudes, classroom climate, or teacher practices, were not explored.

Purpose of the Current Study

This pilot implementation of a trauma supplement intervention (note: to be referred to throughout the paper as the "intervention group") based on the ARC framework (Blaustein & Kinniburgh, 2019) contributes to the literature via the breadth of outcome variables examined. The intervention was approved by the IRB board of the authors' university affiliation. This included an examination of the effects of this intervention on (a) administrators' attitudes towards trauma-informed practices, (b) classroom climate, (c) teacher secondary traumatic stress, and (d) child social-emotional outcomes. An intervention-as-usual group (i.e., to be referred to throughout the paper as the "comparison group") served as a comparison to examine how well interventions were carried out as planned and to address the following research questions:

1. Does the agency's (i.e., director of preschool programs, mental health consultants, building supervisors) knowledge and implementation of trauma-informed practices change as measured using the Trauma-Informed Agency Assessment (TIAA; Yoe, Hornby, Goan, & Tiernan, 2012)?
2. Does the emotional support provided by teachers within the classroom (i.e., positive climate, teacher sensitivity), as measured by the CLASS assessment, increase in the intervention group?
3. Do teacher perceptions of their ability to cope with secondary trauma improve as a result of the trauma supplement intervention?
4. Might children's social-emotional functioning improve as a result of the intervention? Do these outcomes differ by whether a child has a history of trauma exposure?

Methods

Participants

Agency-level participants (*N*=5) involved in this pilot study included the following Head Start staff: Director of Preschool Programs, Mental Health Consultants (*N*=3), and a Building Supervisor. Qualitative data collected at pretest using the Trauma-Informed Agency Assessment (TIAA: Yoe et al., 2012) revealed similar levels of trauma awareness and readiness for change across the intervention and comparison classrooms.

The teacher/classroom participants (*N*=10) represented five classrooms. They included teachers (*N*=3 intervention, *N*=2 comparison) and teacher assistants (*N*=3 intervention, *N*=2 comparison). Each classroom consisted of between 15 and 20 students, and each classroom was staffed with one teacher and one teacher assistant. All teachers identified as white. Teachers in the comparison condition had slightly fewer years (9 years) of experience compared to the intervention condition (12 years). At pretest, teachers in both conditions had similar ratings of their ability to deal with stress caused by working with children who have experienced trauma, as measured by the *Secondary Trauma Self-Efficacy Scale (STSES*; Cieslak et al., 2013). No differences were observed on pretest measures of emotional support, classroom organization, or instructional support between the two classrooms (i.e., CLASS observations).

Table 3 provides an overview of the child participants in this study. A total of 106 (*N*=53 intervention, *N*=53 comparison) preschool students and their primary caregivers (*N*=106; *N*=53 intervention, *N*=53 comparison) participated. Of the 106, 52 (49%) had a reported Adverse Childhood Experiences (ACE; Felitti et al., 1998) score of greater than one, indicating a history of trauma (e.g., "trauma condition"). These items are based on ongoing research from the Centers for Disease Control and Prevention, and include events in the categories of Abuse, Neglect, and Household Dysfunction. Fifty-three children (50%) were in the "no trauma" condition. Trauma condition data for one child (1%) was not provided. The majority of child participants were reported by parents as Black/African American (40.4% of intervention group v. 43.4% in the comparison group) or white (28.8% of intervention group v. 24.5% of comparison group). Caregivers from across the two conditions also reported similar size of households (e.g., 3-5 members), income levels, educational attainment, and rates of being "homeless/hungry" in the past six months. Teachers rated children in the comparison condition (mean T-Score=55) as demonstrating significantly higher levels of internalizing problems as measured by The Behavior Assessment System for Children, Second Edition, Progress Monitor (BASC-2 PM (Kamphaus, 2014) compared to children in the intervention condition (mean T-Score=48). All other ratings on the The Devereux Early Childhood Assessment Preschool Program, Second Edition (DECA-P2; LeBuffe & Naglieri, 2012), and BASC-2 PM were similar (see Table 4).

Measures

Classroom Fidelity Checklist. Fidelity of adherence to the trauma supplement intervention and implementation of classroom strategies that teachers learned in the trainings was measured at four time points during the intervention using an 11-item checklist created by the Head Start mental health team (*Trauma Condition Classroom Fidelity Checklist*). The 11 items reflect the ARC building blocks and the strategies that are based on the building blocks that were presented in the teacher training sessions. The measure is scored by marking a "1" if the item was present during the observation and a "0" if it was not present. For the purpose of analysis, the total score was calculated by summing the number of ones. The total score was then placed into one of the following categories: total score 0-3, low implementation fidelity, 4-6, medium implementation fidelity, 7-11, high implementation fidelity. A brief measure of satisfaction with the intervention trainings and a set of interview questions were also administered to explore teacher perceptions of involvement in the study. See Appendix for a copy of this checklist.

Agency Attitudes. The *System of Care Trauma-Informed Agency Assessment-Amended (TIAA-Amended*; Yoe et al., 2012) was used to help guide structured interviews with the Director of Preschool Programs and two Head Start Mental Health Consultants, who were master's-level clinicians in the mental health field, site supervisors

Table 3
Demographic Information by Intervention Condition

Demographic Information	Intervention Group *N* (%)	Comparison Group *N* (%)	Total Sample *N* (%)
Child Race			
Black/African American	21 (40.4%)	23 (43.4%)	44 (41.9%)
White	15 (28.8 %)	13 (24.5%)	28 (26.7%)
Mixed Race	7 (13.5%)	11 (20.8%)	18 (17.1%)
Hispanic/Latino	8 (15.4%)	3 (5.7%)	11 (10.5%)
Asian	1 (1.9%)	1 (1.9%)	2 (1.9%)
Other	0 (0.0%)	2 (3.8%)	2 (1.9%)
Size of Household			
1-2	11 (21.2%)	9 (17.0%)	19 (18.1%)
3-5	21 (40.4%)	30 (56.6%)	51 (48.6%)
>5	20 (38.5%)	14 (26.4%)	34 (32.4%)
Family Income (yearly)			
< $5,000	13 (25.0%)	14 (26.4%)	27 (25.7%)
<$10,000	21 (40.4%)	9 (17.0%)	30 (28.6%)
<$20,000	11 (21.2%)	14 (26.4%)	25 (23.8%)
<$30,000	7 (13.5%)	10 (18.9%)	17 (16.2%)
<$50,000	0 (0.0%)	4 (7.5%)	4 (3.8%)
>$50,000	0 (0.0%)	2 (3.8%)	2 (1.9%)
Caregiver Educational Attainment			
No Diploma	12 (23.1%)	12 (22.6%)	24 (22.9%)
High School Diploma	19 (36.5)	22 (41.5%)	41 (39.0%)
Some College	13 (25.0%)	10 (18.9%)	23 (21.9%)
Associates Degree	6 (11.5%)	7 (13.2%)	13 (12.4%)
Bachelor's Degree	2 (3.8%)	0 (0.0%)	2 (1.9%)
Graduate/Professional Degree	0 (0.0%)	2 (3.8%)	2 (1.9%)
Homeless/Hungry in last 6 mos.	3 (5.8%)	4 (7.5%)	7 (6.7%)

and teachers at pretest and posttest in the intervention condition. The TIAA is a self-assessment designed for children's behavioral health agencies to evaluate current agency practices, as well as to progress monitor systems-level interventions in order to gauge their impact. The original form of the TIAA measures six elements: (1) physical and emotional safety, (2) trauma competence, (3) cultural competence, (4) commitment to trauma-informed philosophy, (5) trustworthiness, and (6) youth and family empowerment. Available psychometric data suggest that the six domains have moderate to high internal consistency across raters (Youth Empowerment; THRIVE Evaluation Committee, 2011).

Classroom Climate. The *Classroom Assessment Scoring System (CLASS)* is an assessment used by the Federal Office of Head Start to assess the quality of relationships in the classroom environment. These relationships, or process variables, are most directly related to overall improved student outcomes (Pianta, 2003). At the preschool level, the CLASS has three domains. Each domain is further divided into dimensions, indicators, and behavioral markers. Domains follow, with correlated dimensions in parentheses: Emotional Support (positive climate, negative climate, teacher sensitivity), Classroom

Table 4
Mean Parent Ratings (T-Scores) of Children's Social-Emotional Functioning Across Intervention and Comparison Groups at Pre and Post

	Intervention				Comparison			
	Trauma		No Trauma		Trauma		No Trauma	
Measure	Pre M (SD)	Post M (SD)	Pre M (SD)	Post M (SD)	Pre M (SD)	Post M (SD)	Pre M (SD)	Post M (SD)
DECA-TPF	46.74 (8.41)	55.89 (6.29)	48.28 (10.64)	52.52 (9.97)	42.84 (6.56)	47.91 (8.38)	48.11 (8.71)	51.00 (12.05)
DECA-AR	45.67 (8.54)	55.59 (7.00)	49.32 (11.70)	49.32 (11.70)	43.12 (7.66)	48.00 (7.96)	48.71 (9.28)	52.07 (7.94)
DECA-SR	47.96 (8.98)	54.85 (5.35)	47.20 (9.51)	50.12 (9.71)	43.28 (43.28)	46.75 (10.39)	47.82 (8.77)	50.82 (9.45)
DECA-BC	51.40 (10.24)	40.63 (9.76)	55.32 (9.57)	48.76 (11.04)	54.60 (54.60)	51.68 (9.23)	51.79 (7.90)	48.92 (9.30)
BASC2 PM-Internalizing	46.07 (6.66)	45.78 (6.84)	51.44 (9.35)	49.16 (8.66)	54.78 (11.17)	54.35 (11.43)	54.59 (13.55)	54.13 (12.15)
BASC2 PM-Externalizing	53.00 (9.18)	51.70 (7.40)	53.28 (8.82)	51.60 (7.99)	58.96 (9.25)	56.63 (8.10)	54.93 (8.58)	54.53 (9.16)

Note. DECAP2-TPF= Devereux Early Childhood Assessment Preschool Program, 2nd edition- Total Protective Factors; DECAP2-AR= Devereux Early Childhood Assessment Preschool Program, 2nd edition- Attachment/Relationships; DECAP2-SR= Devereux Early Childhood Assessment Preschool Program, 2nd edition- Self Regulation; DECAP2-BC= Devereux Early Childhood Assessment Preschool Program, 2nd edition- Behavior Concerns; BASC-2 PM Behavior Assessment Scale for Children, 2nd Edition- Progress Monitor

Organization (behavior management, productivity, instructional learning formats), and Instructional Support (concept development, quality of feedback, language modeling). Each dimension is described across a 7-point rating scale that includes specific behavioral indicators and descriptions for low, medium, and high levels of each dimension. The CLASS is meant to be used to assess classrooms and not specific children. Head Start teacher coordinators at both sites in the present study have been trained and are certified and reliable raters. The present study compared the 7-point scale numerical ratings across the Emotional Support and Classroom Organization dimensions. Reliability and validity of the CLASS has been established and widely reported (e.g., Pakarinen et al., 2010; Paro, Pianta, & Stuhlman, 2004). Confirmatory factor analysis conducted with this sample concluded that the thee-factor solution (Emotional Support, Classroom Organization, and Instructional Support) explained the classroom quality well. The internal consistency of CLASS scales was high, with Cronbach's alphas of .93, .88, and .90 for the Emotional Support, Classroom Organization, and Instructional Support scales, respectively. Item reliability coefficients were also high.

Teacher Secondary Traumatic Stress. To measure traumatic stress of teachers as it relates directly to their work with students who have experienced trauma, the *Secondary Trauma Self-Efficacy Scale (STSES*; Cieslak et al., 2013) was administered to teachers and teacher assistants at pretest and posttest with one minor adjustment. The STSES is composed of seven items all beginning

with the same stem phrase "how capable am I to..." For example, "How capable am I to deal with my emotions (anger, sadness, depression, anxiety) about working with these people," and "How capable am I to find some meaning in what had happened to those people." Note that the full STSES scale is publicly available in Cieslak and colleagues' (2013) article.

Responses are given on a seven-point Likert – type scale, ranging from 1 (*very incapable*) to 7 (*very capable*). For the purpose of this study, the phrase "these people" was changed to "the children I work with." A mean score for the seven items was computed and analyzed. Reliability and validity of the instrument, along with norms for the STSES were developed across two different studies with participants who regularly came in direct contact with individuals who experienced trauma (Cieslak et al., 2013).

Social-Emotional Outcomes. The *Devereux Early Childhood Assessment Preschool Program, Second Edition (DECA-P2*; LeBuffe, Ross, Fleming, & Naglieri, 2013) was administered to parents to measure children's risk and protective factors across time. One of the objectives of the trauma supplement intervention was to increase children's resiliency in the face of trauma so that negative long-term outcomes are prevented. The DECA-P2 is composed of both Protective Factors Scales (i.e., a combination of ratings on initiative, self-regulation, and attachment/relationships) and Behavior Concerns Scales. The first edition of the DECA has been proven effective for use with the Head Start population (e.g., Brinkman, Wigent, Tomac, Pham, & Carlson, 2007) and the reliability and validity of the measure has been widely reported (e.g., Barbu, Levine-Donnerstein, Marx, & Yaden, 2012; LeBuffe & Naglieri, 2012; Lien & Carlson, 2009).

The *Behavior Assessment System for Children, Second Edition, Progress Monitor* (*BASC-2 PM*; Reynolds & Kamphaus, 2009), preschool version, was used to measure behavioral symptom severity across time. The BASC-2 PM includes forms that measure the following behaviors: Externalizing and ADHD Problems, School and ADHD Problems, Internalizing Problems, Social Withdrawal, and Adaptive Skills. The four different BASC-2 PM forms include 15 to 20 items that are rated on a four-point scale ranging from *never occurs* to *almost always occurs.* This measure was ideal for use in the present study due to its sensitivity to behavior change over time. The BASC-2 PM has strong psychometric properties and widely used in practice (Kamphaus & Reynolds, 2009).

Trauma History. The *Childhood Trust Events Survey* (*CTES*; Pearl et al., 2012) is a 26-item, publicly-available, parent-report screener to assess a child's exposure to traumatic events. The survey has been used in the clinical setting to measure the implementation of caregiver-child trauma interventions (Pearl et al., 2012). This measure is also used by the Head Start Trauma Smart (HSTS) program in order to provide children with appropriate services based on their exposure to traumatic events (Holmes, Levy, Smith, Pinne, & Neese, 2015). Some items on the CTES were derived from the Traumatic Events Screening Inventory (TESI; Ghosh-Ippen et al., 2002) and the UCLA PTSD Index (Pynoos, Steinberg, & Rodriguez, 1999). Also embedded within the CTES are the 13 items that have been identified as the events that have the greatest and longest-lasting impact on children and are referred to as Adverse Childhood Events (ACEs; Felitti et al., 1998). These items are based on ongoing research from the Centers for Disease Control and Prevention, and include events in the categories of Abuse, Neglect, and Household Dysfunction. As the CTES is a simple index for self-report of traumatic events and not intended for diagnosis or treatment planning, reliability and validity have not been reported (as noted by Pearl et al., 2012). The current study used the CTES that includes ACE items as a screener for all children and caregivers enrolled in order to assess exposure to trauma. It was conducted at the beginning of the intervention period to sort participants into appropriate conditions (trauma exposure or no trauma exposure).

Data Collection, Intervention Procedure and Analysis

Pretest data collection phase. Pre-treatment data collection began three weeks prior to the first training session. Teachers sent an introductory letter home to parents explaining that some teachers were taking part in a research study

and they would be asked to fill out information regarding their child at two time points. Some parents were presented with this information at parent-teacher conferences and some received the packet through their child's home-school folder. Attached to this letter were (a) a demographic survey, (b) the Trauma Symptom Checklist for Young Children, and (c) the Childhood Trust Events Survey-Caregiver Version. Parents completed these forms about their children. At that time, teachers were also asked to fill out the Devereux Early Childhood Assessment-Preschool Program (DECA-P2) for all of their students. Teachers also completed Behavior Assessment System for Children-Second Edition Progress Monitor (BASC-P2) ratings of those students whose caregivers rated them as having elevated scores (ACE score >/= 1) on the Childhood Trust Events Survey. Finally, teachers rated their own perceived self-efficacy for effectively working with children who have experienced trauma on the Secondary Trauma Self-Efficacy Scale.

Data, including DECA-P2 caregiver ratings and Classroom Assessment Scoring System (CLASS) ratings, had already been collected previous to this data collection and was considered as part of the initial data collection. The DECA-P2 caregiver ratings were completed during the first month of school. Due to the length of the measure and the predicted response rate, the DECA-P2 was not re-administered to caregivers during the pretest data collection phase. Instead teacher ratings were collected in order to compare to caregiver ratings at both pretest and post-treatment. CLASS ratings are done monthly by site supervisors within this program.

Finally, the System of Care Trauma-Informed Agency Assessment (TIAA) was completed by an external evaluator (intern) during the pretest and posttest phases to add qualitative data to a primarily quantitative study. This instrument was completed by interviewing various stakeholders, including administrators (*N*=1), mental health staff (*N*=3), teachers (*N*=3), and teacher aids (*N*=2), within the intervention sites regarding their knowledge and implementation of trauma-informed practices within the agency. The evaluator also made two site observations prior to, and two following the implementation of the intervention in order to complete the TIAA.

Intervention phase. The intervention phase of the pilot program began after the pre-treatment data collection was completed. The entire intervention phase lasted six weeks.

Trauma supplement intervention condition: Teacher training. During the six-week intervention phase, teachers and teacher assistants in the intervention condition took part in two half-day (four hour) trainings completed three weeks apart. These trainings were based on the ARC framework (Blaustein & Kinniburgh, 2010) that was adapted for the Head Start setting. The ARC framework includes content to strengthen skills across three domains: (1) attachment, (2) self-regulation, and (3) competency both in children and families who have experienced trauma and within systems that work with clients who have experienced trauma. Within these three domains, there are ten additional "building blocks" or components of intervention which are: (1) caregiver affect management, (2) attunement, (3) consistent response, (4) routines and rituals, (5) affect identification, (6) modulation, (7) affect expression, (8) executive functions, (9) self-development and identity, and (10) trauma experience integration (Blaustein & Kinniburgh, 2010).

Training sessions were conducted by Head Start's Mental Health Consultants, along with a graduate-level intern. The first training session focused on attachment and self-regulation, and included material covering the building blocks (a) caregiver management of affect, (b) attunement, (c) consistent caregiver response, (d) building routines and rituals, (e) affect identification, (f) modulation, and (g) affect expression. Teachers and assistants engaged in conversation, wrote in personal journals, listened to lecture and worked through case examples related to the days' building blocks. Each building block was structured in the same way, beginning with psychoeducation about the effects of trauma on the building block, then an assessment of participants' attitudes and thoughts towards the topic, and finally teaching of content. For example, the presentation of attunement began with a discussion of trauma behaviors that affect attunement, including the difficulty of communicating feelings, putting up "fronts" towards caregivers, and being easily triggered.

Participants were then given the opportunity to assess their personal level of attunement, and how they conceptualized child behaviors that challenge attunement. Finally, participants were taught to appropriately interpret child vigilance, understand triggers, and what to do when a child becomes triggered. The second training session included the building blocks under the domain of competency, including (a) strengthening executive functions, (b) self-development and identity, and (c) trauma experience integration. This session was formatted in the same way as the first session.

Implementation of classroom-based strategies. Within the training sessions, teachers and assistants also learned specific strategies to help themselves and their students cope with trauma symptoms. Teachers were required to implement three classroom-based strategies. These strategies were decided during the first training session from a set of strategies detailed in the ARC framework. Although none of the strategies were new to teachers, mental health staff in the buildings noted that none were being implemented with consistency and fidelity. During the training sessions, teachers were given the opportunity to choose from a few strategies, voting on the three that they would feel most comfortable implementing. Finally, teachers and teacher assistants were given time during the sessions to work on incorporating strategies into their daily routines.

> (1) The use of teacher/assistant self-care strategies both in the moment and long-term/ ongoing with signed self-care plan in place,
> (2) the use of a feelings toolbox and feelings poster, and
> (3) incorporating movement and muscle relaxation into the daily routine

All intervention teachers (*N*=3) were expected to use all three of these strategies throughout the intervention period. Throughout the intervention period, the graduate intern made four fidelity checks on the use of the presented strategies using a checklist created by the agency tailored to the content learned in the trainings. Teachers and assistants also rated their satisfaction with the training sessions and with the implemented strategies.

Intervention-as-usual: Al's Pals Social Emotional Curriculum. The trauma supplement intervention was implemented in addition to the existing social emotional curriculum, Al's Pals. Al's Pals is a classroom curriculum and teacher training program that teaches social emotional skills in children, ages 3-8 years old. Al's Pals aims to help children learn self-regulation, teach conflict resolution and problem solving, and build coping skills, thus indirectly creating a caring, cooperative and respectful classroom climate. The specific goals of the Al's Pals curriculum, as stated by the program developers are:

> Goal 1: To increase the protective factor of social-emotional competence in young children (aged three through eight) through a 46-lesson resiliency-based prevention curriculum implemented by trained teachers in a variety of settings including preschools, child care centers, other early childhood classrooms, and after-school programs.
> Goal 2: To decrease the risk factor of early and persistent antisocial or aggressive behavior by preventing the development of increased aggression and antisocial behaviors in young children over the course of a typical school year, through implementation of the preventive intervention referenced in Goal 1 (Lynch, Geller & Schmidt, 2004).

Al's Pals was designed to be introduced with a 2-day teacher training session and then implemented over a 23-week period, with instructional sessions lasting between 15 and 20 minutes.

To date, one paper has outlined previous efforts to research the effectiveness of the Al's Pals curriculum, making the research base for the curriculum extremely limited. Following a series of pilot experiments completed in Lansing-area Head Start centers in the early 1990s that qualitatively examined the effectiveness of the Al's Pals curriculum, one study in the early 2000s followed up with quantitative data. This study found statistically significant improvement in Social Independence and Problem Solving Skills, and improvements in prosocial behaviors at posttest when compared with classrooms that had no social-emotional curriculum (these studies are outlined in Lynch, Geller, and Schmidt, 2004)

Training in the implementation of the Al's Pals curriculum is offered yearly to all teachers,

either online or in person. The training is mandatory for new teachers, although all teachers are welcome to attend. Two teachers (one intervention condition teacher referred to as the trauma supplement group, and one comparison condition teacher, referred to as the intervention-as-usual group) in the present study took part in an online training at the beginning of the school year. Continuing implementation support was provided for teachers by mental health consultants, and site supervisors held teachers accountable for teaching Al's Pals lessons.

The Al's Pals program provides users with instruments to measure implementation fidelity. However, none of these instruments were used by the sites involved in this study. Some aspects of implementation were captured through the CLASS assessment which measured classroom climate. However, this was not a curriculum-specific assessment.

Data Analysis

Question 1. Data from the System of Care Trauma-Informed Agency Assessment (TIAA) was examined qualitatively at both pretest and posttest to better understand the successes and challenges of the implementation of the trauma-informed systems-level intervention. It is noted that the interviews conducted to gather data for this tool were unrecorded, and that qualitative analyses (i.e., thematic analysis) were not used. Analysis of a supplemental, in-depth interview with the Director of the Head Start agency was completed to better understand an administrative perspective of trauma-informed care.

Question 2. This classroom level question was answered by analysis of descriptive statistics included in the results section. The dependent variables, CLASS ES composite constructs (emotional support, classroom organization, and instructional support), were measured two times, at pre and posttest, and were examined across the levels of intervention condition (*intervention* or *comparison*) through one-way ANOVA.

Question 3. In order to answer this question, quantitative data were presented descriptively through examination of means, ranges, and standard deviations. These data are available in the results section (Question 3). Additionally, teacher responses were examined qualitatively. A paired samples t-test was performed using mean teacher ratings on the STSES across both intervention conditions (N=5), measured at posttest and again at four months following the intervention period, to better understand the stability of STSES ratings.

Question 4. Child level outcomes were explored using repeated measures t-tests to measure differences on subscales of the DECA-P2 and the BASC-2 PM from pretest to posttest within the trauma condition.

Results

Fidelity and Satisfaction

Teachers' fidelity of adherence to and attitudes toward the intervention were analyzed using three different measures. The first measure was the C*lassroom Fidelity Checklist.* This checklist was used to observe teachers within the intervention condition at four time points throughout the intervention period. Each teacher had a unique profile of implementation fidelity across the observation period. See Table 5 for implementation ratings by teacher.

Table 5
Level of Fidelity of Intervention Implementation

	Time 1	Time 2	Time 3	Time 4
Teacher 1	Medium	High	Medium	Medium
Teacher 2	Low	Low	Low	Low
Teacher 3	Low	Medium	Low	Medium

Note. Scores based on 11-point checklist. Low: 0-3/11, Medium: 4-6/11, High 7-11/11

The majority of teachers responded consistently to children, set routines and rituals that were supportive of children, and helped children identify a range of emotions (mad was the emotion most frequently identified). Some observations revealed teachers helping children to modulate responses, and teachers making mention of the "future self." Only one observation observed the teacher incorporating muscle relaxation into the routine. No teachers referred to the feelings toolbox (as was implemented during the first training session) during observations, nor did they refer to the feelings poster. However, teachers did report

throughout the intervention period that certain students did benefit from materials in the feelings toolbox, and that it was an easy strategy to add to their usual repertoire of teaching coping skills. It is most likely that the fidelity observations missed the application of these skills specifically, even though they were used throughout the intervention.

The second way in which fidelity and satisfaction were measured was through a measure of satisfaction with the session that immediately followed the two trainings. This measure asked teachers to rate their reactions to the trainings across five different areas on a scale from 1 (strongly disagree) to 5 (strongly agree). Across all scales, teachers endorsed a mean rating of 4 (Agree). The question toward which teachers and teacher assistants reacted most favorably was "I can use strategies that I learned today" (M=4.50 [0.55]). The question that teachers and assistants reacted least favorably was "I am more confident in my skills as a result of this training" (M=3.83 [0.41]). Comments received on the feedback forms were generally positive. Teachers indicated that they enjoyed the interactive nature of the trainings, and they felt that they could implement strategies in their classrooms based on the content of the trainings. Teachers also indicated that they thought that the psychoeducation regarding the neurodevelopmental effects of trauma on the brain was not as useful as the practical aspects training.

Finally, teachers were interviewed using a follow-up questionnaire in the fall following the spring training sessions. Teachers were asked to reflect on the training sessions from the previous school year. Teachers rated that they enjoyed learning about the effects of trauma on their students' development, and they enjoyed learning ways to incorporate relaxation into their daily routines. When asked what they did not enjoy about the sessions they stated that it was an additional commitment that they had to make, and they felt as though they already had a lot of paperwork to do. In terms of changes that teachers would make in their classrooms as a result of the trainings, one teacher disclosed that she was planning to use short yoga videos as part of her morning routine. Another teacher commented that she had already been using a lot of the strategies that were presented, although she may not be using them consistently, and therefore was not planning on making any changes to her classroom besides bringing greater consistency to her practices. The third teacher cited her gratitude for the trainings, as she saw the importance of being "trauma informed," because many of her students recently have been experiencing high levels of trauma. However, she expressed that she felt as though she still did not understand enough to truly make changes to her teaching style. She also expressed the importance of educating caregivers, as she felt as though a lot of "damage" (re-traumatization) was done at home when the children were not at school.

All of the teachers noted that this program was different than the intervention-as-usual social emotional curriculum, because these trainings focused more on the "why" of challenging behaviors as opposed to the "how." One teacher made the point that she appreciated understanding why challenging behaviors occur is important, but she felt as though she did not have enough time to truly understand the effects of trauma and integrate that into her teaching and classroom management. They appreciated that it was not "just another curriculum." Two teachers mentioned that they thought it fit theoretically with the Al's Pals curriculum. Two out of three teachers said that they would take part in more trauma-focused training if they were given the opportunity to, as they continue to have students in their classes who have experienced trauma and loss of loved ones. The third teacher said that she would if she was given more time to commit to the initiative, and if she was given support for dealing with the students with the most challenging behaviors.

Agency Level

Question 1. The Trauma Informed Agency Assessment (TIAA) was used as a guide to qualitatively describe the Head Start agency's knowledge and implementation of trauma-informed practices. Low levels of agency-wide training focused on increasing staff's overall competency in trauma-informed practices were noted at pretest. No trauma-specific training was available for new or existing staff. At posttest, staff who had taken part in the intervention condition had received training. Through the completion of the TIAA, upper level mental health staff and administrative

staff identified several barriers to implementing trauma competency training on a broader scale across the agency. Practically, funding constraints make it difficult to find time for staff to take part in trainings, as it is difficult to find and fund additional time beyond staff's normally contracted hours. If trainings were to take place during teachers' normal hours, the issue of hiring substitute teachers to cover classes arises. In addition to the cost of hiring substitutes, the concern was that teachers and teacher assistants would be repeatedly taken from classrooms in which children have high emotional and academic needs. Secondly, some teachers and administrators viewed trauma competency training as competing with other initiatives that Head Start staff was taking part in. According to administrators, teachers, family advocates and mental health staff are tasked with collecting many types of data and taking part of different trainings across the course of the year. This leaves staff often feeling overworked and "burnt out."

In addition to the practical issues raised through the administration of the TIAA, administrative staff voiced the desire to focus on the positive, as the goal of the Head Start agency is to build resiliency as opposed to respond to trauma through trauma-focused training. Staff, as well as administrators, also identified the unclear link between understanding the developmental impacts of trauma and building resiliency in children (i.e. why it is useful to understand the impacts of trauma). Finally, administrators were unsure about the ways in which trauma competency training could potentially interplay with the developmental progress tool that teachers are required to use (Teaching Strategies Gold). They were concerned that a focus on trauma competency training may detract from the implementation of this tool.

How the agency responds to staff members' secondary trauma exposure is also an important piece of the *trauma competency* domain. At pretest, the agency did not have significant supports in place for dealing with secondary trauma exposure by staff. However, they did offer peer to peer mentoring among teachers, and occasional stress reduction training implemented by mental health consultants. At posttest, administrative staff identified being more aware of the impact of secondary trauma and the necessity of providing supports for staff. However, no additional supports (i.e., therapeutic time off, recreational or wellness activities, systematic referrals to therapy) had been put in place. The greatest barrier to implementation cited by the Director of Preschool Programs, as well as mental health staff, was lack of financial resources to fund these initiatives.

At posttest, the researcher met with mental health consultants and agency administrative staff for the purpose of creating a "trauma task force" which would create a trauma-informed development plan that would carry the agency forward into systematically implementing trauma-informed practices. However, this development plan had yet to be formalized, as other initiatives had been prioritized. Further, fidelity of implementation of practices continues to be an issue within the organization. Although the structure of the organization permits checks of fidelity for trauma-informed practices (potentially through the "trauma task force"), this has been slow to develop.

Classroom Climate

Question 2. The CLASS assessment was used to measure the Emotional Support domain across intervention conditions at both pretest and posttest. Table 6 shows mean scores for the constructs on the Emotional Support domain across intervention condition measured at pretest and posttest.

Observations of the classroom environment by site supervisors (building directors), as rated by the CLASS assessment, showed no differences between the intervention and comparison conditions on measures of emotional support ($F[3,3]=0.89$, $p=.42$), classroom organization ($F[3,2]=1.45$, $p=.32$), or instructional support ($F[3,2]=0.52$, $p=.54$) at pretest. Teachers in both the intervention and comparison conditions were rated moderately on the Emotional Support Domain of the CLASS both at pretest (intervention M=4.79 [0.26]; comparison M=5.65 [0.45]) and posttest (intervention M=5.78 [0.50]; comparison M=5.51 [0.35]). Although the low sample size prohibited statistical comparative analyses, ratings appear similar across intervention conditions and from pretest to posttest. At posttest, teachers were consistently rated as having low levels of *negative climate* (i.e., including the presence of anger,

Table 6
Ratings of Classroom Climate from the Classroom Assessment Scoring System (CLASS)

	Pretest		Posttest	
	Intervention Mean (SD)	Comparison Mean (SD)	Intervention Mean (SD)	Comparison Mean (SD)
Emotional Support Domain	4.79 (0.26)	5.65 (0.45)	5.78 (0.50)	5.51 (0.35)
Positive Climate	5.50 (1.30)	5.78 (0.19)	5.94 (0.59)	6.00 (0.00)
Negative Climate	1.00 (0.00)	1.06 (0.10)	1.22 (0.39)	1.22 (0.39)
Sensitivity	4.78 (0.79)	4.78 (0.79)	4.61 (0.35)	4.77 (0.51)

Note. Scores based on a 1 (low) to 7 (high) scale.

hostility, or aggression; M=1.03 (0.7), range=0.17), and moderate *positive climate* (i.e., enthusiasm, enjoyment, emotional connection between the teacher and students, and nature of peer interactions; M=5.97 (0.37), range=1.17). *Teacher sensitivity* (i.e., how responsive the teacher is to students' needs in the classroom) was rated in the low/moderate range at posttest (M=4.69 [0.40], range=1.00).

Teachers' Secondary Traumatic Stress

Question 3. Teacher ratings on the STSES indicated that across time points, teachers in both conditions rated themselves as generally able to cope with the secondary traumatic stress resulting from their work with children who have experienced trauma (Overall M=5.77, SD=.48, range=4.90-6.57). Teachers in both conditions endorsed feeling *very capable* of "dealing with my emotions about working with children" and "control recurring distressing thoughts or images about the children I work with." Teachers in the intervention condition endorsed feeling *capable* or *very capable* of "finding some meaning in what had happened to the children I work with" (M=6), where teachers in the comparison condition endorsed feeling between *neither incapable nor capable* and *somewhat capable* (M=4.5) of doing this. Teachers in both conditions rated both at pretest and posttest feeling between *somewhat incapable* and *neither incapable nor capable* (M=3.7) of "getting help from others to better handle working with my students." Means at posttest for both groups indicated relatively high levels of self-efficacy as related to dealing with trauma (comparison M=5.43 [0.25], intervention M=6.14 [0.38], on a scale ranging from 1 to 7). Ratings at posttest ranged from 5.14 to 6.57. However, mean STSES ratings across conditions at posttest were significantly lower four months following the end of the intervention (M=5.59 [.54]) than at posttest (M=5.79]), t(5)=3.07, $p<.05$.

Child Social-Emotional Outcomes

Question 4. For children who had experienced trauma and that received the intervention, there was a statistically significant increase noted in scores on the TPF scale of the DECA-P2 from pretest (M=46.74) to posttest (M=55.89), indicating an improvement in functioning (t[52]=4.53, $p<.001$). Children who had experienced trauma in the comparison condition also demonstrated a significant increase in TPF scores (t[48]=2.38, $p<.05$) between pretest (M=42.84) and posttest (M=47.91), however this increase was not as large. It should be noted that while an increase in T-scores on these measures indicates an improvement in functioning, the scores at both pretest and posttest were in the typical range, so this change is not clinically significant.

As was the case with the TPF scale, the BC scale represented an improvement in functioning (a decrease in behavior concerns) that was statistically significant (t[48]= 3.8067, $p<.001$) but not clinically significant. In this case, the trend towards improved functioning was evident in the comparison condition, but was not statistically significant (t[52]=1.15, $p=0.2$).

When using the BASC-2 PM to monitor

changes in internalizing and externalizing problems, no statistically significant changes were evident between pretest and posttest in either the intervention (BASC-2 PM Externalizing and ADHD Problems, t[48]=0.55, p=0.56; BASC-2 PM Internalizing Problems, t[48]=0.15, p=0.80) or comparison conditions (BASC-2 PM Externalizing and ADHD Problems, t[52]=0.98, p=0.33; BASC-2 PM Internalizing Problems, t[52]=0.14, p=0.89). Refer to Table 4 for all child-level data across timepoints and conditions.

Discussion

Agency Level

The results of the agency-level assessment are perhaps the most indicative of continued "roadblocks" in the successful implementation of agency-wide trauma-informed practices that strive to support children's emotional regulation following experiencing trauma. As noted in Chafouleas and colleagues' (2016) article outlining a blueprint for evidence-based interventions for children who had experienced trauma within the school setting, the most successful interventions were those that could fit within a multi-tiered framework that had been adopted at the level of the school or district. Integrating trauma-informed and data-based practices across tiers of service delivery, while also providing technical assistance to build capacity, appears essential to seeing improvements in outcomes (von der Embse, Rutherford, Mankin, & Jenkins, 2018). Further, a review of implementation science research suggests that providing systems with awareness of a problem and suggesting ways to solve it will likely not lead to long-term success (Chafouleas, Johnson, Overstreet, & Santos, 2016). Instead, it is necessary to first foster organizational change prior to engaging in direct intervention. While the intervention in the present study attempted to engage all levels of the system, assessment of the system using the Trauma Informed Agency Assessment (TIAA) at pretest and posttest revealed few changes. It is important to note that true organizational change may take a minimum of three years (e.g., Nersesian, Todd, Lehmann & Watson, 2000). Therefore, the main findings of this study were to acknowledge the importance and need for more work at the level of system administrators prior to engaging in further intervention at the level of the classroom in order to ensure long-lasting change at the levels of the classroom and child.

Further, specific concerns were raised in the domain of *trauma competence* on the TIAA. Upper level administrators recognized that their students' exposure to trauma is a concern. However, at pretest they had not yet taken specific steps to address this. The director of the organization expressed concerns regarding funding and staffing related to engaging in another set of trainings. The other main concern raised was wanting to "focus on the positive" (building resiliency) instead of focusing on the experiencing of trauma ("the negative"). Both of these concerns point to a fundamental misunderstanding regarding the purpose of creating a trauma-informed system. As previously mentioned, SAMHSA's (2014) key assumptions of trauma-informed approaches are: "(a) a realization of the widespread prevalence and impact of trauma, (b) a recognition of the signs of traumatic exposure, and (c) a response grounded in evidence-based practices that (d) resists re-traumatization of individuals" (p. 9). Therefore, focusing on building resiliency is important, but fails to take into account the first steps in both models, which include recognizing children's exposure to trauma, their responses and then responding accordingly. Without acknowledging that children have experienced trauma, there is no guarantee that everyone within the system will react in a way that will avoid re-traumatization of children and families.

Teacher and Classroom Level

Although the present study's sample size did not allow for statistical comparison of quantitative data between the intervention and comparison conditions, descriptive and qualitative data collected both lend support to child level analyses. While the researchers were not able to quantitatively compare scores on the Emotional Support scale of the CLASS assessment due to small sample size, pre and post-test scores on this scale in both were in the "medium" range across treatment and intervention conditions. This indicates that the classroom climate was moderately positive, and that teachers were moderately responsive to students' needs

within the classroom in both intervention and comparison conditions. It is likely that the short duration of the intervention, combined with the uneven implementation of the Al's Pals curriculum, contributed to the absence of an effect of the intervention on this domain. However, analysis of teachers' feedback is an important piece of this pilot study that offers important information for further research and practice. As Head Start programs work to modify this and similar interventions for future implementation, information regarding teacher satisfaction with and implementation fidelity of both the trauma supplement intervention and intervention-as-usual programs is useful.

Teachers in both intervention and comparison conditions rated their abilities to cope with secondary trauma as high. This is important, as experiencing secondary trauma can influence the quality of services that caregivers provide and can lead to burnout (Pearson, 2012). For teachers, experiencing secondary trauma means that he or she will be less emotionally available for students, and less able to support them in their social emotional and academic development (Pianta, 2003). It is unclear why teachers tended to endorse such high feelings of self-efficacy, while they consistently rated low levels of knowledge of trauma-informed practices. It is possible that teachers may not have felt comfortable truthfully rating the items that directly reflected their ability to regulate their own emotional reactions, such as their ability to "control their emotions" or "control recurring distressing thoughts," for fear of being criticized or identified as being unable to do their jobs. Although it was not within the scope of the present study, a private, structured interview with teachers regarding their perceived self-efficacy and strengths and weaknesses may more effectively capture a more accurate picture of teachers' abilities to cope.

Across both intervention and comparison conditions, the lowest ratings on the STSES were on the item "getting help from others to better handle working with my students." When taken in conjunction with the Trauma Informed Agency Assessment (TIAA), it was clear that even though teachers report that they are dealing well with secondary trauma, there are actually relatively few supports in place to help them cope with the effects of working with traumatized children. The fact that teachers feel this lack of support, even though they endorse feeling capable of coping speaks even further to the need to provide staff with the appropriate supports to process secondary traumatic stress. One possible reason that they have endorsed being able to cope is that they have not had an outlet to begin to learn about and truly explore the stress that they face. Providing a forum (i.e., therapy services) for teachers would help teachers reflect on and provide accurate feedback regarding their secondary trauma self-efficacy.

Another classroom-level finding was related to teachers' fidelity of adherence to the intervention. Although the general adherence to the intervention was described as "moderate," there was a great deal of variability in ratings both between teachers and across the observations. The lack of consistently high levels of intervention implementation fidelity in the present study is likely related to the reasons outlined by Baweja and colleagues (2016), which include what teachers express as (1) the perceived need for the program, (2) concerns regarding their ability to balance their students' social and emotional needs with their academic needs, and (3) the need for more psychoeducation about trauma. Specifically, teachers in the intervention condition expressed the perceived need for the program overall, but two of them expressed that they did not have as many concerns with students during the time of the intervention as they had had during previous years. Therefore, the exact degree to which teachers perceived the need for the program at the time it was taking place in the intervention was not clear. However, Mental Health Consultants had perceived a great need for the teachers to participate in the intervention. This further indicates the need for systematic psychoeducation surrounding the effects of trauma for all staff, including teachers. Secondly, teachers repeatedly reported having a need for the program but not having time to balance other initiatives with the program. In this case, those initiatives are not purely academic, as was demonstrated in the Baweja and colleagues study, but the idea that many programs are competing for a relatively small amount of time is reflective of the present study. Teachers in the present study reported that they appreciated learning "why" challenging behaviors can occur when children have

experienced trauma, as this was a difference noted between the trauma supplement intervention and the comparison, Al's Pals. However, on the post-training session rating forms, teachers reacted least favorably toward the item, "I am more confident in my skills as a result of this training (Mean rating of 3.83 out of 5)." This favorability rating was a relative weakness in relation to other items on the scale (mean rating of 4 out of 5 overall). Teachers also indicated that they thought that the practical aspects of the training were more useful than the psychoeducation. This points to the continued need for training and education around this topic. As noted by the Substance Abuse and Mental Health Services Administration's (SAMHSA; 2014) key assumptions underlying trauma-informed approaches, understanding how trauma affects the brain is the first step in preventing re-traumatization of individuals. Understanding how to consistently apply this information through effective intervention comes much later. The fact that teachers did not feel as though the psychoeducation regarding trauma (the "first step") was useful indicates that further training should work to integrate this information, so that everyone can truly have an understanding and appreciation of what trauma is and why it is important to understand when implementing interventions.

Child level

At the level of the child, this study attempted to clarify differences between the effects of having teachers participate in the pilot implementation of a trauma-specific training program, in addition to the intervention-as-usual implementation of the social emotional curriculum, Al's Pals. Several differences were observed at the child level between students (ages 3-4) whose teachers had taken part in the trauma-specific intervention and those whose teachers had not. Overall, significant differences were observed between children in the intervention and comparison conditions students' protective factors and behavior concerns. This finding adds to the work of Holmes and colleagues' (2015) study of the implementation of the ARC framework in the Head Start setting, as that study only included children who had experienced trauma and were displaying post-traumatic stress symptoms. It should also be noted that although this study did not explore the significance of changes in functioning among children who had not experienced trauma, data trends indicate that the framework is potentially beneficial in building social emotional skills for students who have experienced trauma, as well as those who have not, is reassuring for future implementation.

Limitations

The level at which the intervention-as-usual comparison curriculum (Al's Pals) was implemented likely contributed to the lack of significant differences noted between the intervention and comparison conditions. Although Al's Pals curriculum materials were observed in all the classrooms, there was no accurate measurement of the fidelity of implementation of this curriculum. While fidelity checklists exist, they were not used in this study. Further, Al's Pals has very limited empirical support, even when it is being implemented with fidelity. Because of this, it is difficult to gauge the full effect of the trauma supplement intervention when compared with the comparison group. Although there are some measurable gains being made, because the social emotional curriculum is not implemented uniformly, children are likely to "miss" certain skills. Data from this study indicate an improvement in internalizing symptoms as measured by the BASC-2 PM, Internalizing scale in the intervention condition. This suggests that children with internalizing symptoms (common amongst children who have experienced trauma) may not be benefitting fully from the social emotional curriculum, Al's Pals, as it is currently being implemented.

Additionally, the trauma supplement intervention was not implemented consistently with fidelity. It is likely that this would have been easier to measure with more teachers taking part in the intervention. As discussed in the previous section, greater dedication of members of the administration would likely have led to higher implementation fidelity. It is also likely that the low number of training sessions, and the limited duration of the intervention (two 4-hour training sessions across six weeks) influenced both the lack of implementation fidelity and the lack of change demonstrated due to

the intervention. While a few behavioral changes were noted among children who had experienced trauma, it is likely that the low intensity of the intervention and the short intervention period was not enough to produce numerous quantifiable behavioral changes among these children. Further research should continue to examine the effects of the ARC framework in the Head Start setting with particular focus on intervention intensity and implementation fidelity.

Another set of limitations exists with the nature of the data collection and data analysis methods for the study. First, the intervention site was chosen partially based on the site coordinator's willingness to participate in the study. It is possible that this type of selection may have skewed results, as this coordinator was highly motivated to carry out the intervention, which may have led to more positive results of the intervention. Secondly, because teachers were not blinded to condition (intervention or comparison), it is possible that the child-level results were partially due to rater bias, such that teachers in the intervention condition rated their students as having made greater behavioral improvements than those in the comparison condition. An additional bias that the current study was not able to explore was that of implicit racial biases of teachers towards black, male students. It is noted that there was a mismatch between the races of the teachers and students in the study. This is specifically noteworthy in the current study because while all teachers were white, the majority of students across conditions (41.9%) were black. Future studies should take into account the work of Gilliam and colleagues (i.e., Gilliam, Maupin, Reyes, Accavitti & Shic, 2016) on implicit bias and its impacts on teachers' ratings of student behaviors.

In regards to data analysis, while qualitative data were collected, qualitative analyses (i.e., thematic analysis) were not used. Further, these qualitative data were based on a small sample size. Further studies using a more rigorous experimental design in which participants are blinded to intervention condition and multiple methods are used to measure dependent variables, would further expand the literature base.

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Appendix

Classroom Fidelity Checklist

Classroom:_____

Date/Time:_____

Observer:_____

Mark "1" if present, Mark "0" if absent.

1) Caregivers refer to the feelings poster
2) Caregivers refer to the feelings toolbox
3) Caregivers incorporate movement or relaxation into routine
4) Teachers make mention of the "future self"
5) Caregivers maintain controlled affect
6) Caregivers are attuned to children's needs and emotions
7) Caregivers respond consistently to children
8) Caregivers have set routines and rituals that are supportive of all children
9) Caregivers help children with identifying a range of emotions
10) Caregivers help children modulate their emotional responses
11) Caregivers help children express their emotions effectively.

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Article

Responding to Students Exposed to Community Violence: Teachers' Perceptions of Trauma-Informed Service Delivery

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This mixed methods study evaluated attitudes related to trauma-informed care among 52 general and special education teachers in an urban school district. Additionally, 11 teachers who had participated in the district-provided trauma-informed training completed qualitative interviews regarding their experiences working with youth impacted by trauma. Compared to the non-trained group, teachers who had completed the Healthy Environments and Response to Trauma in the Schools (HEARTS) training demonstrated significantly greater knowledge related to the relationship between trauma and problematic behavior in the classroom. Regardless of training, teachers rated their personal history of trauma as most influential in their perceptions of skill in meeting student needs. Qualitative findings suggested that teachers who had participated in the trauma-informed training believed they were able to recognize the signs of trauma and respond to student behavior in a trauma-informed manner through developing safe and secure relationships and creating a sense of community. Also, they recognized the emotional impact of working with trauma-affected students and communicated the importance of self-care. Implications for these findings are discussed.

Keywords: trauma-informed care, teachers' experiences, schools, mixed methods

Violence exposure is a national public health crisis with a majority of youth reporting either exposure to or direct witnessing of some type of violence in the past year (e.g., Finkelhor, Turner, Shattuck, & Hamby, 2015). Of specific interest is community violence as it has a differential impact on minority youth, depending on the neighborhoods in which they live. Exposure to community violence (ECV) can be defined as the direct or indirect experiencing of violence in the community, such as being a victim of physical assault or witnessing a shooting (Antunes & Ahlin, 2018; Lee, Larkin, & Esaki, 2017). For youth living in urban, low-income, primarily ethnic minority communities, the rate of ECV is particularly high. In these settings, adolescents experience higher rates of posttraumatic stress disorder (PTSD) as compared to their peers living in more affluent neighborhoods (Antunes & Ahlin, 2018; Ridgard, Laracy, DuPaul, Shapiro, & Power, 2015). Therefore, educational personnel who work in these urban environments must be prepared to recognize the effects of trauma and effectively adapt their

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teaching strategies to meet the needs of these youth.

Trauma and Development

Traumatic experiences in childhood can have a negative impact long into adulthood. The Substance Abuse and Mental Health Services Administration (SAMHSA, 2014) has described individual trauma as "an event, series of events, or set of circumstances, that is experienced by an individual as physically or emotionally harmful or life threatening and that has lasting adverse effects on the individual's functioning and mental, physical social, emotional, or spiritual well-being" (p. 7). Trauma can be considered acute or chronic. Acute trauma may have long-term psychological effects, but the event itself is often abrupt and short-lived (e.g., natural disaster, car accident). On the other hand, chronic trauma may occur when an individual endures aversive conditions over time, such as homelessness or constant exposure to community violence. Additional conceptualizations include exposure to multiple instances of threatening and devastating events (e.g., chronic trauma) that result in complex trauma (Blaustein, 2013).

The short-term effects of trauma include increased risk for internalizing (e.g., post-traumatic stress, depression) and externalizing (e.g., aggression, defiance) symptoms and disorders (Hamblen & Barnett, 2014). Traumatic experiences can also adversely affect a student's functioning at school, including decreased performance in reading, math, and science achievement in elementary age children (Perfect, Turley, Carlson, Yohanna, & Saint Gilles, 2016). In fact, the links between symptoms of trauma and academic performance are pervasive and likely to be manifested in multiple ways in the classroom, including behavioral dysregulation (Bell, Limberg, & Robinson, 2013). Students experiencing trauma symptoms may have many somatic complaints, appear avoidant and withdrawn, or demonstrate emotional lability. Cognitively, students who have experienced trauma may have difficulty focusing and exhibit a decline in academic performance.

There is a robust body of research demonstrating the long-term effects of trauma. The Adverse Childhood Experiences (ACEs) studies (e.g., Crouch, Strompolis, Bennett, Morse, & Radcliff, 2017; Felitti et al., 1998) demonstrated the linkage between negative experiences from childhood, such as maltreatment and violence exposure, to poorer outcomes among adults such as poor physical health, substance abuse, and depression. Of specific concern was the finding that early exposure to interpersonal trauma may have detrimental effects on an individual's ability to accomplish important milestones (Obradović, van Dulmen, Yates, Carlson, & Egeland, 2006). Unfortunately, one of the most debilitating long-term aspects of trauma is the inability to develop healthy, trusting relationships, especially for those students who have experienced chronic interpersonal trauma (Shafran, Shahar, Berant, & Gilboa-Schectman, 2016). Therefore, an approach that helps to rebuild trust and relationships may show promise in helping youth learn strategies to cope with their negative experiences and develop the support systems that will help to buffer against further stressors (e.g., Blaustein, 2013).

Bioecological Model and Trauma

The bioecological framework (Bronfenbrenner & Ceci, 1994) is an extension of the ecological systems theory first posited by Bronfenbrenner (1977, 1986) conceptualizing human development as a product of interaction between the individual and the multiple systems in which an individual is situated. According to this framework, the ecological environment consists of five levels: the microsystem, mesosystem, exosystem, macrosystem, and chronosystem. At the center of the model is the child who interacts reciprocally within this complex system (Bronfenbrenner, 1986). The microsystem represents the most proximal settings in which a person is positioned, such as a child's family and school. In the context of school, experiences in the classroom, such as teacher-student interactions, are an important part of a student's development. These interactions, termed proximal processes in Bronfenbrenner's model, can occur at any one or several of the different levels. Further, proximal processes are not limited to social exchanges and include interactions with objects and symbols within the immediate environment (Bronfenbrenner & Morris, 2006). In other words, aspects of a classroom environment (e.g., the layout, the wall hangings, available resources) all have the

possibility of shaping students' development. The mesosystem is the interaction between an individual's microsystems, and evidence suggests that these systems can affect ECV related outcomes (Antunes & Ahlin, 2018). Creating a trauma-informed system of care in the schools has the potential to encompass each of these system levels.

Trauma-Informed Training for Teachers

Over the last two decades, school districts have recognized the importance of addressing the events leading to long-term negative impacts of trauma by offering school-based crisis interventions (Ridgard et al., 2015). However, these efforts were limited in duration and a more intensive approach was needed. District personnel began focusing on incorporating more extensive interventions delivered in small groups or to individual students (e.g., Trauma-Focused Cognitive-Behavioral Therapy, TF-CBT; Cohen, Mannarino, & Deblinger, 2010; Cognitive Behavioral Intervention for Trauma in the Schools, CBITS; Jaycox, 2004). These interventions were typically delivered by specially trained personnel, and minimal training was offered to general education teachers who were expected to support trauma-impacted students (Alisic, 2012; Jaycox, Langley, & Dean, 2009). Because of their daily interactions with students, teachers can be instrumental in fostering resilience in these youth through the creation of safe classroom environments and promotion of growth mindsets (Brown & Shillington, 2017). By preparing teachers to use trauma-informed practices and deliver classroom-based supports and interventions, we can reinforce the learning and emotional/behavioral growth of students who have experienced traumatic events.

Efforts to educate school personnel in trauma-informed practices have become increasingly popular. Preliminary studies have shown promising outcomes regarding the effectiveness of training for enhancing adult knowledge and behaviors when working with individuals affected by trauma (e.g., Purtle, 2018). However, more information is needed on the best methods for developing teachers' skills and knowledge in identifying and responding to students impacted by trauma (Alvarez, 2017). Recently, McIntyre, Baker, and Overstreet (2019) reported that participation in a foundational professional development training on trauma-informed approaches significantly improved teacher knowledge and tended to increase staff views on the acceptability of implementing such approaches. This line of research represents a promising first step towards addressing trauma at a systemic level, but it does not highlight how participation in trauma-informed training changes teachers' perceptions of their daily practice.

Trauma-Informed Systems

Additional efforts are needed to create programming and policies that incorporate trauma-informed principles at multiple system levels, consistent with the bioecological model. Responding to students' distress requires an approach in which trauma-informed systems of care are implemented throughout the school setting in order to reach the greatest number of youth (Chafouleas, Koriakin, Roundfield, & Overstreet, 2019). A trauma-informed framework as outlined by SAMHSA (2014) encompasses delivery of trauma-specific practices and interventions by integrating important principles into the culture of the institution such as safety, trustworthiness and transparency, peer support, collaboration and mutuality, empowerment, and cultural responsiveness. These elements can be incorporated into a tiered model of school-based services (Chafouleas, Johnson, Overstreet, & Santos, 2016; Ridgard et al., 2015) and has the potential to act as a protective factor for youth who have experienced ECV.

The Healthy Environments and Response to Trauma in the Schools (HEARTS; Dorado, Martinez, McArthur, & Leibovitz, 2016) represents one program that incorporates the SAMHSA framework and aligns with a tiered model of services using a trauma-focused lens. Although empirical research on the HEARTS program is limited, results from its implementation in one school district, San Francisco Unified School District, serving students impacted by community violence and chronic stress showed promising results such as an improvement in school personnel's knowledge about trauma-informed practices and a decrease in students' problematic behaviors (Dorado et al., 2016). The goal of

HEARTS is to help prepare teachers to provide support to their students by implementing trauma-informed approaches such as creating consistent classroom routines, teaching coping skills to manage stress responses, and helping them recognize when students may need more intensive supports (Dorado et al., 2016).

In addition to teacher training, school leaders are encouraged to adapt school policies to align with trauma-informed practices and HEARTS-leaders provide ongoing district-wide consultation. Simultaneously, students are provided with instruction in coping, small group interventions as needed, and crisis supports for those with the most intensive needs. Through this model, trauma-specific interventions are provided at the individual, group, and teacher level (Dorado et al., 2016). Evaluating such a broad program is difficult and this study focused only on teachers.

The teacher training component of the HEARTS program was the focus of this study and specifically, a comparison was made between teachers who participated in the training and their peers who had not in relation to their attitudes towards trauma-informed practices. Because teachers with more years of teaching experience tend to have greater knowledge and skill in classroom management than early career teachers (Wolff, van der Bogert, Jarodzka, & Boshuizen, 2015), years of teaching experience was included as a potential variable. Additionally, participants' personal history of trauma was included as there is some evidence to suggest a personal history of trauma affects teachers' ability to work with youth who have experienced trauma (Alisic, 2012).

A mixed method design was used to gain a deeper understanding of how teachers perceived changes in their own teaching practices after participating in the HEARTS program. The quantitative phase addressed the following question: Do teachers who have participated in the HEARTS training differ in their attitudes related to trauma-informed care as compared to their non-trained peers, regardless of years of experience or personal history of trauma? For the qualitative phase of the study, two questions guided this study: 1) How did teachers perceive the impact of the HEARTS training on their perspectives and behaviors related to trauma-affected students?; and 2) How did teachers perceive the supports and barriers they faced when implementing trauma-informed approaches?

Methodology

Participants

Participants were K-12 general and special education teachers employed in an urban public-school district where the majority of students were from low-income homes (68% qualified for free and reduced-priced lunch), and represented a diverse student population with students identifying as Latinx (55%), Black (18%), White (15%), Asian (5%), and Two or More Races (5%). For the quantitative phase of this study, 52 respondents completed surveys including 30 teachers who indicated participation in the HEARTS training and 22 non-participants. In this district, teachers could choose the HEARTS training as one of their professional development opportunities. The training itself was offered by a community mental health agency partnering with the school district. The overall sample in this study was comparable to the general district teaching staff in terms of race/ethnicity and average years of teaching. However, there was a smaller percentage of male participants suggesting they may have been underrepresented. No data were gathered on specific teaching roles (e.g., general, special, ELL).

The HEARTS-trained and non-HEARTS trained participants were similar across most demographic variables (e.g., years of experience, ethnicity, grade level taught; see Table 1). On the question of whether they had a prior history of experiencing psychological trauma (using the SAMHSA definition of trauma), a higher percentage of the HEARTS-trained participants reported a personal history of trauma as compared to the non-HEARTS group; however, chi-square tests analyses were not statistically significant.

For the qualitative phase, 11 HEARTS-trained teachers were recruited to participate in individual interviews related to their classroom practices. These teachers represented different roles (e.g., 7 general education and 3 special education teachers, as well as one ELL participant). Their mean years of teaching experience was 12.5 with a range of 1 to 24 years. All participants were female,

Table 1
Demographic characteristics across HEARTS-trained and non-HEARTS trained participants

Characteristic	HEARTS (n = 30)	Non-HEARTS (n = 22)
Race/Ethnicity		
White/Caucasian	80.0	81.8
Hispanic/Latino	6.7	4.5
Black/African American	0.0	4.5
Asian/Pacific Islander	3.3	4.5
Native American	0.0	4.5
Multi-racial	3.3	0.0
Missing	6.7	0.0
Gender		
Female	96.7	86.4
Male	3.3	9.1
Missing	0.0	4.5
Age Range		
23-29	26.6	27.2
30-39	36.7	36.1
40-49	23.2	4.5
50+	9.9	9.0
Missing	3.3	22.7
Degree Earned		
Bachelor's	33.3	59.1
Master's	60.0	40.9
Doctorate	3.3	0.0
Other	3.3	0.0
Number of Years Teaching Experience Range		
1-5	43.3	36.4
6-15	36.7	40.9
16+	20.0	22.7
Grade Taught		
Elementary (1-5)	26.7	54.5
Middle School (6-8)	50.0	36.4
High School (9-12)	23.3	9.1
Personal Trauma History		
Yes	66.7	54.5
No	33.3	45.5

one identified as Mexican-American and one Asian-White, with the remaining participants indicating White, non-Hispanic. Nine teachers had their Master's degree and two, their Bachelor's degree. Some teachers had not received the full dosage of the HEARTS training but had participated in some components.

Instrumentation

During the quantitative phase, participants completed the demographic survey and the *Attitudes Related to Trauma-Informed Care* (ARTIC; Baker, Brown, Wilcox, Overstreet, & Arora, 2016) scale. This scale was used to assess teachers' attitudes across five aspects of TIC: (a) Underlying causes of problem behavior and symptoms, (b) Responses to problem behavior and symptoms, (c) On-the-job behavior (e.g., control focused vs. empathy focused), (d) Self-Efficacy at work (i.e., perceived ability to meet student needs), and (e) Reactions to the work. The ARTIC scale was developed using trauma-informed principles (see SAMHSA, 2014), and is used as an indicator of whether a setting is prepared for TIC programming based on staff attitudes (Baker et al., 2016). The ARTIC-35 includes 7-point Likert questions which yield five domain scores and an overall score. Higher scores indicate more favorable attitudes and for this study, both domain and total scores were used.

Baker et al. (2016) found the ARTIC-35 to have overall scale reliability (α = 0.91) with a sample of 760 service providers, 165 of whom worked in education. The reliability of the ARTIC-35 for this sample also showed strong internal consistency (α = 0.90). Four of the composite scores had acceptable internal consistency: Underlying Causes (α = 0.73), Responses (α = 0.74), On-the-Job Behavior (α = 0.72), and Self-Efficacy (α = 0.75). In both the Baker et al. sample and in this study, the Reactions to Work had the lowest reliability (α = 0.63 for this sample) suggesting caution in the interpretation of this domain.

For the qualitative phase of this study, semi-structured individual interviews were conducted, audio recorded, and transcribed. The interviews were guided by a predetermined list of questions used in a flexible manner and included the collection of basic demographic information. Examples of questions included: (1) What signs and/or behaviors do you notice in the classroom that alerts you to the fact that a child may have or is being impacted by trauma? (2) What learned strategies from the HEARTS training are you implementing in the classroom? Provide examples. (3) How does working with students with trauma experiences impact you?

Procedures

Prior to recruiting participants, approval and permission was granted by the Institutional Review Board of the University of Northern Colorado and from the participating school district. The lead researcher collaborated with district leadership and the community-based mental health organization that provided the HEARTS training to recruit participants. Informed consent, the ARTIC-35, and a brief demographic survey were distributed through a link supported by Qualtrics. For the qualitative phase, schools with HEARTS-trained teachers were identified and participants were recruited via email. Teachers contacted the researcher directly if they were interested in participating. Participants for each phase were recruited separately but all were sampled from the same district.

Data Analysis

A convergent mixed methods design was used to address the research questions (Creswell & Plano Clark, 2011). Quantitative and qualitative phases occurred simultaneously and were treated with equal importance, analyzed separately, and then brought together for interpretation. Correlations between the continuous variables were analyzed, followed by independent samples t-tests to compare means using an alpha level of .05.

For the qualitative interviews, transcripts were first read through to gain a general understanding and then analyzed for the purpose of category construction. Transcripts were initially hand-coded, and these codes were organized and analyzed using the NVivo qualitative analysis software. First, the lead researcher engaged in open coding and then utilized axial coding to connect and compare these categories. Based on these categories, relevant themes were derived and then compared with one another to identify interrelated themes (Creswell & Plano Clark, 2011). To enhance trustworthiness, a peer reviewer and the lead researcher coded two transcripts resulting in an inter-coder agreement of 80% agreement.

Results

Quantitative Results

A correlation matrix indicated that all ARTIC-35 variables were significantly and positively correlated with one another and with the overall score (ranging from .342 to .853). Years of teaching experience was not significantly correlated with any of the dependent variables. HEARTS training was significantly correlated with Underlying Causes, and Personal History of Trauma was significantly correlated with Self-Efficacy. An independent samples t-test was conducted to compare the five ARTIC-35 domains and the Overall Scale for HEARTS-trained teachers and non-HEARTS trained teachers. The HEARTS trained group (M = 5.74, SD = 0.73) reported a significantly higher score on the Underlying Causes domain than the non-HEARTS group (M = 5.28, SD = 0.56; t (50) = 2.48, p = 0.02). A large effect size (Cohen's d = 0.71) was present. Although no other means between the two groups were statistically significant (see Table 2), all trended towards higher means for the HEARTS vs. non-HEARTS group except on the Self-Efficacy domain. Participants who reported a personal history of trauma (M = 5.73, SD = 0.63) indicated higher ratings of Self-Efficacy than those with no trauma history (M = 5.21, SD = 0.91; t (50) = 2.42, p = 0.02), resulting in a large effect size (Cohen's d = 0.66).

Qualitative Results

A number of themes and subthemes emerged from participant interviews regarding their experiences with the HEARTS training and working with students who had experienced trauma. The six main themes, described below, related to (a) realization of trauma, (b) recognizing and responding to students' needs, (c) teacher behaviors, (d) developing student-teacher relationships, (e) self-efficacy, and (f) self-care. Subthemes are presented in italics.

Realization of trauma.

Teachers shared how their view on trauma had expanded following the HEARTS training. They were able to describe the functional changes that students might demonstrate in response to trauma (e.g., academic, emotional and behavioral) as well as those that are less observable. In their conceptualization of trauma, teacher participants noted that trauma *impacted a person's way of being*, including ways of thinking and behaving. One

Table 2
Means of Outcome Variables by Group - HEARTS Training and Trauma History

	HEARTS (n = 30)		Non-HEARTS (n = 22)		Trauma History (n = 32)		No Trauma (n = 20)	
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Underlying Causes	5.74	.726	5.28	.555	5.59	.668	5.48	.742
Responses to Problem Behavior	5.69	.712	5.32	.837	5.58	.694	5.46	.916
On-the-Job Behavior	5.97	.602	5.62	.736	5.95	.580	5.62	.786
Self-Efficacy at Work	5.52	.659	5.54	.936	5.73	.626	5.21	.907
Reactions to the Work	5.78	.668	5.57	.766	5.72	.669	5.64	.790
Overall Scale	5.74	.529	5.47	.607	5.71	.487	5.48	.681

teacher described trauma as "any event or circumstance that negatively impacts your ability to be a human being - to be yourself, to be comfortable, to be aware, to fully engage mentally in the material that's being presented, to be engaged with your world." Participants *acknowledged the prevalence of trauma* as one noted, "I think that my students reveal things to me on a daily basis, and I try to make note of all of those. But I know that there is so much more that I haven't even touched on."

The most common traumatic experiences for their students included *family discord* such as domestic violence, child maltreatment, divorce, parent medical illness, and family substance use. *Separation from parent or caregiver* due to parental death or incarceration was frequently identified as well. Participants understood that trauma could occur in the form of *economic trauma* that included poverty and unstable living situations. They described sources of chronic stress for their students such as ongoing community problems and a high level of responsibility at home. Although teachers seemed to understand that life stressors were not traumatic in and of themselves, some did blur this line. They identified both traumatic events as well as chronic stressors as having a negative impact on students' functioning. Also, sources of trauma were traced to *community violence exposure*, with examples of students having witnessed assault or murder. One participant shared the story of one of her students, "She was in this street with her grandfather, and he was shot, and she had to keep running so she wouldn't be shot."

Recognizing and responding.

Teacher participants described the ways that they viewed their students' behavior through a trauma-informed lens and provided different examples of what they had witnessed in their students. They identified both *internalizing* and *externalizing behaviors* as manifestations of trauma. Internalizing behaviors included students covering or hiding their traumatic experiences, withdrawing, or engaging in self-harming behaviors. Externalizing behaviors included acting out, being jumpy or on edge, having difficulty focusing, showing aggression, anger or oppositional defiance, seeking attention, and attending school irregularly. An overlay to both internalizing and externalizing behaviors was the *emotionality* observed in students such as crying, seeming depressed, and displaying extreme emotions in the classroom. One participant provided the following example, "Monday mornings he is just sad. There is no other description than just sad; shoulders down, frown, sad. It takes me a good half day to get him back to a smile and relaxed shoulders." Teachers believed that their ability to view these behaviors through a trauma-informed lens allowed

them to provide appropriate interventions.

When working with students who had traumatic experiences, participants reported that *recognizing students' signs, triggers, and experiences* related to trauma was important to *responding* to students' unique needs. For example, one teacher articulated the importance of meeting the student's needs rather than her own:

> I think a lot of times a teacher with a kid who they know is in trouble, like either emotionally or academically, we want to have them spill their guts and tell us everything, so we can fix it. And, that's not always what the kid needs.

Once a need was identified, teachers tried to provide the most appropriate response: "The role of the teacher is to be in tune to students' behaviors, students' moods, to be prepared to recognize changes in behaviors, in moods. To track any kind of issues and then to seek out whatever support we possibly can." Participants described their efforts to be proactive in the classroom and recognize when a student was struggling. A teacher noted, "I can see where he's starting to get antsy, I kind of know what his triggers are, so we're going to try to do something else to divert those tendencies so he doesn't erupt." Sometimes teachers believed students needed more specialized mental health support and expressed the need for access to additional *mental health professionals*, particularly for general education students. Although there were both counselors and school psychologists in the district, participants did not believe there was sufficient access to these resources.

Some spoke about how HEARTS had helped them be creative when responding to students' needs. One participant noted, "If there's not a door, look for a window. Looking for different ways to reach kids that don't respond instead of giving up on them." Teachers shared that one of the challenges of working with youth impacted by trauma was recognizing the need, because there was so much *unknown* about students and their experiences. One teacher said, "As much as you think that you know about somebody's mental health or their trauma experiences there's always parts you don't know. You can't predict and can't understand."

In addition to recognizing trauma responses in their students, participants noted that *understanding the impact* allowed them to respond quickly and appropriately to their students. Additionally, they recognized how trauma negatively affected the brain and a student's ability to learn. As noted, teachers understood that their efforts to intervene early could reduce behaviors. One teacher remarked on the importance of preventing a "child from getting to that point where they become that tornado in your classroom and then disrupt the entire classroom."

Teacher behavior.

Participants seemed to have insight into how their own behaviors changed after participating in the HEARTS training. They described themselves as more *mindful and aware* of their students' needs, more *proactive* in addressing student needs, and more *inquisitive* with their students rather than making assumptions. Participants developed greater awareness of their own behavior and provided examples of monitoring the volume of their voices and seeking permission to get close to a student. Teachers described their efforts to become more reflective regarding their actions and thoughts. They believed that these changes improved the classroom culture and their relationships with students.

One of their greatest changes was to change their approach to managing behavior following the training. They began to anticipate behaviors and to intervene early and in a non-judgmental manner. For example, one teacher said, "They could be doing something that is completely just, make you drop your jaw, but you can't respond to that. You just have to stay calm and non-reactive." Participants talked about reducing their tendency to make assumptions and instead to behave in a more inquisitive and open manner in order to seek out additional information. They also described themselves as becoming more flexible and provided examples of how they adapted their personal approach to students as well as their expectations for the classroom environment. One teacher said, "I've got one kid now who, the only way he feels comfortable enough to relax and focus is if he is literally laying across a table." This flexibility was described as an important component to creating positive student-teacher relationships. However,

the lines between being understanding and maintaining classroom discipline were sometimes difficult to navigate. Participants spoke about engaging in a *balancing act* between accommodating student needs and maintaining order.

> You're basically constantly navigating what some days feels like an emotional minefield in the classroom. You're constantly problem solving, constantly comforting students, and then, you know, our primary job is educators. So, you are trying to balance that with, with, maintaining a learning environment.

Developing relationships.

Developing relationships emerged as an important aspect of working with students impacted by trauma. Three main subthemes were evident including *building safe and secure relationships*, *creating a sense of community*, and *empowering students*. Teachers believed their competency in building relationships with students improved following the HEARTS training. They believed *safe and secure relationships* were developed through fostering loving, caring, and warm student-teacher relationships, showing understanding and patience, and providing stability and consistency. One participant said, "I see my role is to be another adult in a child's life that they trust enough that when they can't go to mom or dad or caregiver, they feel secure enough to talk to me." Teachers recognized they needed to foster a sense of safety in the classroom before students could learn.

Additionally, teachers described forgiveness of themselves and others as vital. They modeled forgiveness for their students by acknowledging their own mistakes and by not holding anger towards their students who were struggling. One teacher shared what she told her class,

> I'll tell my students, you know you were mad at me today, we didn't get along, we didn't see eye to eye, but tomorrow, I'm still going to love you the same as I did when you walked in the door today. My love for you doesn't go away. So, I think that's really important that it's not contingent-based.

Participants realized that part of their efforts were directed at helping students feel a sense of belonging and this could be addressed through creating a *sense of community,* building support networks, and taking the time to listen. They used community circles, a component of the HEARTS program, to help establish connections. They also tried to *empower students* by identifying and fostering resilience and helping students find their voices. One teacher said, "I think that if I can get my students closer to knowing how to advocate for help for themselves then I feel like I'm doing better."

Self-efficacy.

Most participants voiced a sense of self-efficacy and confidence as related to teaching students with trauma histories. They discussed *feeling prepared* following the HEARTS training and *asking for help* when needed. One participant commented that she had seen a decrease in the number of students being sent to the office or suspended in her school and attributed this change to teachers and staff "becoming more aware of what trauma looks like, kind of what to look for, and what you can do." One teacher shared a significant story of improving her level of preparedness. When asked about the benefit of the HEARTS training, she said:

> I think coming into this environment my first year, I had no idea what to expect and what I saw and what I had in my classroom really threw me. I did not know how to prepare for the next day. I was exhausted emotionally, and I did not know what resources to pull from to handle that situation again the next day. With HEARTS, I feel like I have a toolbox now where I might still go home and ask myself, how could I have done better, how could I have handled that differently, but at least now I feel like I have other things I can pull out and do it differently the next day.

Many participants referenced using HEARTS' strategies such as *peace corners*, *community circles*, and *utilizing tangibles* such as stress balls. They described adapting these practices to fit their own teaching styles and many found them to be valuable.

Part of gaining confidence and a sense of self-efficacy was developing the courage to *ask for*

help when needed. One teacher commented on this change in her own thinking by noting a "freedom to ask for help. The first year I kind of felt like if I was seeking help it was a weakness and now I realize it's not." Several participants discussed the importance of seeking help from mental health providers when students' needs became too extreme to be met in the classroom.

Self-care.

All participants, four of whom mentioned their own personal histories of trauma, discussed the challenges of teaching traumatized youth and the importance of self-care. They provided stories regarding the *emotional toll* of working with students impacted by trauma. "It's exhausting. It's like, it can be like, really physically and mentally, emotionally exhausting in that we are working with kids. I often leave school feeling like more of a social worker than a teacher." Participants also discussed trying to *make themselves a priority* by recognizing their own feelings and responses, as well as having reasonable expectations for themselves. They believed they needed to care for themselves first in order to be a support for their students. One participant noted, "I think the biggest challenge for me is to remember I am a human too; that I can't always be exactly what they need and there's always room to grow and learn." They attributed their belief in self-care to the HEARTS training, "I kind of realized through HEARTS that, if I don't take care of myself, it's not helping anybody."

Teachers articulated how their perspectives changed regarding student behavior and that they learned to *not take it personally* following their training. "I am the adult in the room, I am the leader in the room, I'm the teacher. I have to be sure that I act accordingly, and I have to remember to really not take things personally." An unexpected comment made by some of the participants was that they felt *gratitude* for working with youth impacted by trauma. This perspective seemed to help teachers feel good about what they were doing and motivated to continue. One participant shared her powerful perspective on how she had grown as a teacher, "I'm such a better teacher than I was…I am much more fulfilled teaching these kids that have such major challenges. Fulfills me a lot more, hard work but more fulfilling." Another challenge was the limited amount of time to complete expected instruction, to build relationships, and to provide social-emotional learning opportunities. Having support from their administration and the HEARTS team helped them navigate these competing demands.

Discussion

Exposure to aversive and traumatic events is an all too common experience for children and adolescents in the United States (Antunes & Ahlin, 2018; Finkelhor et al., 2015). Because of the prevalence, systemic approaches delivered in the school setting represent a promising approach for addressing the greatest number of student needs. One strategy for building this capacity is to prepare school staff in trauma-informed care principles so they can support students who have been exposed to traumatic events (e.g., Dorado et al., 2016; Reinbergs & Fefer, 2018). A mixed method design was used to evaluate the relationship between participation in a trauma-informed training (i.e., HEARTS program) and teachers' attitudes related to trauma-informed care, as well as teachers' perceptions of their daily practice with youth impacted by trauma.

There was preliminary evidence to suggest that teachers who participated in trauma-informed training held different views of student behavior than their peers who had not participated in this type of program. Specifically, the HEARTS-trained teachers were more likely to attribute students' learning and behavior problems to a history of difficult life events rather than to fixed internal characteristics, consistent with a key element of the training program (Dorado et al., 2016). Furthermore, HEARTS-trained teachers endorsed more positive attitudes related to TIC principles compared to the non-HEARTS group in all areas except for attitudes related to Self-Efficacy, although the differences were not statistically significant. These results are consistent with those of McIntyre et al. (2019) who found that teachers who completed a trauma-informed workshop endorsed gaining knowledge of this construct.

Teachers who endorsed the greatest levels of self-efficacy in working with youth who had

experienced trauma reported their own personal histories of trauma. This finding may reflect a type of posttraumatic growth (PTG), defined as an individual's growth following traumatic experiences (Tedeschi & Calhoun, 2004), which in this case represents a greater level of confidence in working with traumatized youth. This sense of self-efficacy likely assists teachers in being more proactive in the classroom and in managing the emotional toll of working with trauma-impacted students (Heller et al., 2011). It was interesting to note that there were more participants who endorsed a personal history of trauma and completed the HEARTS training as compared to those who had not participated in the training. It is possible that teachers with a history of trauma sought out this type of training more often than those without these personal histories. Little is known about how a history of trauma impacts one's work with traumatized youth. Of the existing studies, the implications are unclear and may not apply to U.S. populations (e.g., Ben-Porat & Itzhaky, 2015).

The qualitative aspects of this study helped to clarify how teachers who had completed the HEARTS training implemented trauma-informed practices in their classrooms. Furthermore, there was a clear alignment between the themes that arose from teacher interviews, SAMHSA's trauma-informed framework, and the goals and core guiding principles of HEARTS (see Figure 1). The bidirectional arrows suggest a relationship between the components.

Teachers were able to articulate real-world challenges, such as balancing academic and behavioral needs, and provided detailed examples of supporting their students. Their trauma-informed lens allowed teacher participants to change their own actions by being proactive and responding to their students in different ways (e.g., suggesting a break rather than enforcing a punishment). Recognizing the signs of trauma, responding in a trauma-informed way, and reframing student misbehavior as reactions to trauma are important aspects of TIC (SAMHSA, 2014). Consistent with a comprehensive review of TIC training by Purtle (2018) and recent research by McIntyre et al. (2019), training in trauma informed approaches enhances staff knowledge of and positive attitudes towards trauma-focused approaches.

Through the HEARTS training, teachers viewed themselves as having more tools to use consistent with TIC practices. Teachers described greater awareness of their own reactions and the importance of proactive and flexible responses in managing trauma-related behavior in their students, similar to the findings of Crosby, Day, Baroni, and Somers (2015) in their work with teachers of court-involved youth. Based on the examples of flexibility provided by participants, teachers realized that allowing students to break minor rules (e.g., sitting on their desk rather than chair) allowed them to avoid power struggles and keep them engaged.

A cornerstone of discussion among teachers was the importance of developing safe and secure relationships and creating a sense of community. These proximal processes continually communicate to students the elements of the HEARTS curriculum, which emphasizes the importance of safety and predictability as well as fostering compassionate and dependable relationships (Dorado et al., 2016). Participants described their efforts to establish empathetic, caring relationships with their students and to show them understanding, patience, and forgiveness. They attempted to serve as a secure base for their students and to foster connections through community circles. Positive teacher-student relationships with trauma-impacted youth is critical and teachers with this type of training appear to have the capacity to develop these relationships (Crosby et al., 2015), which may help buffer against various risk factors (e.g., Brown & Shillington, 2017).

One key aspect of working with trauma-affected populations is understanding that these interactions can lead to emotional distress among service providers (SAMHSA, 2014). At each tier of service delivery of the HEARTS intervention, there is a focus on training school staff to address stress, burnout, and secondary trauma (Dorado et al., 2016). Participants recognized the necessity of caring for their own needs and realized the emotional toll involved in working with trauma-impacted students, consistent with previous research (Alisic, 2012; Crosby et al., 2015).

A goal of HEARTS is to "build staff and school system capacities to support trauma-impacted students by increasing knowledge and

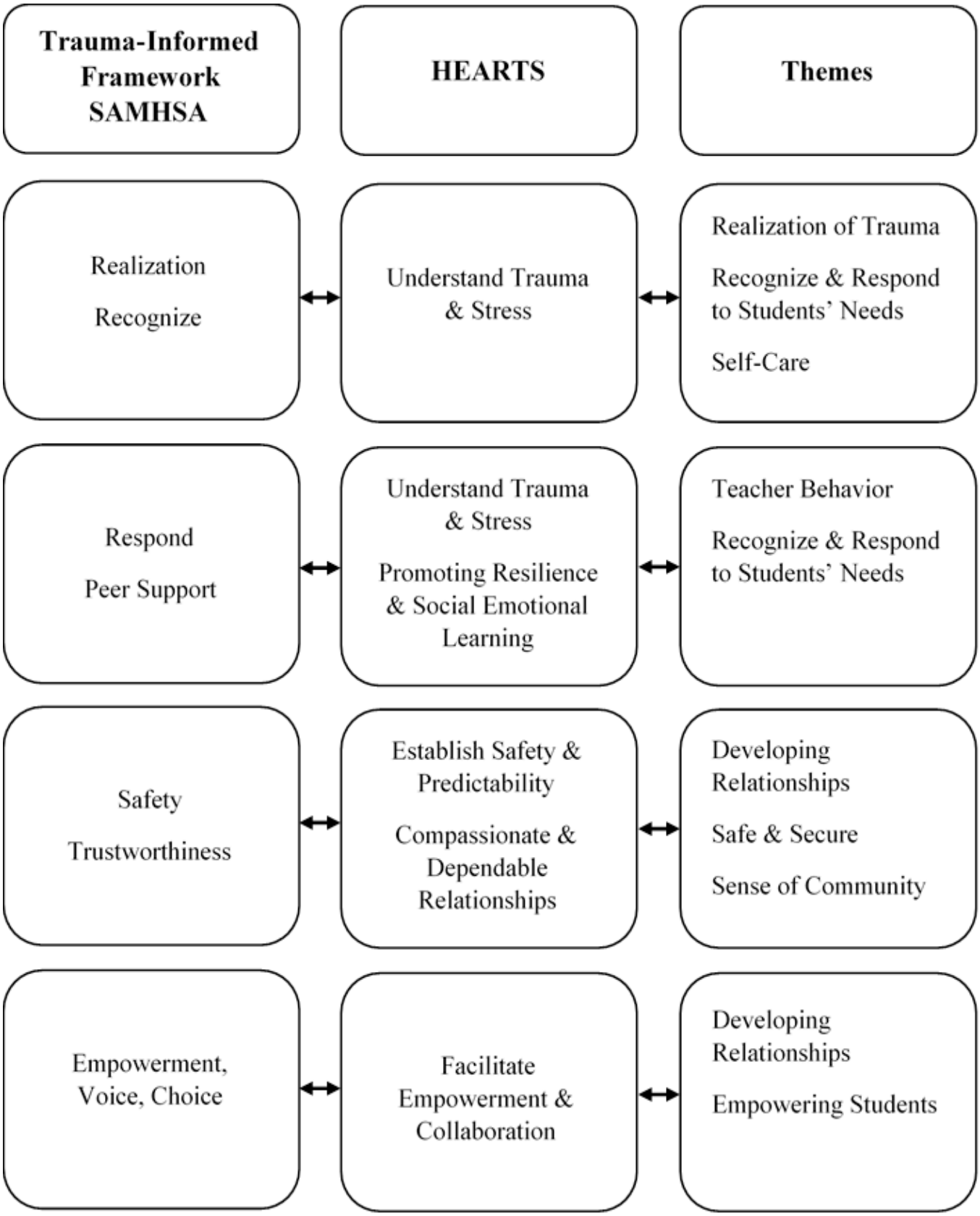

Figure 1. Commonalities among SAMHSA's trauma informed framework, the goals and guiding principles of HEARTS, and this study's qualitative themes

practice of trauma-informed classroom and school-wide strategies" (Dorado et al., 2016, p. 164). This objective was apparent in participants' reports of viewing themselves as prepared to meet the needs of their students, although they sometimes wanted additional support for more complex student needs. Teachers who work with trauma-affected youth need high levels of support, including resources and training (see Reinbergs & Fefer, 2018). One important challenge appeared to be lack of time to provide TIC interventions and still meet academic expectations. TIC training seemed to help facilitate a number of specific behaviors and attitudes, but higher ratings of self-efficacy were associated with a personal history of trauma rather than specific training.

Participants shared a sense of gratitude or passion for working with trauma-impacted students and feeling fulfilled by the opportunity and challenge. This attitude of thankfulness and fulfillment emerged as a noteworthy theme. Gratitude research, as it relates specifically to teacher wellbeing and self-care, is relatively scarce in the United States. An overview of this construct by McCullough, Emmons, and Tsang (2002) suggested a positive association between gratitude (i.e., a lasting quality of thankfulness), hope, and optimism, and a negative relationship with symptoms of depression and anxiety. In a study conducted in Hong Kong, Chan (2013) found a connection between subjective well-being, forgiveness, and an orientation to happiness among those teachers who were showed the greatest ability to manage their stress and burnout. The construct of gratitude warrants additional exploration to understand how it might act as a buffer to secondary traumatic stress for those working with trauma-impacted students. If practicing gratitude helps enhance teacher well-being, perhaps strategies related to fostering gratitude could be incorporated as a part of trauma-informed training.

Limitations

There are some limitations associated with this study, especially as related to generalization. The sample was drawn from one large urban district and limited in size. Random sampling was not utilized which limited the generalizability of the results, and due to the sampling procedures for the qualitative analysis, sampling bias may have been present. Teachers who self-selected for the HEARTS training may have already held more favorable attitudes related to trauma-informed care than those teachers who did not volunteer. Additionally, not all participants had completed the full HEARTS training, and some may have participated in other forms of training, so it was difficult to draw direct conclusions between participation in the training and these findings.

Finally, it is important to note that the perspectives represent those of the teachers and may not reflect those of students. The student body in this district is ethnically diverse and the participants generally were not. A key principle of TIC includes consideration of many aspects of students' histories and incorporating culturally responsive practices (Chafouleas et al., 2016; Dorado et al., 2016; SAMHSA, 2014), but no participants mentioned potential adaptations to providing TIC based on students' ethnic or cultural backgrounds. Even given these limitations, this exploratory study offers potential insights as to how knowledge of trauma-informed practices might contribute to positive changes in teachers' classroom practices.

Implications for Practice

Even though there was a strong emphasis on TIC in this district, when recruiting teachers, it became clear that there were many who had completed only parts of the training or had not participated at all. Therefore, if district leaders are committed to ensuring all teachers and school staff have this knowledge, it may be necessary to make trauma-informed training mandatory. In this study, participants referred to the consultants who were helpful as they worked with specific students or needed additional assistance in implementing TIC principles. Therefore, developing trusting working relationships between training teams and teachers and providing ongoing consultation may enhance efficacy and fidelity in delivering TIC.

To provide quality trauma-informed care, communication is important and one of the participants' frustrations was not knowing the backgrounds of their students. Although student confidentiality is of utmost importance, it might be

helpful to have some indicator in a student's file if there is a history of trauma and a document that outlines potential triggers, behavioral manifestations, and interventions or strategies that have been effective. This type of information could help teachers to be prepared for students' needs and help ease students' transitions to a new classroom. Further, it might circumvent some trial and error for the teacher and help students avoid "telling their story" again. As noted, confidentiality concerns such as guardian permission for sharing this information and controlled access are important considerations related to documenting sensitive information in a school record.

It takes time to incorporate these practices and teachers who incorporate classroom meetings or who spend time developing relationships with students may find they have less time to address the curriculum. It is a difficult balance to flexibly respond to students' behavior and maintain a rapid learning pace consistent with a planned curriculum. When teachers believed they had the support of administrators, they seemed to experience less pressure and had more leeway to meet students' needs as appropriate. Participants clearly voiced their beliefs that for learning to take place, the mental health needs of their students had to be addressed, a position consistent with the work of Greene, Grasso, and Ford (2014). Therefore, additional mental health professionals in the schools, such as school psychologists, are needed to address more intensive needs of students through tiered levels of support.

Conclusion

Other than parents/guardians, teachers are often the first responders to students' academic and social-emotional needs. Therefore, it is important that educators are prepared to meet the needs of their students who have been impacted by trauma. This study provided preliminary support demonstrating that teachers who have been trained in trauma-informed practices (i.e., HEARTS), were more likely to view students' learning and behavior problems as potentially stemming from trauma, a view that is consistent with TIC. Additionally, teachers who had participated in this training were able to articulate personal changes in their attitudes and beliefs as well as their day to day practice as related to TIC. Importantly, teachers recognized the need to care for themselves and to view their work with gratitude in order to avoid secondary trauma. Creating a system responsive to the needs of all trauma-impacted students and supporting school staff may be the most effective approach to preparing children and adolescents exposed to ECV to learn and thrive.

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Article

Considerations for Implementing School-based Trauma-Informed Care for Individuals with Intellectual and Developmental Disabilities

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Students with intellectual and developmental disabilities (IDD) are at an increased risk of experiencing both traumatizing events and subsequent mental illness than their typically-developing peers. This risk stems from higher rates of adverse life experiences, higher rates of secondary and layered trauma, and difficulty accessing developmentally-appropriate trauma-informed care. Following trauma exposure, students with IDD manifest different internalizing and externalizing symptoms than their same-age peers. As school-based mental health practitioners with expertise in development and learning, school psychologists are uniquely prepared to provide trauma-informed care to this at-risk population. In light of these needs, this paper discusses the ways in which the broad tenets of trauma-informed care, systems-level frameworks for practice, and individual interventions for stressor-related mental illness are applicable to students with IDD. Additionally, specific frameworks and practices that have been utilized to support students with IDD in schools and other settings are introduced. Developmentally-appropriate application to group and individual interventions for students with IDD following trauma exposure are also provided.

Keywords: Intellectual disability, Trauma-informed care, School Psychology

As one of the primary mental health providers in schools, school psychologists are trained to provide population-based mental health supports, but must also be competent in assessing and responding to students who need individualized support and intervention (Doll, Cummings, & Chapla, 2014). Consequently, practitioners must seek specialized knowledge when supporting uniquely marginalized populations. This holds true for all students, including students with intellectual and developmental disabilities (IDD). IDD is an umbrella term that encompasses, but is not limited to, moderate to severe autism spectrum disorders (ASD), Fragile X syndrome (FXS), Down syndrome (DS), and idiopathic intellectual disabilities (ID). These disabilities are characterized by significant limitations in both intellectual functioning and adaptive (e.g., functional behaviors, socialization skills, communication skills) behaviors (American Association on Intellectual and Developmental

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Disabilities [AAIDD], 2018). The constellation of such symptoms makes this population particularly vulnerable to experiencing layered trauma *and* having trauma-based symptoms incorrectly attributed to behavioral or cognitive characteristics.

Continually, mental health care for individuals with IDD is overlooked by professionals, including school-based practitioners (Hurley, Tomasulo, & Pfadt, 1998; Whitehouse et al., 2005; Wilcyznski et al., 2015). This oversight stems from limited understanding of mental illness in individuals with IDD, insufficient training and professional development to support the provision of mental health services to this population, and persistent beliefs within professional communities that individuals with IDD have a limited ability to experience a range of emotions (Brickell & Munir, 2008; Levitan & Reiss, 1983; Manohar et al., 2016). Taken together, these beliefs frequently lead professionals to underestimate the rates of mental illness in populations with IDD; these conditions and beliefs are particularly impactful in the context of trauma-related disorders (Hollins & Sinason, 2000). Over the course of their lifetimes, students with IDD are more likely to be diagnosed with a mental illness than their peers; evidence indicates that this increased risk stems from increased exposure to traumatic events paired with insufficient intervention from school psychologists and other mental health professionals (Martorell et al., 2009). While this elevated risk of psychopathology continually holds true for individuals with IDD, research indicates that practitioners may be under-equipped to identify when symptoms are linked to trauma, and individuals with IDD subsequently go untreated for stressor-related mental illnesses (Borghus, Dokkedahl, & Elklit, 2018).

These discrepancies also manifest themselves in high-stakes legal and educational decision-making. In a recent case involving a 9-year-old girl with IDD who was sexually assaulted five times in an after-school program, a psychologist for the Los Angeles Unified School District testified, "There's a relationship between intelligence and depression . . . because she may be less intelligent than a general education student, she's going to suffer less depression because of it" (Shapiro, 2018, n.p.). Despite this assertion, there is no empirical evidence suggesting that IDD is a protective factor against experiencing trauma. Rather, students with IDD are more likely to experience traumatic events and more likely than their typically-developing peers to experience associated trauma symptoms as a result.

IDD and Trauma

Primary Risk. Any type of disability appears to contribute to higher risk of victimization, but IDD, communication disorders, and behavioral disorders are connected to very high levels of risk, and students with intersectional identities experience even higher risk (Sullivan & Knutson, 2000). Indeed, data suggests that victimization rates seem to fall on a continuum, both for presentation of the disability and the educational placement of students. Students with more severe cognitive or physical disabilities experience more victimization than students with higher incidence disabilities (Wald, 2003), while those in self-contained settings appear to be victimized more often than students in inclusive settings (Rose, Monda-Amaya, & Espelage, 2010). Furthermore, those with low-incidence disabilities, such as IDD, are more likely to experience maltreatment than any other subgroup (Glumbic & Zunic-Pavlovic, 2010; Rose et al. 2010). For example, people with IDD, regardless of gender, experience one of the highest rates of sexual assault of any group in America – anywhere from 1.5 to 10 times those for people without disabilities (Brown-Lavoi, Viecili, & Wiess, 2014; Shapiro, 2018; Stevens, 2012). Those students with IDD who experience sexual or other types of abuse are at an increased risk for repeated abuse when compared to typically developing students (Sobsey & Doe, 1991). Clearly, students with IDD represent a particularly at-risk population – one with whom school psychologists are uniquely trained to work.

Secondary and Layered Risks. Students with IDD are more likely than their typically developing peers to not only experience trauma, but are also more likely to experience a wider array of traumatic events (Hatton & Emerson, 2004). Individuals with IDD who experience traumatic events are more likely to experience secondary and layered losses, or the domino effect of changes in independence, care providers, educational settings

and other changes that can follow a traumatic event (Brickell & Munir, 2008). Decisions surrounding these changes are often made without including individuals with IDD at the table, which may further exacerbate symptoms related to trauma. These circumstances are often unique to the lives of individuals with IDD, who because of the symptoms associated with their disability, are more likely to receive long-term support with daily living, employment, and other tasks from a wide variety of care providers and professionals (Colorado Department of Education, 2013; Strunk, Leisen, & Schubert, 2017).

Symptoms of Trauma. Research consistently indicates that when students without IDD experience trauma, their risk for short- and long-term psychological, social and academic consequences increases (Cassudt & Taylor, 2005; Roland, 2002; Hawker & Boulton, 2000; McDougal, Vaillancourt & Hymel, 2009). These findings also hold true for individuals with IDD in both childhood and adulthood (Hulbert-Williams et al., 2014; Wigham, Hatton, & Taylor, 2011; Vervoort-Schel et al., 2018). Regardless of cognitive or adaptive functioning, individuals who have experienced trauma demonstrate increased risk for anxiety, loss of self-esteem and confidence, loneliness, depression, helplessness, post-traumatic stress, general deterioration in physical health, self-harm, and suicidal ideation (Cassidy & Taylor, 2005; Hawker & Boulton, 2000; McDougall, et al., 2009; Mevissen, Didden & de Jongh, 2016; Roland, 2002; Shin, 2010; Tehrani, 2004). Additionally, similar symptoms of trauma-related mental illness are also associated with IDD; Hulbert-Williams et al. (2014) found that individuals with IDD who experienced negative life events were more likely to experience later mental illness, even when the researchers controlled for pre-existing psychological diagnoses.

Specific to students with IDD, there may be unique presentations of behavioral, emotional, and physiological characteristics of trauma (Everatt & Gale, 2004; Sormanti & Ballan, 2011; Trueblood, 2009; Wigham, Hatton, & Taylor, 2011). In school-age children with IDD, behavioral changes may include disobeying rules at home or school, or refusing to come to school altogether (Sormanti & Ballan, 2011). Existing behavioral concerns may also increase in severity or frequency as a result of a recent traumatic event (Trueblood, 2009). Physiological symptoms can include changes in eating habits, stomachaches, or pervasive fatigue (Everatt & Gale, 2004). Despite this elevated risk, symptomatology associated with trauma in students with IDD are often overlooked or misunderstood by mental health providers, caregivers, and school professionals (Wilczynski et al., 2015).

Because IDD are associated with deficits in language, self-direction, and self-care, the social-emotional effects that students with IDD experience as a result of trauma are largely left undiscovered and untreated (Keesler, 2014). Instead of recognizing the impact of the traumatic event or a possible mental illness, changes in behavior or disruptions in attitude are often attributed to their disability (Levitan & Reiss, 1983; Manohar et al., 2016). When considering emotional presentations of trauma in students with IDD, school professionals must be mindful that this population sometimes presents with withdrawal, shock, or delayed grief; while these symptoms may not be as salient to school professionals as disruptive behavior, they still represent a change in baseline functioning and indicate that the student may benefit from intervention in order to process their experience and continue to benefit as maximally as possible from their education.

Availability of Intervention. Despite the well-established finding that students with IDD face high rates of trauma, there is minimal research, and consequently, policies or treatment guidelines, related to traumatization with this population (Glumbic & Zunic-Pavlovic, 2010; Horner-Johnson & Drum, 2006; Newman, Christopher, & Berry, 2000). Furthermore, although largely helpful when accessible, a community-based survey of individuals with IDD and their caregivers found that 65% of those exposed to trauma were unable to access IDD trauma-specific therapy after an adverse event (Spectrum Institute, 2013).

Mirroring this trend, guidelines for school psychologists to consider while supporting students with IDD are largely absent (Sormanti & Ballan, 2011), despite trauma exposure being a well-documented and significant risk for students

with IDD (Newman, Christopher, & Berry, 2000). Using a brief scoping review, a dearth of trauma-informed care (TIC) practices for this population were unearthed. According to Grant and Booth (2009), scoping reviews are a "preliminary assessment of potential size and scope of available research literature." A search was conducted using a university-hosted service that included large, relevant databases (e.g., Academic Search Complete, PsychArticles, ERIC, EBSCO). The search includes the keywords "intellectual and developmental disabilities" and "trauma-informed" in any field. Further, filters were set to include only articles that were peer reviewed. No date limit was set and all article types (e.g., conceptual, empirical) were included. This resulted in the identification of six articles, which are identified in the reference section. Of these articles, two focused on family members and family relationships of individuals with IDD (Brown, Hamilton-Mason, Maramaldi, & Barnhill, 2016; Scotti et al., 2012). Four articles did provide more specific information related to the use of trauma-informed care with individuals with IDD; however, they were largely focused on adults within residential or day treatment facilities (Craig & Snaders, 2018; Keesler, 2016; Keesler, 2014; Keesler & Isham, 2017). None of the articles specifically discussed the use of a TIC model for providing services to students with IDD within the context of special education programs in schools.

Considering the extent of research evidence was limited, it raises concerns that individuals with IDD are at elevated risk for negative reactions to trauma. Given the unique profile of traumatized students with IDD and the ongoing development of models for TIC, practitioners and scholars of school psychology must do better in identifying and implementing comprehensive strategies for students with IDD who have experienced trauma. Consequently, this applied theoretical paper delineates the unique needs of students with IDD who have been exposed to traumatic events. Drawing from the brief scoping review outlined above, we offer preliminary guiding frameworks that provide IDD-specific adaptations and school implementation considerations for school psychologists seeking to support this population. Specifically, the authors' purpose was to intersect currently available TIC principles and IDD strategies and outline potential next steps for research and practice. Using well-established TIC structures, this paper provides various evidence-based strategies school psychologists can employ when implementing TIC for individuals with IDD in schools.

TIC for Individuals with IDD

As TIC includes efforts across the system of service delivery (e.g., multi-tiered systems of support, special education programs), it is important that all potential aspects of the system are aware of TIC and its role in service delivery. From an ecological viewpoint (Bronfenbrenner, 1979), school psychologists can influence the micro, meso, and exosystem of any given student within schools. As such, it is incumbent on school psychologists to help provide services that improve students' achievement across each level. This includes students with IDD. From identification, goal development, and progress monitoring, school psychologists are trained to serve students with IDD across multiple ecological levels. We maintain that because of their expertise and involvement, it is important that school psychologists recognize the potential for TIC to improve the educational experiences of students with IDD.

The first step for school psychologists implementing TIC for students with IDD is understanding that trauma symptoms may go unrecognized or attributed to the inherent disability. As an example, staff should be prepared to consider how a change in behavior – such as an increase in self-injurious behavior – may be a manifestation of trauma rather than "acting out." Thus, practitioners interested in providing culturally-competent TIC to students with IDD must increase their knowledge of the behavioral, emotional, and physiological presentations of *thriving* individuals with IDD versus trauma-impacted individuals with IDD. Often, the inherent nature of the disability may preclude individuals with IDD from fully understanding (a) the reason why traumatic events occur, (b) the resulting consequences on themselves and others, and (c) how to effectively use coping strategies to assist themselves in dealing with the stress and related symptoms. This only highlights the need for school psychologists to enact

intentional interventions to help this population recover and thrive after experiencing trauma.

Next steps may include implementing preliminary recommendations for trauma-informed frameworks within schools. These services should be strengths-based and consider students' exposure to violence, historical trauma and risk, school belonging, biological responses to stress, and adaptive coping (Blitz & Lee, 2015). This requires that any subsystem within the school (i.e., special education) should use the tenets of TIC to improve school climate, emotion regulation, learning skills, friendship skills, and family connections (Blitz & Lee, 2015; Wesselmann & Parris, *in press*).

TIC Pillars

TIC is used to describe a specific approach to service delivery within any given system. There are four pillars that include six guiding principles (see Figure 1). The four pillars are *realize, recognize, respond,* and *resist revictimization* (Substance Abuse and Mental Health Services Administration [SAMSHA], 2014). The first pillar is the most basic, with everyone within the agency *realizing* the impact that trauma has on the population being served. This would require that all individuals, including school psychologists, who provide services to students with IDD, receive training on the impact of trauma on this unique population.

The second pillar is the ability of all service providers to *recognize* the signs of trauma. Similar to *realize,* this pillar requires that all service providers receive training that goes beyond simply understanding that trauma does, in fact, impact students with IDD. Such training must also include strategies for identifying when any given student is struggling with symptoms of trauma or may have recently experienced a traumatizing event. Specific to students with IDD, it is important that this training include expression of traumatic symptoms that may be unique to this population so that school psychologists are able to accurately assess trauma within any given student. We consider this aspect of assessing for trauma to be a particular skill unique to the training of school psychologists.

The third pillar is *respond*, which requires the agency to provide appropriate intervention for trauma symptoms across a range of tiers. Within the school systems, this includes universal, targeted, individualized, and special education services. For students who have been diagnosed with IDD, this requires that schools have in place strategies that address potential trauma in all students within special education, for groups of students within special education that may have similar or more severe forms of trauma, and then for individual students with intensive needs related to their traumatic experience.

The final pillar is *resist revictimization,* which is best encapsulated by prevention efforts within school systems. Special education teams, including school psychologists, must work to provide safe, supportive environments that reduce the likelihood of traumatic experiences while also mitigating the impact of trauma that may occur outside of school. This includes not forcing students to relive situations unnecessarily, avoiding exposing them to triggering stimuli, and promoting physical and psychological safety across all domains of the students' education.

TIC Guiding Principles

Embedded across all four pillars are the six guiding principles of TIC (see Figure 1). These principles include *safety, trustworthiness /transparency, peer support, collaboration/ mutuality, empowerment/voice/choice,* and *cultural/ historical/gender considerations* (SAMSHA, 2014). These principles ensure that all students receive positive support that promotes psychological and physical *safety,* while service providers maintain a sense of *transparency* that helps establish a relationship of trust with the student, special educator, or other school personnel that the school psychologist is helping. For students with IDD, this means not only meeting their basic needs, but attending to their psychosocial needs as well. One example from a trauma-informed Tier 2 intervention program, the Trauma-Informed Program for Promoting Success (TIPPS; Parris, 2017), that could be implemented includes mapping the school for safe and unsafe areas. This allows the students to use visuals, such as different colored crayons, to identify school spaces (e.g., gym, classroom) and through discussions explore why they may or may not feel physically or psychologically safe within those spaces (Foley,

Charczuk, & Parris, 2019; Varjas et al., 2012). This also provides ways for students to express what might make any given area, or identified person, feel safer to them. Additional TIPPS activities with IDD-specific adaptations can be found in Table 1. Furthermore, school psychologists can use this opportunity to train teachers and provide professional development on how to identify signs of trauma, both in the general and IDD populations. This would increase safety for students by raising awareness and recognition of signs of distress that are unique to students with and without IDD (Keesler, 2014). Further, Craig and Sanders (2018) illustrated that increased trauma-informed intervention methods reduced the use of restraint and seclusion, and subsequent client and staff injury, within a healthcare facility. It is possible that TIC may provide similar outcomes within school contexts.

Further, school psychologists must strive to be as *trustworthy and transparent* as possible with the students, families, and educators they work with. From making data-based decisions to progress monitoring, school psychologists working within a TIC framework are open and honest with students and their caregivers (e.g., legal guardians, special education teachers) regarding all aspects of treatment and educational progress. Part of trustworthiness is giving special educators opportunities to explore their own feelings and thoughts regarding how they are working with students with IDD and giving them a confidential and nonjudgmental space to discuss their experiences. This is a form of consultation that all school psychologists are in a position to provide to help create a trustworthy environment for students with IDD. Transparency means that during team meetings, for example, data are not overlooked or dismissed, and that all aspects of decision-making regarding programming for students with IDD are clear and easily understood by stakeholders (e.g., teachers, families, administration). This is another area in which school psychologists can work collaboratively to ensure this is achieved to the extent possible for students with IDD.

Typically, the third principle, *peer support*, applies to the student population in that service providers work to encourage supportive relationships among youth. It is possible, depending on the severity of IDD for any given student, that this will be difficult to achieve. Yet, this also means that peer support is available and utilized by the students' educators and family members. For example, providing guidance and information to support groups for caregivers of children with IDD who have experienced trauma would also fall under this category.

This leads to the next principle, which is *collaboration and mutuality.* Within the TIC model, school psychologists also need to work *collaboratively* with special educators, families, and their students with IDD to meet student needs. This includes a sense of *mutuality,* which relies heavily on the idea of mutual self-help wherein every member of the individualized education program (IEP) team, including school psychologists, serves to help with every aspect of service delivery. This principle also highlights the need for students to learn collaborative skills in order to access as much support as possible. Examples from TIPPS (Parris, 2017) include a problem-solving model that includes asking one person for advice or support before enacting a decision and an agree-to-disagree activity that outlines conflict resolution (see Table 1). Activities that help students learn to successfully disagree without conflict are crucial for this pillar of TIC (Foley, Charczuk, & Parris, 2019).

The fifth principle focuses on *empowering* students with adaptive coping strategies and strengths-based interventions. To do so, it is important that students, to the extent they are able, have the opportunity to provide their own *voice* to intervention decisions and *choice* in how those interventions are implemented. In one research study (Mitchell, Clegg, & Furniss, 2006) examining trauma in individuals with IDD, some participants refused to talk about the trauma; in their own way, these individuals were enacting the "*resist revictimization*" pillar as silence meant they could avoid thinking about a time when they were distressed, vulnerable and afraid. However, by suppressing their voice, participants also maintained the belief that the world was a dangerous place and perpetuated the belief that they were partly to blame for what happened to them and they felt ashamed. As a research participant with intellectual disabilities explained, "It's best to talk about a thing than to keep it back in your mind...cos...if you keep

Table 1
IDD Adaptation of selected TIPPS activities

Activity	Goal	Key Components	IDD adaptation
Tale of Two Tigers	Students understand different physiological responses to stress.	Facilitator reads a story about a paper and real tiger that both trigger physiological sensations of fear. • The "paper tiger" is used as a metaphor for trauma triggers. • Places emphasis on identifying "paper tigers" in order to manage physiological responses to fear. • Describe physical reactions to stress (fight, flight, or freeze). • Students create a craft that privately identifies their own "paper tiger" that they can laminate and take home from the session.	Simplify language and reading material by shortening sentences, reducing or eliminating metaphors. • Consider utilizing a social story or creating a fable that utilizes a strong interest to teach content and repeats key information. Increase visual content and graphic organizers • Consider utilizing visual emotional regulation tools (e.g., Anger-mometer) to minimize dependence on language to describe feelings/ emotional states
Problem-Solving	Students learn a model for problem solving.	Problem-solving components are adapted from Varjas et al. (2012) as follows: • Ask what the problem is. • Brainstorm solutions • Choose a solution by considering: Is it safe? How will it impact others? Is it fair? Can I do it? • Students are also encouraged to ask others what they think, do the steps they selected, and evaluate the choice for success. • Content is reinforced through role-plays. • Students create laminated cards as a permanent product from session to help make the problem-solving cycle automatic.	Simplify language and provide verbal prompts to support content (e.g. "Ask," "Think," "Choose," "Do.") Support students in generalizing the model by using similar prompts across settings and providers or staff. Integrate simplified problem-solving model as a functional routine within and outside of group.
Body Scanning	Students identify physiological sensations associated with different emotions.	Pictures of bodies with different parts highlighted in orange (warm, heavier) and blue (colder, lighter) are used to highlight common physiological sensations associated with different emotions. • Students guess which emotion might be associated with different images. • For example, anger is shown through orange/red hands and feet while worry is shown through a red stomach area.	Simplify lessons according to emotional insight, language level, or other variables by focusing on core emotions, building on existing teaching about emotion regulation, or focusing on a single emotion at a time. • Use multiple modalities (e.g. pictures, charades, video modeling) to support emotion identification and facilitate body scanning.
School Maps	Students identify spaces in school that feel physically or psychologically unsafe.	Students draw on or color-code blueprints of the school to identify safe or unsafe areas. • Discuss each area in terms of how students described its safety level and how to make it more safe. • Identify one person in each space that is safe for them to go to if they feel upset.	Simplify lesson activity by concretely describing what "safe spaces" look like and what traits are associated with safe spaces in school. • Use graphic organizers, such as T-Charts, to sort school spaces as safe or unsafe.

Table 1 *(Continued)*

Positive Safe Spaces	Students discuss ways that they can contribute to a more positive school climate for themselves and others.	Use narratives to create a group goal for improving positive perceptions of school. • Students draw or write a story about a time they felt negatively while at school. • Students then draw or write what would have made them feel better in this situation.	Simplify language and reading material by shortening sentences, reducing or eliminating metaphors. • Consider utilizing a social story or creating a fable that utilizes a strong interest to teach content and repeats key information.
Body Maps	Improve students self-esteem by identifying strengths and interests.	Facilitators lead a discussion on using strengths to feel better when upset. • Provide students with pre-drawn outlines of a human body. • Students color or draw their body outline and add drawings to indicate what they like about themselves or are good at. • If time allows, students view each other's drawings and write what they liked about each one.	Simplify lesson activity by concretely identifying what things make them upset, what strengths and interests they have, and what upset feels and looks like. • Use graphic organizers (i.e., body outline) to visually represent feelings and strengths to minimize dependence on language.
Empathy and Peers	Students receive psychoeducation and complete role plays to understand and apply the concept of empathy towards others.	Group leaders define the concept of empathy. • Students draw or write about a time that they did not feel like someone was empathetic to them. • Share examples provided by students and facilitate discussion around how the interactions described could have been made more empathetic. • Use role play to act out what empathy does and does not look like across different situations.	• Depending on language, social motivation, and other traits, simplify concept to describe "caring" for others as appropriate. • Break the concept of empathy or caring down into steps (e.g. notice a situation, imagine yourself in that situation, etc.). • Use social stories to reinforce teaching about the steps for empathy. • Use developmentally-appropriate role play to practice caring responses or thoughts in different situations.
Friendship Mountain	Students identify different levels of friendship and appropriate levels of effort, trust, and self-disclosure for each level.	Different levels of friendship are described in terms of a mountain. • The top level is best friends, the second is close friends, the third is family, the fourth are friends, the fifth is emerging friends, the sixth is peers, the seventh is adults in our lives, and the eighth is everyone else. • Discuss how individuals who are higher up the mountain typically receive and give more energy, trust, and effort within the relationship. • Students discuss what happens when the mountain is flipped (e.g. when we base self-worth and invest excessive energy in maintaining relationships with people on the eighth level of the mountain.)	Students exposed to trauma may have challenges with boundaries and trust. • Break the concept of relationships into types (e.g., casual, close, intimate) and brainstorm examples of people that would fall into each type • Place relationships onto a graphic organizer (e.g., mountain, concentric circles, relationship map) • Using simple terms and developmentally appropriate language, identify how people closer to the student are more trustworthy than people farther away from the student.

Table 1 *(Continued)*

Agree to Disagree	Students identify how to appropriately disagree with others and how to avoid aggression following a disagreement.	Group leaders facilitate discussion on strategies to respect others and manage possible feelings of anger or embarrassment during conflict. • Students create drawings or stories about disagreements that they have had. • Physiological reactions to disagreement and the diverse feelings that may arise for students with trauma histories are emphasized. • Students role play and practice.	Provide repetition and practice across settings to generalize conflict resolution steps. • Use story strips to teach guidelines for safe conflict and the effects that unsafe conflict has on relationships. • Supplement role play with video modeling to teach appropriate conflict skills. • Emphasize "Stop. Think. Do" models to regulate emotional response.

Note: Adapted from Parris (2017)

it back in your mind it sort of builds up and builds up, and then you come out with it bursting out crying" (Mitchell et al., 2006, p. 137).

Activities that help with this pillar include the creation of classroom rules that are informed and agreed upon by the students themselves (Foley et al., 2019; Wesselmann & Parris, in press), allowing students both choice and voice in the cultural expectations of their classroom. Further, the use of narrative techniques such as drawings and storytelling can help students provide rich descriptions of their experiences through a medium which allows them to pick and choose what, and how, to share (Foley, 2018; Foley et al., 2019). Story-telling and visual representations of experiences are a particularly effective tool when working with students with IDD (Gul, 2016).

Finally, empowerment comes from the use of strengths-based coping identification. Using multiple modalities, school psychologists might help students create a coping bag that includes reminders of one thing the student likes about themselves, one image that always makes the feel calmer, one person they can count on and go to when they are upset, and one thing they can do to make themselves feel better (Foley et al., 2019; Parris, 2018). This small bag or folder is kept with the student and can be accessed any time they feel distressed as a reminder of how to cope. Other strengths-based activities include drawings, such as body maps, in which students identify things they like about themselves and feel they do well on a visual representation of themselves, or body scanning, in which students examine pictures representing how the body feels when experiencing certain emotions and highlight different areas, representing changes in temperature or comfort in that area of the body (see Table 1). By learning to identify physical manifestations of emotions (e.g., increased discomfort or weight in their stomach when they are worried or the warming of their cheeks when they are embarrassed), students with IDD can begin to accurately identify, express, and cope with emotions they experience.

Finally, all services under TIC must be culturally responsive, taking into account the *cultural* differences among students with IDD. In addition to the cultural and developmental needs associated with IDD, school psychologists must consider the student and their families' racial/ethnic, gender, religious, and socioeconomic backgrounds. This also requires that service providers understand the *historical* aspect of students' culture. For example, having an awareness of how students with IDD have been stigmatized and limited in their protections within the historical context is necessary. Indeed, students with IDD were only guaranteed a free, public education starting in 1972 (PARC v. Commonwealth of Pennsylvania) after extensive advocacy and labor by caregivers, families, and self-advocates with IDD. This principle also requires an understanding of other historical contexts for culturally relevant information, such as the history of civil rights issues among certain racial/ethnic populations.

Table 2
Integration of TIC Care with the National Child Traumatic Stress Network's (2017) Steps to Implementing TIC in Schools.

Pillar	Principle	Guideline
Realize (1)	Safety (1)	Identify and assess traumatic stress (1)
Recognize (2)	Safety (1) Trustworthiness & Transparency (2)	Design population-specific prevention and intervention (2) Provide trauma-informed stakeholder training (3)
Respond (3)	Safety (1) Trustworthiness & Transparency (2) Peer Support (3) Collaboration & Mutuality (4) Empowerment, Voice, & Choice (5) Cultural, Historical, & Gender Issues (6)	Create partnerships with students and families to address risk (4) Create a learning environment that includes the tenets of TIC (5) Provide culturally responsive interventions (6) Develop a crisis plan for addressing future crisis/trauma (7) Build opportunities for educator self-care and reduction of secondary traumatic stress (8)
Resist Revictimization (4)	Trustworthiness & Transparency (2) Collaboration & Mutuality (4)	Create partnerships with students and families to address risk (4) Use needs assessment and trauma-informed literature to inform school discipline policies and practices (9) Ensure interdisciplinary collaboration within the school and the local community (10)

Note: Adapted from Foley (2019)

TIC School Integration

The National Child Traumatic Stress Network ([NCTSN], 2017) put forth 10 steps to integrating trauma-informed care into schools. These steps range from initial identification and assessment of the presence of traumatic stress within the select population, to creating partnerships with families, cultural responsiveness strategies, and working up towards system-wide policies and community partnerships (NCTSN, 2017). Table 2 outlines each step and the potentially corresponding pillars and principles of TIC.

In addition to these steps, other recommendations have focused on specific domains that are important. Blitz and Lee (2015) recommended a focus on safety, emotion regulation, learning, and families as focal points for trauma-informed approaches. Others have included school climate and peer relationships as important areas to consider (Wesselmann & Parris, *in press*). Regardless of the specific areas that schools choose to target with TIC, it is important to focus on enhancing students' well-being rather than focusing on *why* they may be struggling (Overstreet & Chafouleas, 2016). This shift allows for school personnel, including those working with students with IDD, to focus on improving the current situation as it is, rather than focusing on the child's behaviors as a problem or the system developing a sense of learned helplessness.

Considering that students with IDD have unique risk factors specific to the population such as limited verbal communication skills, delayed understanding of trauma, and experiences of concurrent caregiver grief (Brickell & Munir, 2008; Handley & Hutchinson, 2013), it is critical that school psychologists consider specific programs that exist within the NCTSN framework to appropriately address trauma in individuals with IDD (see Table 3). Once frameworks are in place, more targeted interventions can be applied for students with IDD.

We recognize that interventions that adhere to national guidelines and recommended practices that address trauma in students with IDD efficiently and efficaciously are scarce (Newman et al., 2000). To ensure intentionality around coping strategies for individuals with IDD, we

Table 3
Evidence-based TIC Interventions for Individuals with IDD

NCTSN Guideline	**IDD-Specific Framework**		
	TAKING TIME (Jackson & Walters, 2015)	*ROAD TO RECOVERY* (Ko et al., 2015)	*THERAPEUTIC SUPPORT PLANS* (Marcal & Trifoso, 2017)
	PURPOSE: Guide organizations that support people with IDD in adopting a trauma-informed lens for practice	PURPOSE: Prepare multidisciplinary providers with knowledge, skills, and values needed to support children with IDD who have experienced trauma	PURPOSE: Integrate available guidelines on best practices that can be applied to people with IDD who have experienced trauma
Identify and assess traumatic stress (1)	Understand the specific, unique experiences that place people with IDD at a higher risk for trauma. Recognize trauma, its effects on individuals, and never assume a person with IDD has *not* experienced trauma.	Initiate trauma screening when children with IDD present with behavioral concerns. Conduct assessment when children have known trauma history and trauma symptoms. Adapt trauma-specific screeners and assessment to the communicative needs of children with IDD. Collect data from multiple caregivers and service providers. Train caregivers on behavior changes that may be associated with trauma. Note the nonverbal responses and behavior of children with IDD during assessment.	Not explicitly addressed.
Design population-specific prevention and intervention (2)	Tailor intervention to individual needs & experiences. Maximize choice and control for people with IDD. Ensure age-respectful as well as developmentally informed practices.	Strengthen protective factors in the individual, family, community, and culture. Help families access IDD- and trauma-informed support; consider both formal and informal sources. Partner with parents to create a recovery team (p. 88 of trainer manual). Merge person-centered planning with evidence-based trauma treatment. Select evidence-based trauma treatment based off of the developmental level of the child.	Conceptualize trauma as a setting event. Utilize trauma-informed behavior planning; develop plans with the understanding that the function of someone's behavior is driven by their trauma history. Include and facilitate genuine choice-making for individuals with IDD.

Table 3 (*Continued)*

Provide trauma-informed stakeholder training (3)	Emphasize recovery	Help caregivers and family members be aware of the behavioral changes that may be associated with trauma. Emphasize that both IDD and trauma disrupt development. Recognize previously held biases about people with IDD; that they cannot benefit from standard mental health treatment, that behavioral intervention is the only option, that they are protected by their mental age, that IQ predicts adaptive functioning and responses to trauma (p. 20, facilitator handbook) Consider how stigma and community attitudes impacts the child, their family, their ability to seek support/justice)	Understand how individuals with IDD are more at risk for experiencing Adverse Childhood Experiences (i.e. ACEs) *and* smaller, layered traumas during the course of their lifespan.
Create partnerships with students and families to address risk (4)	Integrate the voices of people with IDD and traumatic experiences in program development.	Prioritize strategies that build on family resiliency and strengths. Recognize that many families of children with IDD live with added concerns about their child's wellbeing and hopes for their child's development.	Not explicitly addressed.
Create a learning environment that includes the tenants of TIC (5)	Consult with other organizations that have enacted trauma-informed policies.	Aim to provide – and support caregivers/other stakeholders in providing – an interpersonal environment that is healing to counteract trauma.	Not explicitly addressed.
Provide culturally responsive interventions (6)	Conceptualize how intersections between gender, ethnicity, and disability inform experiences. Recognize groups that are overrepresented in both the disability population and who have an increased probability of having experienced trauma (e.g. refugees, CLD students).	Recognize that children with IDD and their families often hold multiple identities. Recognize that cultural values and beliefs may or may not be congruent with our own (p. 67).	Not explicitly addressed.
Develop a crisis plan for addressing future crisis/trauma (7)	Involve people with disabilities and their families in reviewing policies and procedures.	Not explicitly addressed.	Not explicitly addressed.

Table 3 (*Continued)*

Build opportunities for educator self-care and reduction of secondary traumatic stress (8)	Not explicitly discussed.	Screen caregivers for trauma and refer to appropriate services. Recognize that families may experience feelings of grief and loss related to both an IDD diagnosis and their child's experience of trauma. Educate other providers and be aware of secondary traumatic stress, burnout, and vicarious trauma. Implement your own steps to stress reduction and self-care. Educate families about secondary stress/trauma and help them engage in self-care strategies.	Support direct support professionals in recognizing their own trauma history/ACES score, creating a self-care plan, and building resilience to stress. Prioritize the wellbeing of direct support staff. Recognize and respond to the effects of high turnover and compassion fatigue on the direct care providers of people with IDD.
Use needs assessment and trauma-informed literature to inform school discipline policies and practices (9)	Utilize self-assessment and consumer assessment to understand whether stakeholders are aware of the value of TIC, prevalence of trauma for individuals with IDD, and areas that could be improved.	Consider frameworks that think about behavior management in an expansive way (e.g. Gentle Teaching, Positive Behavior Support, The Happiness Factor, My Book about Recovery!, & Positive Identity Development) Focus on increasing quality of life, changing the environment, increasing alternate means of communication, and using alternative supports such as pictures.	Agencies interested in adopting a TIC lens should adopt the following goals and responsibilities: *Minimize the use of restraint and seclusion*. *Interview all victims of possible abuse*. *Train and educate staff regarding the intersection between trauma and IDD*. *Carefully oversee the direct services provided to people with IDD*.
Ensure interdisciplinary collaboration within the school and the local community (10)	Undertake a preliminary mapping exercise of who in your field of work and/or location may be available to consult, educate, and support the process of becoming trauma-informed. Share language across disciplines; trauma-specific language may have different meanings for disability-specific providers Acknowledge that trauma may further isolate individuals with IDD from forming relationships. Promote and maximize opportunities for people with IDD to engage fully in the wider community	Utilize Family-informed child-centered planning to unite goals and strategies across settings/agencies. Identify providers in your area that use TIC and evidence-based interventions for trauma. Reach out to agencies to identify how they adapt treatment to individuals with IDD.	Not explicitly addressed.

Table 4
Adaptation Strategies for Implementing TIC for Use with Individuals with IDD

Strategy[a]	Purpose[a]	Individual Application[b]	At-Home Application
Structure and Routine	Consistency, autonomy, opportunities for repetition	Consistent day and time Opening and closing routines	Support parents in developing bedtime, homework, or mealtime routines
Shorten	Competency, feelings of success, self-control, increased ability to regulate	Consider attention span, development, and language Use short, simple language Reduce complexity of sessions	Model language length and complexity Provide psychoeducation that addresses the effects of attention span and developmental level on mood and regulation
Slow Down	Comprehension	Speak slowly Reduce length of sessions Repeat sessions to address slow progress	Not explicitly addressed
Integrate Visuals	Comprehension and communication	Provide images that illustrate directions, tasks, and routines Pair visuals with verbal skill instruction Encourage painting, sculpting, etc. to express thoughts and feelings	Not explicitly addressed
Play	Comprehension and communication	Use figurines, dolls, puppets, sand play etc. to create stories or metaphors Bibliotherapy	Not explicitly addressed
Repeat	Consistency, predictability, and increased capacity for autonomy	Repeat skills and concepts in session Intentionally reinforce skill or knowledge acquisition	Assign and support caregivers in guiding homework completion
Use Interests and Development	Engagement, communication, skill retention, socialization	Ask and learn about interests Use favorite characters or things to teach skills Use interests to increase social engagement Use a developmental lens to consider peer interactions Consider sensory needs and interests, especially in the context of relaxation skill building	Not explicitly addressed

a: Grosso, 2012
b: Focht-New et al., 2008; Grosso, 2012; Hurley et al., 1998

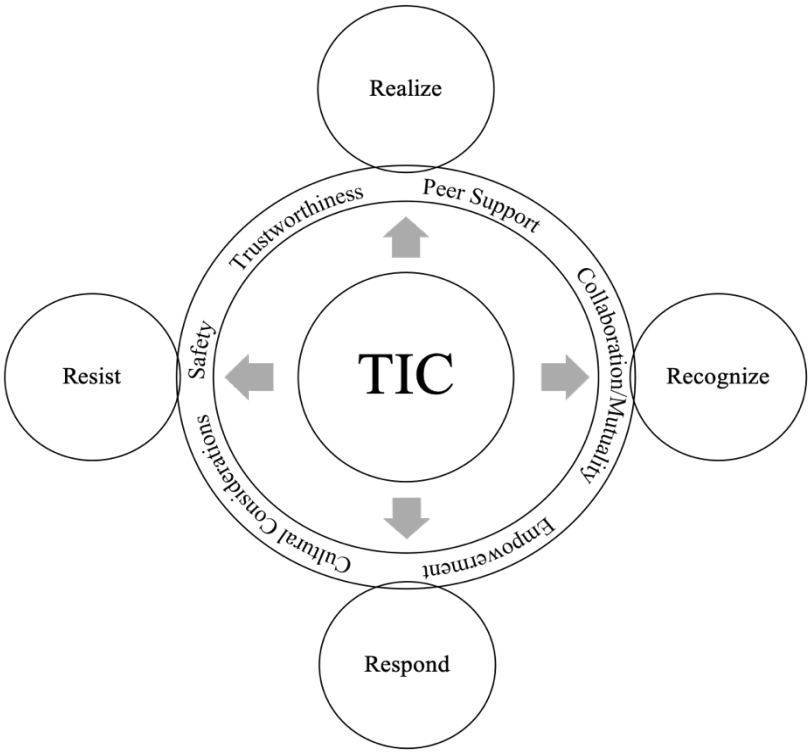

Figure 1. Model for Trauma-Informed Care.

suggest practitioners consider several strategies, including shortening instructions, slowing down the lesson plans, using visuals and interactive activities, and repeating lessons (Focht-New et al., 2008; Grosso, 2012; Hurley et al., 1998). Table 4 presents how these strategies can be applied individually and at home to intervene with traumatized students with IDD.

Impact and Conclusion

There have been multiple calls for schools to adopt a trauma-informed approach to service delivery (e.g., Ridgard et al., 2015). Indeed, research demonstrated that when schools systematically integrated a trauma-informed approach at the universal level there was an increase in academic performance and student resiliency (Blitz, Anderson, & Saastamoinen, 2016). Further, such approaches helped reduce the racial disparities in service delivery (Blitz et al., 2016). This is especially important given the overrepresentation of racial/ethnic and linguistic minority students within special education under the IDD label (Chaidez, Hansen, & Gertz-Picciotto, 2012; Nowell et al., 2015; Travers, Tincani, & Krezmien, 2011).

School psychology continually responds to shifts in the national climate and supports a diverse student body. As primary mental health providers in schools, school psychologists are trained in providing population-based mental health supports, but must also be competent in assessing and responding to students who need individualized support and intervention (Doll et al., 2014). Consequently, practitioners must seek specialized knowledge when supporting uniquely marginalized populations. This holds true for all students, including students with IDD. Despite increased risks, individuals with IDD are often overlooked by school psychologists responsible for providing tiered mental health interventions within schools. As stated earlier, there is a paucity of research examining the intersectionality of IDD and TIC. This in turn has resulted in limited best-practices, guidelines and frameworks, and resources for practitioners to reference. In response to the unique profiles of individuals with

IDD who have experienced trauma, this paper provides initial considerations and potential strategies for providing evidence-based support for those impacted by trauma within this population. In order to facilitate improved social-emotional outcomes for marginalized students, school psychologists are in a unique position to consult with special educators, as individuals and as a system, to help intervene with students with IDD who have experienced trauma. As such, it is important that school psychologists help integrate the TIC framework when working with special educators and providing services (e.g., assessment, creating IEP goals, progress monitoring review) to students with IDD.

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