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Examining Trauma-Informed Care Knowledge, Skills, Dispositions, and Professional Development Needs of Special Educators and Paraprofessionals in Therapeutic Alternative Schools: An Exploratory Survey Study

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ACCEPTANCE

This dissertation, EXAMINING TRAUMA-INFORMED CARE KNOWLEDGE, SKILLS, DISPOSITIONS, AND PROFESSIONAL DEVELOPMENT NEEDS OF SPECIAL EDUCATORS AND PARAPROFESSIONALS IN THERAPEUTIC ALTERNATIVE SCHOOLS: AN EXPLORATORY SURVEY STUDY, by MORA D. PRESSLEY, was prepared under the direction of the candidate's Dissertation Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree, Doctor of Philosophy, in the College of Education and Human Development, Georgia State University.

The Dissertation Advisory Committee and the student's Department Chairperson, as representatives of the faculty, certify that this dissertation has met all standards of excellence and scholarship as determined by the faculty.

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ABSTRACT

Examining the use of trauma-informed care (TIC) in schools is necessary to support the academic, behavior, and social-emotional development of students with and without disabilities who encounter trauma. In Chapter One, a systematic literature review was conducted to examine TIC interventions implemented in schools. Nineteen publications were included. Review results identified P-12 school-based TIC intervention characteristics, school-based facilitators, implementation strategies, and professional development (PD) components. Limitations and future directions are discussed. In Chapter Two, an online survey was administered to special educators and paraprofessionals to assess their knowledge, skills, dispositions and PD needs regarding TIC implementation for students with disabilities (SWD) in therapeutic alternative schools. Data analysis consisted of an exploratory factor analysis (EFA), an independent sample *t*-test, and a one-way Analysis of Variance (ANOVA). A total of 164 surveys were completed by special education classroom personnel. The EFA results revealed a 3-factor solution for examining TIC in therapeutic alternative schools. The independent *t*-test results revealed no statistically significant difference on TIC knowledge and skills, TIC personal responsibility dispositions, or TIC PD need. The overall ANOVA findings revealed that TIC PD need was significantly different across years of experience in therapeutic alternative schools, but not across school location or grade level. These findings set the stage for TIC practice implementation and creating appropriate and relevant TIC PD for special educators and paraprofessionals in therapeutic alternative schools.

INDEX WORDS: systematic literature review, trauma-informed care, special educators, paraprofessionals; professional development, school-based mental health, survey research

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By

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in

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DEDICATION

This dissertation is dedicated to my son, Ason J. Pressley. He has been the most important source of encouragement and motivation throughout this chapter in my life. He has genuinely grown into an intelligent, handsome, and energetic young man during this process. We have developed together as mother and son. Thank you, Ason for giving me the reason to be a phenomenal scholar and mother.

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1 EXAMINING SCHOOL-BASED TRAUMA-INFORMED CARE INTERVENTION FACILITATORS, STRATEGIES, AND PROFESSIONAL DEVELOPMENT: A SYSTEMATIC REVIEW OF LITERATURE

Childhood Trauma Exposure

Over 60% of America's children and adolescents will experience exposure to one or more traumatic event(s) in their lifetime (Anda et al., 2006; Fairbank, 2008; Felitti et al., 1998; National Child Traumatic Stress Network [NCTSN], 2008). Childhood trauma exposure refers to traumatic experiences that occur before age 18 and are physically and/or emotionally harmful or threatening (NCTSN, 2008). These experiences can have lasting adverse effects on a child's physical, social, emotional, and spiritual well-being (American Psychiatric Association [APA], 2013; Cook, Blaustein, Spinazzola, & Van der Kolk, 2003; Cook et al., 2005).

Childhood trauma can have lasting effects on a child's ability to be academically, behaviorally, and social-emotionally successful in school (Copeland et al., 2007). Students, who are exposed to trauma, can experience negative academic (e.g., decreased reading and math abilities, lower GPAs, Sullivan & Knutson, 2000), behavioral (e.g., higher rates of school absences, suspensions, and expulsions, De Bellis & Zisk, 2014) and social-emotional consequences (e.g., depression, suicidal ideation, NCTSN, 2008; Substance Abuse and Mental Health Services Administration [SAMSHA], 2014).

Preschool and K-12 schools are often the first point of contact for children and adolescents to receive restorative supports related to trauma-exposure (Chafouleas, Johnson, Overstreet, & Santos, 2016; Harris & Fallot, 2001; SAMSHA, 2014). Preschool settings such as Head Start, provide opportunities through which to identify trauma exposure among children and provide early on-site treatment and prevention (Bratton et al., 2012). Further, the impact of

trauma on a young child's school readiness offers motivation for Head Start educational settings to play a role in early identification of trauma exposure (Lieberman, Chu, Van Horn, & Harris, 2011). Similarly, kindergarten to twelfth-grade school settings have been identified as an ideal access point for improving contact with mental health service providers for children and adolescents exposed to trauma (Chafouleas et al., 2016; Hoagwood, Burns, Kiser, Ringeisen, & Schoenwald, 2001; Kazak et al., 2010). School-based personnel can provide supports within trauma-informed interventions by: (a) establishing key school-based personnel facilitators, (b) implementing specific trauma-informed care (TIC) strategies, and (c) providing opportunities for trauma-informed professional development (PD) for school-based personnel (Alisic, Van der Schoot, Van Ginkel, & Kleber, 2008; Chafouleas et al., 2016).

Trauma-Informed Care in Schools

A TIC approach in schools involves fully integrating knowledge about trauma into all aspects of instructional, behavioral, and psychological supports and prepares school-based personnel to recognize the signs of childhood trauma exposure and avoid the possibility of re-traumatization (Harris & Fallot, 2001; Ko & Sprague, 2007; Pappano, 2014; Plumb, Bush, & Kersevich, 2016; SAMHSA, 2014). Providing TIC in schools requires a commitment from all school-based personnel to build knowledge, awareness, and skills to support students' academic, behavior, and social-emotional development (Guarino, Soares, Konnath, Clervil, & Bassuk, 2009; Hodas, 2006; Jennings, 2008; Ko & Sprague, 2007; Wiest-Stevenson & Lee, 2016). In a seminal article on the development of a TIC service system, Harris and Fallot (2001) proposed that such a system is one in which administrators and school personnel understand how traumatic experiences may negatively affect overall well-being. TIC is similar to other school-based frameworks (e.g., Positive Behavior Interventions and Supports [PBIS, Simonsen & Sugai, 2013]

and social-emotional learning [SEL, Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Weissberg, Durlak, Domitrovich, & Gullotta, 2015]) that embed mental health consideration into their contexts. However, TIC challenges school-based personnel to commit to responding to student needs through universal trauma exposure realization, recognition, and responding to prevent the (re)traumatization of students (Harris & Fallot, 2001; SAMSHA, 2014).

School-based personnel are key to implementing TIC interventions for students who have had childhood trauma exposure (Ko et al., 2008). Children and adolescents exposed to childhood trauma can be supported by numerous adults in the school building including administrators, special and general education teachers, paraprofessionals, school-based mental health counselors, social workers, and other school personnel (Bath, 2008; Greenwald, 2005; Ko et al., 2008). School administrators often serve as the first point of contact among intervention implementors and require the most buy-in for TIC implementation in a school district or building (Chafouleas et al., 2016; Overstreet & Chafouleas, 2016; Pappano, 2014; Plumb et al., 2016). Teachers often serve as the first point of contact among students exposed to trauma. The teacher often provides the most direct supports and can mediate the effects of trauma exposure in the school building. However, teachers rely on the assistance of paraprofessionals, school-based mental health counselors, school-based social workers, and other school personnel to provide direct therapeutic supports to students exposed to trauma (Carello & Butler, 2014; McInerney & McKlindon, 2014). Further, school-based personnel are in a key position to deliver comprehensive TIC strategies to students exposed to trauma.

Trauma-Informed Strategies in Schools

Although TIC implementation in schools is a recent shift, several literature review studies (Chafouleas et al. 2016; Zakszeski, Ventresco, & Jaffe, 2017) support the implementation of TIC

strategy implementation in school-based settings. The SAMHSA (2014) provided a TIC conceptual framework embedded within six key areas (i.e., safety, trust, empowerment, personnel support, collaboration, and cultural responsiveness) in which school-based TIC strategy implementation can be embedded (Chafouleas et al. 2016; Cook et al., 2005; Harris & Fallot, 2001; NCTSN, 2008; Wiest-Stevenson & Lee, 2016). Table 1.1 defines six key areas that can be used in schools. The six TIC key areas are described below within school contexts.

Table 1.1
Trauma-Informed Care Key Areas

Key Area	**Strategies that:**
Safety	Ensure physical and emotional safety for all students and school personnel.
Trust	Maintain confidence among students and personnel while being transparent about school policy and procedures
Student Empowerment	Provide opportunities for school-based personnel to create an environment that allows students to feel validated and affirmed within daily interactions in the school.
Personnel Support	Establish TIC school environments building on critical resources and supports provided to school-based personnel to increase TIC practice and sustainability.
Collaboration	Recognize that healing happens in relationships and the meaningful sharing of power and decision-making by ensuring everyone has a role to play in a trauma-informed approach.
Cultural Responsiveness	Move past cultural stereotypes and biases (e.g., based on race, ethnicity, sexual orientation, age, geography) to implement culturally relevant interventions and practices.

Note. Key areas descriptions are modified from definitions within Harris & Fallot, 2001 and SAMHSA, 2014.

Safety. Being safe in a trauma-informed school means that school personnel ensure physical and emotional safety and recognize students' potential discomfort, unease, and triggers (e.g., Carello & Butler, 2015; Fallot & Harris, 2009; Harris & Fallot, 2001). Within the parameters of TIC, schools have an essential role to play in providing a safe and secure environment for youth and connecting them to caring adults to ensure that everyone who enters

the building and classroom feels physically and emotionally safe (Bath, 2008; Carello & Butler, 2015). Further, when school personnel restores safety after trauma exposure, the adverse effects of trauma exposure can be substantially mitigated (Chafouleas et al., 2016; Harris & Fallot, 2001; Osofsky & Fenichel, 1994; Phifer & Hull, 2016).

Trust. Incorporating trust strategies in a TIC school means that school personnel works to establish clear and proper tasks and boundaries (Harris & Fallot, 2001; Pappano, 2014; Phifer & Hull, 2016; Plumb et al., 2016). Further, school personnel can maintain trust by involving the student and caregivers in decision-making around needed TIC supports (Bryk, & Schneider, 2003). TIC trust practices might involve teachers and school personnel creating time during the school day to target individual students they know have trauma exposure and asking questions about social-emotional wellbeing. Teachers create ways to provide coping assistance (e.g., Pappano, 2014; Prinstein, La Greca, Vernberg, & Silverman, 1996; Plumb et al., 2016) for students after trauma exposure. Responding with TIC trust strategies also creates ways to build positive and trusting student-teacher relationships (Pianta, 1999). Last, teachers could use direct intervention strategies such as dialogue journaling to strengthen trust within student-teacher relationships (e.g., Anderson, Blitz, & Saastamoinen, 2015; Kane, 2017; Regan, 2003) by allowing students to write about trauma-related issues and teachers responding with TIC solutions.

Student empowerment. TIC student empowerment (SE) Strategies that empower students exposed to trauma provide opportunities for school-based personnel to create a school environment that allows students to feel validated and affirmed with opportunities for skill-building (Harris & Fallot, 2001; Pappano, 2014; SAMHSA, 2014). For example, trauma-informed schools provide opportunities for personnel to support students to build resiliency,

coping, self-control, and self-regulation skills. Strategies embedded within student empowerment might involve key facilitators providing psychoeducational activities such as resiliency skill building.

Personnel support. Personnel support (PS) strategies in trauma-informed schools provide opportunities for school-based personnel to build both professional and personal care for sustainability (Harris & Fallot, 2001). For example, trauma-informed schools can provide specific trauma-informed resources to teachers, curriculum and behavior specialist, and trained paraprofessionals who can give specialized attention to students who need extra social-emotional supports (Chafouleas et al., 2016). Providing TIC school-based personnel support practices help take some of the burden off teachers' day-to-day responsibilities. Also, personnel support involves creating opportunities to receive administrative support, access PD with mental health professionals, and engage in self-care (Ansley, Houchins, & Varjas, 2016; Butler, Carello, & Maguin, 2017; Craig, 2008; Craig, 2016a). For example, embedding supports designed to increase self-care that build mindfulness and reduce stress may be helpful in promoting school-based personnel in implementing TIC practices in schools. Providing these personnel supports ultimately works to improve the sustainability of trauma-informed practices in the school and classroom setting.

Collaboration. Embedding TIC collaboration strategies allow schools to recognize that everyone has a role to play in creating a trauma-informed environment. Students benefit from the increased levels of collaboration among school personnel and service providers (Harris & Fallot, 2001; Ko et al., 2008). Within TIC collaboration practices, school-based personnel work alongside other school-based personnel such mental health professionals or school social workers to recognize students' needs and possible solutions. Collaboration within TIC

acknowledges that each person (i.e., school-based personnel) involved is bringing valuable observations, information, and expertise to the table (Harris & Fallot, 2001). Opportunities for collaboration also recognizes that teachers can respond to students' trauma history (Harris & Fallot, 2001; Hopper, Bassuk, & Olivet, 2010). TIC collaboration practices might look like school-based personnel working alongside a school social worker to examine a child's case file or Individualized Education Program (IEP) to determine any history of trauma exposure. TIC collaboration practices might involve forming a task force of teachers and personnel who work to identify and respond to students who they have knowledge of trauma exposure.

Cultural responsiveness. Including TIC cultural responsiveness (CR) strategies in trauma-informed schools encourage school-based personnel to implement practices that acknowledge, respects, and integrates the student's and family's cultural values, beliefs, and customs (Harris & Fallot, 2001; Hodas, 2006; Hopper et al., 2010). Cultural responsiveness involves teachers consistently taking time to examine existing biases, stereotypes, and/or assumptions about their students (Blitz, Anderson, & Saastamoinen, 2016; Hodas, 2006; Hopper et al., 2010). Trauma-informed culturally responsive school staff might use a variety of methods (e.g., school demographic data, student demographic surveys, community assessment) to assess the demographics and cultures of the students in their classroom (Walkley & Cox, 2013). Further, teachers might involve caregivers and community members in structuring classroom lessons and cultural awareness activities for students (Blitz et al., 2016; Walkley & Cox, 2013).

Trauma-Informed Professional Development

Professional development (PD) is an essential foundational component of creating trauma-informed schools utilized to increase trauma knowledge, awareness and skills to support TIC intervention implementation. Effective TIC PD in schools should be designed to increase the

depth of knowledge in understanding trauma and its adverse effects on students (Chafouleas et al., 2016; Collie, Shapka & Perry, 2012). SAMHSA (2014) provides a conceptual framework in which TIC PD can be embedded. This a component of this conceptual framework (SAMHSA, 2014) is known as the 4R's (i.e., Realizing, Recognizing, Responding, and Resisting re-traumatization). Trauma-informed school personnel can be supported through TIC PD to (a) realize the prevalence of childhood trauma, (b) recognize the physiological impact of childhood trauma, and (c) respond by translating TIC knowledge into teaching practices, and to actively resist re-traumatization of students, families, school personnel, and other school-based employees is a vital component of TIC PD (Chafouleas et al., 2016; Cole, Eisner, Gregory, & Ristuccia, 2013; Mirabito & Callahan, 2016; Souers & Hall, 2016). Providing trauma-informed PD is a vital component of school-based TIC implementation because it builds knowledge of and buy-in for effective TIC implementation in schools (Chafouleas et al., 2016; Cole et al., 2013; Harris & Fallot, 2001). TIC PD should educate school personnel on the prevalence and impact of childhood trauma as it relates to the demographics of their student population. This knowledge-building ultimately enables school personnel to understand the purpose of creating a trauma-informed school and recognizing its effects (Butchart & Harvey, 2006; Cole et al., 2013; Wolpow et al., 2009). Table 2.1. defines the 4-Rs (SAMHSA, 2014) that TIC PD components can be framed for schools.

Table 2.1
Four R's within Trauma-Informed Care

Four R's	**PD components designed to:**
Realize	Help school-based personnel realize the impact of trauma and understand the potential for recovery and healing.
Recognize	Encourage personnel to recognize the signs of trauma in students, families, school personnel, and other school-based employees

Respond	Help school personnel respond to students by fully integrating knowledge about trauma into policies, procedures, and practices.
Resist Re-traumatization	Actively resist re-traumatization of students, families, school personnel, and other school-based employees

Note. Four R's descriptions are modified from definitions within Harris & Fallot, 2001 and SAMHSA, 2014.

Providing TIC PD promotes the use of effective practices and strategies into all levels of the school building and culture (SAMHSA, 2014). Further, educating school personnel about the benefits and outcomes for becoming trauma-informed encourages personnel to work toward developing healthy and trusting relationships with students and increased opportunities for caregiver collaboration (Chafouleas et al., 2016; Cole et al., 2013). For schools to best support students who have been traumatized, school-based personnel should have opportunities for active learning and ongoing TIC PD (Anderson et al., 2015; Chafouleas et al., 2016; Cole et al., 2013; Layne et al., 2011). Also, TIC PD should incorporate self-care activities specifically designed for school personnel (Carello & Butler, 2014; Craig, 2008; Craig, 2016b) to mitigate teacher burnout (Ansley et al., 2016). Within TIC PD, administrators should provide multiple opportunities throughout the year for TIC PD activities, opportunities for implementation performance feedback, reflection, and follow-up (Anderson et al., 2015; Chafouleas et al., 2016; Desimone, 2011; Desimone & Garet, 2015). Even after successful implementation of trauma-informed school-wide approach, school leadership must provide continuous TIC PD and self-care activities for school personnel (Anderson et al., 2015; Cole et al., 2013; Harris & Fallot, 2001). However, preliminary evidence suggests that direct and indirect exposure to trauma-related topics during PD can contribute to vicarious trauma in school-based personnel (Carello & Butler, 2014, 2015; Knight, 2010) especially with those who trauma and TIC are new (Knight, 2010). Some researchers have suggested that school-based personnel should be provided with additional

supports to promote self-care and coping strategies before, during, and after PD exposure (Anderson et al., 2015; Cole et al., 2013).

Rationale

TIC intervention implementation in schools creates a culture of school-based personnel who are equipped to support children and adolescents coping with the effects of childhood trauma exposure (Harris & Fallot, 2001; SAMSHA, 2014; Wiest-Stevenson & Lee, 2016). Although, limited literature exists that examines TIC intervention implementation in school-based settings (Bath, 2008; Chafouleas et al., 2016; Hoagwood et al., 2001; Ko et al., 2008; Zakszeski et al., 2017), there is no systematic review that specifically examines and synthesizes the literature regarding TIC school-based personnel facilitators, strategies, and PD components. It is imperative to understand the direct involvement of school-based personnel facilitators to understand what TIC strategies and TIC PD components are necessary when implementing school-based TIC interventions.

Research Questions

The primary focus of this systematic literature review was to examine the existing literature related to school-based TIC interventions implementation across P-12 school settings. The central research questions of the systematic literature review were:

1. What school-based personnel facilitated TIC intervention implementation?
2. What TIC strategies were included within school-based TIC interventions?
3. What TIC PD components were included within school-based TIC interventions?

Method

For this systematic literature review, *School* was defined as a preschool setting such as Head Start or pre-school or K-12 public school (i.e., traditional, alternative, day-school, or

charter). *School-based TIC intervention* was defined as a systematic framework or program that served students in schools who required psychological supports because of childhood trauma exposure. *School-based personnel* was defined as administrators, teachers, paraprofessionals, school-based social workers, school-based psychologists, mental health counselors, and/or clinicians. *TIC strategy* was defined as trauma-informed instructional, behavioral, psychological practice or procedures implemented within the school-based TIC intervention. *School-based TIC PD* was defined as training that school-based personnel participated in that supported increased realization, recognition, response, and resistance of childhood trauma exposure among students and school-based.

Literature Search

Publications were systematically identified using a three-step process. First, a search was conducted within the following education and psychology related databases: ERIC, Academic Search Complete, Child Development & Adolescent Studies, Education Source, Professional Development Collection, PsycARTICLES, PsycEXTRA, and PsycINFO using the following search string: (*trauma* OR "*trauma-informed care*" OR "*trauma-informed practice*") AND (*school** OR *education* OR *classroom* OR "*school-based"*) AND (*program* OR *intervention*). The primary author conducted the initial search. A second researcher (PhD in special education and works in an administrative capacity serving students with disabilities (SWD) in therapeutic alternative schools) was trained using the search criteria and provided the same literature search procedures described above and an *Abstract Review Form* (see Appendix A) and conducted a matching search. Inter-rater reliability between the two researchers was initially 97% (Miles & Huberman, 1994; Gwet, 2014). Disagreements were discussed using consensus coding until inter-rater reliability (IRR) was 100 percent between the two searches.

Inclusion Criteria. A study was included if it: (a) was published in English, (b) was published between 1995 to March 2018, (c) used quasi-experimental, experimental, qualitative, or mixed-methods to assess a TIC intervention in a *school* setting, (d) assessed a school-based TIC intervention implemented with youth and adolescents within the United States, (e) was primarily facilitated by school-based personnel, (f) utilized trauma-informed strategies, and (g) provided information on the TIC PD for school-based personnel.

The literature search identified 1,030 total non-duplicate records from the database search. A total of 170 records were excluded because they were primarily identified as grey literature (e.g., reports [*n* = 93], books and e-books [*n* = 37], magazines [*n* = 26], and conference materials [*n* = 6]). After abstract review of 860, an additional 774 records were excluded when the study was not a TIC intervention implemented in a school-based setting (*n* = 316), conducted outside the US (*n* = 241), or the study did not use a quantitative and/or qualitative methodology (*n* = 217). Eighty-six publications were identified for full-text review. After full-text review, an additional 68 articles were excluded because no school-based personnel were included in the school-based TIC implementation, the researchers did not describe TIC practices for school-based personnel or did not describe TIC training or PD components for school-based personnel. Second, to identify any additional studies, the primary researcher applied a backward reference search (Webster & Watson, 2002) within the reference sections of the identified studies to locate other eligible publications. Third, a forward reference search (Webster & Watson, 2002) was conducted using a "cited by" search of the identified studies using Google Scholar. For any new publication identified in the second and third searches, the same inclusion and exclusion process (i.e., independent review of the abstract and full-text review) was completed. No additional studies were identified in the backward reference search. However, one additional study (i.e.,

Crosby, Day, Somers & Baroni, 2018) was identified in the online Google Scholar forward search. A total of 19 studies met inclusion criteria.

Data Extraction and Coding

Codename definitions, inclusion, and exclusion criteria were discussed between the primary author and the secondary researcher until consensus was reached. Training on data extraction and coding included the primary researcher and a secondary researcher discussing and giving examples of strategies and PD components that might be coded within operational definitions of each of the six TIC key areas (see Table 1.1) and 4 R's (see Table 2.1) using the coding manual (see Appendix B) to extract and code strategy and PD component data both deductively (i.e. level one codes) and inductively (i.e., level two codes). Deductive coding (Bernard, Wutich, & Ryan, 2016) was used to sort the identified TIC strategies into the six key areas (see Table 1.1). Inductive coding was used to group the identified strategies into a sub-category under each key area. There were no strategies identified that did not fit into one of the six key areas and no strategy was coded for multiple key areas or subcategory. Deductive coding (Bernard et al., 2016) was used to sort the identified TIC PD components into the 4 R's of TIC: (a) realizing, (b) recognizing, (c) responding, and (d) resisting re-traumatization within the coding framework. Deductive coding was used to sort the identified PD components into one of the 4R's categories. Inductive coding was used to group the identified components into a sub-category under each key area. There were no components identified that did not fit into one of the 4-Rs and no PD component was coded for multiple 4-Rs or subcategory. Appendix B provides the TIC strategy coding manual with code names, definitions, inclusion, and exclusion criteria and the consensus coding results.

Inter-rater reliability training consisted of the primary and secondary researcher coding a practice article together and independently coding practice articles (i.e., articles that were identified that did not meet inclusion and exclusion criteria) until a 95% agreement was reached consecutively across two articles. Then, the primary and secondary researchers extracted and coded data from each study (n = 19) for trauma-informed strategies and TIC PD components within level one and level two codenames and definition using the abovementioned coding manual. To calculate IRR (Gwet, 2014; Miles & Huberman, 1994), all publications (n = 19) were coded independently by the primary author and the secondary researcher. The secondary student researcher was provided the same data extraction and coding procedures described above. Initial IRR was computed using *percent agreement* where reliability equaled number of agreements divided by number of agreements plus disagreements (Miles & Huberman, 1994) between the two coders concerning the data extraction and coding for level one (i.e., practice key area and PD component 4R's) and level two (practice and PD component subcategories). Level one coding IRR for practices within the six key areas was 94.7 percent and within the 4 R's was 98.5 percent. Level two coding IRR within the subcategories within each practice key area was 95.4 percent and PD 4R's was 98.5 percent. In the case of disagreement, the TIC intervention strategy or PD component at both level one and level two coding were discussed until consensus coding of 100 percent was reached.

Results

The systematic literature review identified 19 studies of school-based TIC interventions with P – 12-grade youth who were exposed to childhood trauma. Studies utilized quasi-experimental (n = 10), experimental (n = 4), qualitative (n = 4) and mixed method (n = 1) research designs in preschool (n = 2) and K – 12 (n = 17) school settings within the United

States. Publication dates ranged from 2003 to 2018, with 63% (n = 12) published in the last three years (i.e., 2015 – 2018). The studies varied in TIC program, study design, school setting, grade level, sample demographics, and intervention outcomes. All the included studies shared a common intervention goal of ensuring the physical and emotional well-being of students who were exposed to trauma. Intervention outcomes shared a common goal of teacher and student increased knowledge, awareness, and/or positive behaviors. Also, studies (e.g., Day et al., 2015; McConnnico et al., 2016; Perry & Daniels, 2015) utilized researcher-created questionnaires and surveys to collect qualitative, anecdotal, and overall student and teacher satisfaction with TIC implementation. For example, Day and colleagues (2015) utilized a researcher created school climate survey to collect information on student perceptions of school climate change after intervention implementation. Whereas, McConnico and colleagues (2016) utilized teacher questionnaires to evaluate teachers' knowledge about trauma, TIC strategies, and their confidence to apply TIC strategies learned. Characteristics of included school-based TIC intervention studies are detailed in Table 3.1.

Table 3.1
Studies that Implemented TIC Interventions in P-12 Schools

Publication Author (Year)	Intervention	Design	Sample & Setting (Grade)	School-Based Facilitators	Measures	Outcomes
Allison & Ferreira (2017)	*CBITS*	Quasi-experimental pretest-posttest	23 students females (60.9%) males (39.1%) ages 10 to 14. Public School (5^{th} – 7^{th})	School Social Worker Teachers	The Child Posttraumatic Symptom Scale (Foa, Cashman, Jaycox, & Perry, 1997) The Short Mood and Feelings Questionnaire (Angold, Costello, Messer, & Pickles, 1995)	Statistically significant [$t(22) = 3.18$; $p < 0.05$; CI.95: (2.12,10.05)], lower indications of trauma exposure and depression following the intervention with a large effect size ($d = 0.80$) among student intervention group.
Crosby, Day, Somers, & Baroni (2018)	*Monarch Room (MR)*	Mixed Method	71 students female (100%) ages 14 to 18. Public Charter High School (9^{th} – 12^{th})	Teachers School Staff	MR logs within the School data system Researcher-created qualitative survey	Statistically significant ($F(2, 140) = 11.44$, $p < 0.01$) increase in use of MR over time among student intervention group. Positive perceptions of the MR intervention reported among student intervention group.
Day, Somers, Baroni, West,	*Heart of Teaching and Learning*	Quasi-experimental pretest-posttest	143 court-involved students ages 14 and 18.	Teachers Paraprofessionals	Student Needs Survey (Burns, Vance, Szadokierski, & Stockwell, 2006)	Statistically significant difference ($t(69) = -3.08$, $p < .01$, $d = .35$) in the survival subscale

Sanders, & Peterson (2015)			Gender not reported. Public Charter Middle/High School (K – 12th)	Mental Health Counselors	Child Report of Post-Traumatic Symptoms (Greenwald & Rubin, 1999) The Rosenberg Self Esteem Scale (Rosenberg, 1989) Researcher-created School-Climate Questionnaire	after among student intervention group. Significant difference ($t(69) = -2.53$, $p < .05$, d = .30) in post-traumatic symptoms among student intervention group.
Dorado, Martinez, McArthur, & Leibovitz (2016)	*Healthy Environments and Response to Trauma in Schools*	Quasi-experimental retrospective pretest-posttest	46 students female (30%) and male (70%), with a mean age of 8.48. Traditional Public School (K – 12th)	School Administrators General Education Teachers Special Education Teachers School Social Workers	Child and Adolescent Needs and Strengths Scale (Anderson, Lyons, Giles, Price, & Estes, 2002) Researcher-created Program Evaluation Survey	Statistically significant changes ($p < .001$) were found for student engagement items (i.e., students' ability to learn, students' time on task in the classroom, students' time spent in the classroom, students' school attendance) among student intervention group. Significant changes ($p < .001$) for five trauma knowledge and practice items (i.e., knowledge about trauma and its effects on children, understanding about how to help traumatized

						children learn in school, knowledge about trauma-sensitive practices, knowledge about burnout and vicarious traumatization, and use of trauma-sensitive practices) among school personnel intervention group. 87% decrease in total incidents, and an 86% decrease in incidents involving physical aggression after year five among student intervention group.
Goodkind LaNoue, & Milford (2010)	*CBITS*	Within-group longitudinal design	24 American Indian adolescents ages 11 to 15. Traditional Public School (6^{th} – 12^{th})	School Clinicians Teachers School Staff	Exposure to Violence Youth Survey (Singer, Anglin, yu Song, & Lunghofer, 1995) The Child Posttraumatic Symptom Scale (Foa et al., 1997) Child Depression Inventory (Kovacs, 1985)	Significant decreases in anxiety ($t(75) = 2.15$, $p < .05$), PTSD indicators ($t(76) = 2.30$, $p < .05$), and avoidant coping behaviors ($t(22) = 2.28$, $p < .05$) among student intervention group. Decrease in depression indicators ($t(22) = 1.98$, $p = .06$) among student intervention group.

					Multidimensional Anxiety Scale for Children (March et al., 1999) Children's Coping Strategies Checklist (Ayers, Sandier, West, & Roosa, 1996)	
Hansel et al., (2010)	*Rural school-based TF-CBT Program*	Quasi-experimental pretest-posttest	115 students female (47.8%) and male (52.2) with a mean age of 13.96. Traditional Public School (K – 12)	School District Superintendent School Administrators Teachers	University of California Los Angeles Post Traumatic Stress Disorder Index (Steinberg, Brymer, Decker, & Pynoos, 2004) The Trauma Symptom Checklist for Children (Briere, 1996)	Statistically significant lower intrusion ($\chi2$ = (1, n = 104)19.78, p < .001), avoidance/numbing ($\chi2$ = (1, n = 104) 20.78, p < .001, and arousal ($\chi2$ = (1, n =104) 1.91, p < .001) indicators compared to baseline scores of student intervention group.
Holmes, Levy, Smith, Pinne, & Neese (2015)	*Head Start Trauma Smart*	Quasi-experimental pretest-posttest	150 students female (65%) and male (64%), with a mean age of 4.25. Preschool (PreK / Head Start)	School Administrators Teachers Classroom Assistants	Childhood Trust Events Survey-Caregiver Version (Olafson & Connelly, 2012) Achenbach System of Empirically Based Assessment	74% of caregivers reported their children had been exposed to at least one traumatic event. Statistically significant (p < .05) improvements in attention problems, ADHD and ODD

					(Achenbach & Rescorla, 2000) Classroom Assessment Scoring System (Pianta, La Paro, & Hamre, 2008)	problems, and internalizing and externalizing behaviors among student intervention group.
Jaycox et al., (2009)	*Support for Students Exposed to Trauma (SSET)*	Quasi-experimental pretest-posttest	76 students female (54%) and male (46%), with a mean age of 11.4 Public Middle School (6 – 8)	Teachers School Counselors	Modified Life Experiences Survey (Sarason, Johnson, & Siegel, 1978) The Child Posttraumatic Symptom Scale (Foa et al., 1997) Child Depression Inventory (Kovacs, 1985) Strengths and Difficulties Questionnaire-Parent Report and Teacher Report (Goodman, 1997) Researcher-created Parent and Child Satisfaction Survey	Significant (T = -1.99, p = .046) reduction in depression scores, Non-significant (T =-1.89, p = .058) reduction in PTSD scores among student intervention group.

Jaycox et al., (2010)	*Project Fleur-de-Lis (CBITS and TF-CBT)*	Randomized controlled trial	118 students female (55.9%) and male (44.1%), with a mean age of 11.5. Public Schools (4 – 8)	Teachers School Counselors	Disaster Experiences Questionnaire (Scheeringa, 2005) UCLA PTSD Reaction Index for DSM-IV (Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998) Child Depression Inventory (Kovacs, 1985) Social Support Scale for Children (Harter, 1985) Strengths and Difficulties Questionnaire (Goodman, 1997)	Significant ($p < .01$) symptom reduction of PTSD symptoms at post-test within the student intervention groups.
Kataoka et al., (2011)	*CBITS*	Randomized controlled trial	123 students female (44%) and male (40%), with a mean age of 11. Middle School (6)	School-Based Mental Health Counselors School-Based Clinicians Administrators Teachers	The Child Posttraumatic Symptom Scale (Foa et al., 1997) Child Depression Inventory (Kovacs, 1985)	Significantly ($p = .048$) higher mean grade in math scores among student intervention group. Non-significant score increases in language arts among student intervention group.

Langley, Gonzalez, Sugar, Solis, & Jaycox (2015)	*Bounce Back* (TF-CBT and CBITS)	Randomized controlled trial	74 students female (50%) and male (50%), with a mean age of 7.65. Elementary school (K – 5)	School-Based Mental Health Clinicians Teachers	Traumatic Events Screening Inventory for Children—Brief Form (Ford et al., 2000) UCLA PTSD Reaction Index for DSM-IV (Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998) Child Depression Inventory (Kovacs, 1985) Screen for Child Anxiety Related Emotional Disorders (Birmaher et al., 1999) Strengths and Difficulties Questionnaire-Parent Report and Teacher Report (Goodman, 1997) Social Adjustment Scale-Self-Report for	Statistically significant post-traumatic stress indicators (RI-C: f^2 = .15, p = .0029: RI-P: f^2 = .09, p = .022) and youth reported anxiety symptoms (SCARED-C: f^2 = .26, p = .0002) among student intervention group.

					Youth (Weissman, 1999) Coping Efficacy Measure (Sandler, Tein, Mehta, Wolchik, & Ayers, 2000) Emotion Regulation Checklist (Shields & Cicchetti, 1997) Researcher-created Parent and Child Satisfaction Survey	
McConnico, Boynton-Jarrett, Bailey, & Nandi (2016)	*Supportive Trauma Interventions for Educators*	Quasi-experimental pretest-posttest	250 students. Gender and ages not reported. Public School (K – 2nd)	Administrators Teachers	Classroom Assessment Scoring System (Pianta, La Paro, & Hambre, 2008) Researcher-created Teacher Questionnaire	Statistically significant ($p < .05$) differences in the CLASS scores for educational support and classroom organization among student intervention groups. Majority of teachers (90%) reported an increase in TIC knowledge at post-intervention.
Parris et al., (2015)	*Trust-Based Relational Intervention*	Qualitative	138 at-risk students. Gender and	General Education Teachers	Focus group and interview data.	Improved school culture (i.e., positive mood among staff and

			ages not reported. Charter school (7^{th} – 12^{th})	Special Education Teachers Behavioral Support Staff School Principal	Disruptive and aggressive behavior incident reports from school data system.	students) reported by school personnel. 68 percent decrease in referrals for physical aggression among student intervention group. 88 percent decrease in referrals for verbal aggression among student intervention group. 95 percent decrease in referrals for disruptive behavior among student intervention group.
Perry & Daniels (2016)	*New Haven Trauma Coalition*	Mixed Methods	77 students ages 10 to 12. Gender not reported. Public Charter School (5^{th} – 6^{th})	Administrators Teachers	UCLA PTSD Reaction Index for DSM-IV (Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998) Researcher-created Student Satisfaction Survey Researcher-created PD satisfaction survey	A better understanding of how to relax (95%), trusting others (92%), and how to worry less (91%) reported among student intervention group. 97 percent satisfaction with training received reported among school personnel participants.

Powell & Bui (2016)	*Journey of Hope*	Mixed Methods	110 students female (45.5%) and male (55%) ages 11 to 15. Public Middle Schools (6^{th} – 8^{th})	School Counselors School Social Workers School Psychologists	UCLA PTSD Index (Steinberg, Brymer, Decker & Pynoos 2004) Youth Coping Index (McCubbin, Thompson, & Elver, 1996) General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995) Strengths and Difficulties Questionnaire-Parent Report and Teacher Report (Goodman, 2001)	Significant increase in communication management ($F(1, 101) = 4.23$, $p = .042$; $d = .37$) and prosocial behaviors ($F(1, 107) = 16.19$, $p = .000$; $d = .61$) among student intervention group.
Santiago, Fuller, & Lennon (2016)	*CBITS* + *Family Component*	Mixed Methods	19 student dyads female (57%) and male (43%) with a mean age of 11.59. Urban Public School (4^{th} – 8^{th})	Teachers School Counselors	Researcher-created parent interviews	Problems children faced in the community and schools (87%), the importance of parent involvement (87%), motivation to participate (80%), and benefits of participation on CBITS (87%) reported among parents.

Santiago et al., (2014)	*CBITS-plus-Family Treatment Component*	Quasi-experimental pretest-posttest	32 student female (59%) and male (41%) with a mean age of 11.70. Urban Public Middle Schools (5^{th} – 8^{th})	School Social Workers	Researcher-created Parent Satisfaction and Participation Survey Parental School Involvement Questionnaire (McBride, Schoppe-Sullivan, & Ho, 2005) Attitudes Toward Mental Health Treatment Scale (Brown et al., 2010) Stress Questionnaire (Connor-Smith, Compas, Wadsworth, Thomsen, & Saltzman, 2000) Familism Scale (Gil, Wagner, Vega, 2000) Child Report of Parenting Behavior Inventory (Schludermann & Schludermann, 1970)	Significant changes in parental school involvement ($F(1, 61) = 9.50$, $p < .01$) and attitudes toward mental health ($F(1, 61) = 8.98$, $p < .01$) among student intervention group. Significant changes in symptoms and responses to stress and PTSD indicators ($F(2, 58) = 3.36$, $p < .05$) among student intervention group. .

					The Child Posttraumatic Symptom Scale (Foa et al., 1997) Child Depression Inventory (Kovacs, 1985)	
Shamblin, Graham, & Bianco (2016)	*Partnerships Program*	Quasi-experimental pretest-posttest	217 students ages 3 to 5. Gender not reported. PreK / Head Start	Teachers Pre-School Staff School-Based Mental Health Counselor	Teacher Opinion Scale (Geller & Lynch, 1999) Preschool Mental Health Climate Scale (Gilliam, 2008) Deveraux Early Childhood Assessment (LeBuffe & Naglieri, 1999) Georgetown University Early Childhood Mental Health Consultation Survey (Hepburn et al., 2007)	Significant improvement (M = 39.6, SD = 2.94), $t(11) = 2.50$, $p = .030$). in confidence in responding to student behaviors related to trauma among teacher intervention group. Significantly higher resilience scores ($p <$ .001) among student intervention group.
Stein et al., (2003)	*CBITS*	Randomized controlled trial	126 students female (38%) and male (62%), with a mean age of 10.9.	School-based Clinicians School Administrators	The Child Posttraumatic Symptom Scale (Foa et al., 1997)	Non-significant differences of lower symptoms of PTSD, depression, and psychosocial dysfunction among

		Teachers Public Middle School (6th)	Child Depression Inventory (Kovacs, 1992) Pediatric Symptom Checklist (Gall, Pagano, Desmond, Perrin, & Murphy, 2000) Teacher-Child Rating Scale (Hightower, Spinell, & Lotyczewsk, 1989)	student intervention group. Non-significant differences in teacher-reported lower rates of students' aggressive classroom behaviors among student intervention group.

Note. CBITS = Cognitive Behavior Intervention for Trauma in Schools; PTSD = Post-traumatic stress disorder

School-Based TIC Interventions

The 19 studies reviewed utilized a total of 14 different school-based TIC interventions delivered across whole-school, small-groups, and individualized settings. Of the 19 studies, two implemented school-based TIC interventions with students in preschool settings (Holmes, Levy, Smith, Pinne, & Neese, 2015; Shamblin, Graham, & Bianco, 2016) while the remaining 17 studies implemented TIC interventions in K-12 settings. Twelve (63%) of the identified school-based TIC interventions implemented small-group TIC supports. Nine (47%) studies utilized small-group cognitive-behavioral interventions were most often implemented across K-12 school settings with positive long-term effects. Seventeen (89.4%) studies implemented targeted individualized TIC interventions for students who needed additional supports in preschool (*n* = 2, 10%) and K-12 (*n* = 15, 79%) schools. The studies reviewed included student participants from a variety of cultures (e.g., Asian and American Indian) and trauma-histories (e.g., physical assault, emotional neglect, or witnessing domestic violence) and were conducted in diverse pre-school and K-12 school settings.

Nine (50%) of the included studies that modified or adapted the TIC intervention to meet the needs of student participants. Specifically, TIC interventions were modified and delivered to small groups of Latino Spanish-speaking (Allison & Ferreira, 2017) and American Indian (Goodkind LaNoue, & Milford, 2010) students. All studies included students identified as having a significant trauma history. Six (32%) of the included studies directly addressed students with PTSD. While the remaining studies addressed trauma-related symptoms, stress, violence, depression, aggression, and disruptive behaviors demonstrated among student participants.

All the included studies measured teachers' (e.g., TIC knowledge and skills) and student-related outcomes (e.g., PTSD symptoms, academic, behavior, resiliency). Teacher-related

outcomes were measured using rating scales, researcher-created questionnaires, surveys and interviews. Studies measured students' related outcomes using a variety of standardized scales, trauma screeners, symptom checklists, inventories and questionnaires. The most commonly used measures were the *Child Depression Inventory* (*n* = 7, 36.8%) and the *Child Posttraumatic Symptom Scale* (*n* = 6, 31.6%). Researchers also reported changes in student behaviors and quality of relationships using the UCLA PTSD Reaction Index for DSM-IV (n = 4, 21.1%, Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998), Strengths and Difficulties Questionnaire-Parent Report and Teacher Report (*n* = 3, 15.7%, Goodman, 2001), and the Classroom Assessment Scoring System (*n* = 2, 10.5%, Pianta, La Paro, & Hamre, 2008). Researcher-created surveys (*n* = 8, 42.1%) and interviews (*n* = 1, 5.3%) were utilized to assess participant involvement, perceptions and satisfaction with school-based TIC intervention implementation.

School-Based Personnel Facilitators

To answer the first research question, school-based facilitators of each TIC intervention were identified within the included 19 studies. Studies included school-based facilitators such as teachers (*n* = 12, 63% of studies), school-based mental health professionals (*n* = 11, 58% of studies), school administrators (*n* = 8, 42% of studies), school social workers (*n* = 4, 21% of studies), and other school personnel (*n* = 11, 58% of studies). Identified school-based facilitators within each included study are detailed in Table 3.1. Teachers [Head Start (*n* = 2), general education (*n* = 12), and special education (*n* = 2)] were the most often identified facilitator of TIC implementation in schools and classrooms. For example, Head Start teachers facilitated TIC intervention implementation by receiving training, classroom consultation, and peer-based mentoring from school-based mental health professionals (Holmes et al., 2015; Shamblin et al.,

2016). General education (Dorado, Martinez, McArthur, & Leibovitz, 2016; Parris et al., 2015; Perry & Daniels, 2016; Santiago, Fuller, & Lennon, 2016) and special education teachers (Dorado et al., 2015; Parris et al., 2015) facilitated TIC intervention implementation by receiving training, implementing intervention components, and referring students to individualized intervention supports. Mental health counselors (n = 5), and school clinicians (n = 5), school psychologists (n = 1). Mental health counselors served as the primary facilitators (e.g., Jaycox et al., 2009), participant recruiters (e.g., Powell & Bui, 2016), and provided direct services (e.g., Santiago et al., 2016; Shamblin et al., 2016). School-based clinicians interviewed potential student participants, provided facilitator training to school personnel, and led individual student sessions (Goodkind et al., 2010; Kataoka et al., 2011; Langley, Gonzalez, Sugar, Solis, & Jaycox, 2015; Stein et al., 2003). School psychologists received training on the intervention background, design, and implementation procedures and facilitated school-based TIC intervention implementation (Powell & Bui, 2016). School administrators (n = 8) and district superintendents (n = 1) were often the first points of contact for school-based TIC intervention implementation. School administrators received trauma training, met with an intervention facilitator, and provided insight on intervention implementation and procedures (Crosby et al., 2018; Dorado et al., 2016; Holmes et al., 2015; Perry & Daniels, 2016; Stein et al., 2003). District superintendents and school principals served as the main point of contact between TIC intervention facilitators and facilitated networking between school stakeholders (Hansel et al., 2010; Parris et al., 2015). School-based social workers (n = 4) received training (Allison & Ferreira, 2017; Dorado et al., 2016) served as the primary intervention implementor (Allison & Ferreira, 2017; Powell & Bui, 2016; Santiago et al., 2014) and served as members of coordinated care teams (Dorado et al., 2016). Paraprofessionals and classroom assistants (n = 3, 16%) were

trained to implement intervention procedures and support general and special education teachers in implementing strategies (Day et al., 2015; Holmes et al., 2015; Shamblin et al., 2016). Other school-based personnel (*n* = 4) such as behavior support specialists (*n* = 1), office receptionists (*n* = 1), kitchen personnel (*n* = 1), and bus drivers (*n* = 1) were also included in school-based TIC intervention implementation. Behavior support specialists attended intervention training, provided supports for teachers during intervention implementation, and supported students during individual supports (Parris et al., 2015). Office and kitchen personnel and bus drivers received TIC training and provided support to the primary intervention facilitators (Crosby et al., 2018; Goodkind et al., 2010; Holmes et al, 2015; Shamblin et al., 2016).

School-Based TIC Intervention Strategies

To answer the second research question, a total of 191 TIC strategies were identified within the included 19 studies. The strategies were deductively coded into level one codes utilizing the six key areas of TIC that: (a) targeted safety (*n* = 28), (b) aimed at establishing trust (*n* = 23), (c) empowered students (*n* = 70), (d) provided school-based personnel support (*n* = 27), (e) incorporated cultural responsiveness (*n* = 15), and (f) created opportunities for collaboration (*n* = 28). Level 2 codes were inductively derived under each of the Level 1 codes. The TIC strategy coding manual is detailed in Table 4.1.

Table 4.1
TIC Strategy Coding Manual

Level 1 Code **Level 2 Code**	**Definition**
Safety	Ensure physical and emotional well-being of all students and school-based personnel
Consistency in Daily Routines	Establishing dependable and structured procedures for academic and behavior supports for trauma-exposed students

Predictability	Anticipating expectations when a change is implemented or during periods of transition. Change is implemented with considerations for expectations and values.
Non-Violent Learning Environment	Creating peaceful and nurturing environments including classrooms, hallways, playgrounds, and school bus) that are attentive to transitions and sensory needs
Emotional Well-being	Ensure mental health welfare of students
Evaluation of Discipline Policies	Evaluation of discipline policies to reward students for positive behaviors instead of punitive discipline measures.
Identifying Triggers	Recognizing and preventing trauma-related triggers in the school and classroom setting.
Trust	**Maintain confidence among students and personnel relationships while being transparent about school policy and procedures**
Develop Mutually Respectful and Positive Relationships	Fostering relationships that are compassionate and attuned as well as dependable and trustworthy.
Establish Appropriate Attachment	Fostering healthy attachment relationships that consider the developmental needs of the student
Student Empowerment	**Provide opportunities for school-based personnel to create an environment that allows students to feel validated and affirmed within daily interactions in the school.**
Social-Emotional Skills	Training provided to students to increase expand their emotional vocabulary, while learning to identify, express, and manage their feelings related to trauma exposure
Coping Skills	Training provided to students to increase methods to deal with stressful situations related to trauma exposure.
Resiliency Skills	Training provided to students to increase skills to build the capacity to recover quickly from trauma-related experiences.
Self-Regulation	Training provided to students to increase emotion regulation skills to respond to traumatic triggers in a socially acceptable way.
Problem Solving	Training provided to students to help them find solutions to difficult or complex responses to trauma.
Mindfulness Skills	Training provided to students to increase consciousness or awareness of trauma exposure or traumatic memories to produce a trauma narrative.

Relaxation Techniques	Training provided to students to reduce stress, tension, and anxiety related to trauma response.
Personnel Support	**Establish TIC school environments building on critical resources and supports provided to school-based personnel to increase TIC practice and sustainability.**
Psychoeducation	Training provided to school-based personnel to increase personal and professional coping skills related to trauma healing.
Classroom Consultation	Providing classroom personnel with performance feedback and consultation in implementing specific TIC practices.
Opportunities for Reflective Practice	Providing school personnel with opportunities for self-reflection for effective TIC practice implementation.
Peer-Based Mentoring	Providing school personnel opportunities for peer-based mentoring for effective TIC practice implementation.
Cultural Responsiveness	**Move past cultural stereotypes and biases (e.g., based on race, ethnicity, sexual orientation, age, geography) to implement culturally relevant interventions and practices**
Assess School Culture	Assessment of current school culture to determine strengths and areas of need.
Modify TIC intervention	The TIC intervention was adapted to within ethnic, racial, gender, and historical trauma contexts
Defining Cultural Responsiveness	Ensure school personnel learn about other cultures and are sensitive to cultural differences
Support Cultural Awareness Activities	Creating opportunities designed to increase knowledge of different cultural components
Collaboration	***Meaningful sharing of power and decision-making by ensuring everyone has a role to play in a trauma-informed approach***
Communication Across Service Providers	School personnel working together to discuss trauma-related student needs with a primary facilitator to create plans and brainstorm student-focused solutions.
Include Parents in Intervention Psychoeducation	Include primary caregivers in the discussion of trauma-related student needs, working with a primary facilitator to create plans, and brainstorming student-focused solutions.
Include community-based organizations, colleges, and universities in intervention implementation.	Include outside organizations in the discussion of trauma-related student needs, working with a primary facilitator to create plans, and brainstorming student and personnel focused solutions.

Communication and healing among peer groups	Allow students to work in peer groups to facilitate communication among school-based facilitators and key stakeholders

Note. Level 1 and level 2 code definitions were based on literature examples and agreed upon within consensus coding procedures.

Safety. Level 1 safety strategies (*n* = 28) were grouped into six level 2 sub-codes: (a) consistency in daily routines (*n* = 2), (b) predictability (*n* = 2), (c) non-violent learning environment (*n* = 8), (d) emotional well-being (*n* = 13), (e) evaluation of discipline policies (*n* = 1), and (f) identifying triggers (*n* = 2). Creating opportunities for establishing emotional well-being was most often identified among the studies (e.g., Parris et al., 2015; Dorado et al., 2016) as a part of creating a trauma-sensitive school culture. The creation of a trauma-informed system of safety and care were linked to teachers' ability to create physically and emotionally safe classroom environments for all children by providing supports, consistency through daily schedules and class meetings, well-planned transitions, identifying and dealing with triggers.

Trust. Level 1 trust strategies (*n* = 23) were grouped into two level 2 sub-codes: (a) mutually respectful and positive relationships (*n* = 17) and (b) appropriate attachment (*n* = 6). Establishing positive and respectful relationships was the most often identified strategy within trust. Studies (e.g., Day et al., 2015; McConnico et al., 2016; Parris et al., 2015; Shamblin et al., 2016) provided opportunities for students to develop healthy and positive relationships with the teacher by creating a culture of care and respect.

Student empowerment. Level 1 SE strategies (*n* = 70) were coded into seven level 2 sub-codes: (a) social-emotional skills (*n* = 15), (b) coping skills (*n* = 14), (c) resiliency skills (*n* = 10), (d) self-regulation (*n* = 2), (e) problem solving (*n* = 8), (f) mindfulness (*n* = 14), and (g) relaxation techniques (*n* = 7). Strategies that involved SEL for student empowerment were most often implemented within the school-based TIC intervention studies. Studies (e.g., Jaycox et al.,

2009; Langley et al., 2015; Perry & Daniels, 2016; and Stein et al., 2003) provided opportunities to build social skills, self-esteem, and self-efficacy skills within SEL strategies. Further, strategies that built on coping and mindfulness skills were the second most-implemented strategies within the identified school-based TIC intervention studies. For example, studies supported student empowerment by providing direct psychoeducation to increased awareness and benefits of utilizing coping (e.g., Allison & Ferreira, 2017), relaxation (e.g., Goodkind et al., 2010), and problem-solving skills (Day et al., 2015).

Personnel support. Level 1 PS strategies (*n* = 27) were coded into four level 2 sub-codes: (a) psychoeducation (*n* = 19), (b) classroom consultation (*n* = 5), (c) opportunities for reflective practice (*n* = 1), and (d) peer-based mentoring (*n* = 2). Psychoeducation strategies provided the foundation for school-based personnel to build knowledge and understanding of the effects of trauma and build necessary coping mechanisms. Further, classroom consultation and peer-based mentoring to supported TIC implementation by providing trained specialized personnel to support school-based personnel facilitators (Holmes et al., 2015; Shamblin et al., 2016). The consultation supported teachers by providing examples of how to best structure the classroom to create a supportive trauma-informed environment. Studies also utilized peer-based mentoring to offer a way for teachers and administrators to support one other and discuss trauma-informed techniques and skills being used. Self-reflection strategies also provided teachers with the opportunity to reflect on their successes and challenges and aid in the prevention of burnout and vicarious trauma while implementing TIC intervention supports to students.

Cultural responsiveness. Level 1 CR strategies (*n* = 15) were coded into four level 2 sub-codes: (a) assessed school culture (*n* = 2), (b) modified or adapted the TIC intervention (*n* =

6), (c) defined cultural responsiveness (*n* = 4), and (d) supported cultural awareness activities (*n* = 3). Cultural responsiveness strategies modified or adapted the school-based TIC intervention to fit the needs of the student participants (Dorado et al., 2016; Goodkind et al., 2010; Santiago et al. 2014, 2016). Studies implemented CR strategies that assessed the racial and cultural demographics of school personnel and students to adapt the intervention procedures to best fit the needs of students. Cultural awareness and capacity assessment allowed for school personnel to identify areas of strengths and needs considering specific student cultural contexts while implementing TIC and helped to determine the trajectory of trauma-informed future steps. Further, TIC interventions provided a PD on cultural responsiveness for teachers and school personnel.

Collaboration. Level 1 collaboration strategies (*n* = 28) were coded into four level 2 sub-codes: (a) communication across service providers (*n* = 9), (b) included parents in psychoeducation (*n* = 10), (c) included university and community agencies in implementation (*n* = 5), and (d) used collaborative peer groups for recovery (*n* = 4). Strategies that provided the opportunity for school-based personnel to work together and with others to provide trauma-informed supports. Strategies that allowed parents to be included in school-based TIC intervention implementation were the most often identified strategies within collaboration. For example, strategies included advocating for partnering with parents and other caregivers to increase students' chances for trauma-related post-intervention outcomes (Hansel et al., 2010; Holmes et al., 2015; Shamblin et al., 2016).

School-Based TIC PD Components

To answer the third research question, a total of 114 TIC PD components were identified within the included 19 school-based TIC intervention studies. The TIC PD components were

deductively coded utilizing the 4Rs- Realizing (*n* = 41), Recognizing (*n* = 25), Responding (*n* = 32), and Resisting Re-traumatization (*n* = 16). Then, each identified TIC PD component was inductively grouped into a subcategory within each of the 4Rs. All the identified intervention studies (*n* = 19, 100%) contained some TIC PD component designed to increase school-based personnel knowledge of trauma and trauma exposure. TIC PD was provided directly to Head Start teachers, administrators, bus drivers, and kitchen personnel (e.g., Holmes et al., 2015). TIC PD opportunities within K-12 TIC school-based interventions primarily included administrators and teachers and focused on increasing teachers' understanding of ways that trauma could impact students' physical, social, emotional, behavioral, cognitive, and academic functioning (Dorado et al., 2016; McConnico et al., 2016). Specific TIC PD components involved teachers learning about the importance of establishing and maintaining positive, caring, and supportive relationships to instill a sense of safety and trust (McConnico et al., 2016; Shamblin et al., 2016). School personnel within the included intervention studies received training to promote a culture shift by building the capacity to respond to students in a trauma-informed manner (Dorado et al., 2016; Holmes et al., 2015; Perry & Daniels, 2016). The TIC PD component coding manual is detailed in Table 5.1.

Table 5.1
TIC PD Component Coding Manual

Level 1 Code **Level 2 Code**	**Definition**
Realize	**Help school-based personnel realize the impact of trauma and understand the potential for recovery and healing.**
Defining Trauma	School personnel are taught about the definition of trauma and potential consequences of trauma exposure among students.
Defining Principles of TIC	School personnel are taught about and given a definition of TIC guiding principles of TIC and how

	practices within each principle applied to their school setting.
Understand how Trauma Affects Learning	School personnel are made aware of the adverse academic consequences that could potentially result from trauma exposure.
Understand How Trauma Affects Behavior	School personnel are made aware of the negative behavior consequences that could potentially result from trauma exposure among students.
Recognize	**Recognize the signs of trauma in students, families, school personnel, and other school-based employees**
Trauma Screening and Assessment	School personnel are provided tools and resources for screening and assessing trauma exposure among students. School personnel are given opportunities to practices assessing trauma exposure using screening and assessment tools.
Trauma-related Triggers	School personnel are also made aware of triggers that are present in the school setting that could potentially re-traumatize students.
Trauma Exposure Symptoms	School personnel are given lists of externalizing and internalizing behaviors symptoms demonstrated among students that might indicate trauma exposure.
Respond	**Help school personnel respond to students by fully integrating knowledge about trauma into policies, procedures, and practices.**
Positive Relationships	School personnel are taught how to build healthy positive relationships with students.
Classroom De-escalation	School personnel are taught how to de-escalate the classroom environment if a student has a trauma-related behavior response.
School Crisis Plans	School personnel are provided a framework to develop school plans that mitigated trauma-exposure among students.
Resiliency Skills	School personnel learn how to build capacity to foster resilience in school personnel and students.
SEL Skills	School personnel learn how to build capacity to promote SEL in school personnel and students.
Resist	**Actively resist re-traumatization of students, families, school personnel, and other school-based employees.**
Self-Care Practices	School personnel are taught self-care practices.

Self-Reflection	School personnel are taught how to and are provided opportunities for self-reflection
Coping Skills	School personnel are taught how to build healthy coping skills to mediate working with students who have encountered trauma.
Healing Strategies	School personnel are taught healing response strategies that could support students after trauma exposure.

Note. Level 1 and level 2 code definitions were based on literature examples and agreed upon within consensus coding procedures.

Realize. Forty-one level 1 TIC PD components were coded into five level 2 codes within *Realize* that focused on (a) defining trauma (n = 19), (b) discussing principles of TIC (n = 3) and understanding how trauma affects (c) learning (n = 7), (d) behavior (n = 8), and (e) relationships (n = 4). The most identified PD component within *Realize* was defining trauma. Teachers and school personnel discussed the definition of childhood trauma and learned about the negative consequences of trauma exposure and the link between adverse childhood experiences (ACEs; Felitti et al., 1998).

Recognize. Twenty-five level 1 TIC PD components were coded into three level 2 codes within *Recognize* that focused on (a) trauma screening and assessment (n = 19), (b) identifying trauma-related triggers (n = 3) and (c) trauma-exposure symptoms (n = 3). The most identified PD component within *Recognize* was screening for and assessing trauma exposure among students. School-based personnel were taught ways to screen for trauma exposure using checklists, scales, and qualitative measures (e.g., interviews, anecdotal evidence).

Respond. Thirty-five level 1 TIC PD components were coded into six level 2 sub-categories within *Respond* that focused on (a) positive relationships (n = 8), (b) classroom behavior de-escalation (n = 5), (c) creating school safety plans (n = 1), (d) resiliency skills (n = 3), (e) SEL (n = 7), and (f) intervention implementation procedures (n = 8). The most identified

PD components within *Respond* involved providing teachers with resources to build positive relationships with students and implement the policies and procedures within each school-based TIC intervention.

Resist. Sixteen components were grouped into four sub-categories within *Resisting Re-traumatization* focused on (a) self-care (n = 3), (b) reflective practice (n = 1), (c) coping skills (n = 4), and (d) healing strategies (n = 8). The most identified PD component within Resisting Re-traumatization involved training school-based personnel to provide direct healing strategies to students.

Discussion

The primary purpose of this systematic literature review was to synthesize the literature regarding school-based TIC interventions. The primary author investigated nineteen school-based TIC intervention studies for: (a) school-based facilitators, (b) trauma-informed intervention strategies, and (c) TIC PD components. TIC strategy implementation that considered safety, trust, student empowerment, personnel support, collaboration, and cultural responsiveness strategies are discussed. TIC PD components that considered realizing, recognizing, responding to childhood trauma and resisting re-traumatization of students and school-based personnel are discussed.

The findings within the current review considered the involvement of school-based intervention facilitators such as administrators, teachers, and paraprofessionals. Previous research (e.g., Anderson et al., 2015; Harris & Fallot, 2001) supports the importance of school facilitators because they supported TIC implementation through strategic planning, reviewing school policies, developing community partnerships, and evaluating implementation efforts. School-based facilitator roles and responsibilities included assessing training needs and creating

opportunities for teachers and personnel to gain knowledge and awareness about TIC by providing PD learning opportunities (Anderson et al., 2015; Hansel et al., 2010; Kataoka et al., 2011; McConnico et al., 2016; Stein et al., 2003). Further, studies that included teachers as the primary facilitator (e.g., Holmes et al., 2015; Perry & Daniels, 2016; Shamblin et al., 2016) had more direct and consistent access to students compared to other facilitators (e.g., school-based social worker, counselor, and mental health clinician) in studies that did not (e.g., Goodkind et al., 2010; Kataoka et al., 2011; Langley et al., 2015; Powell & Bui, 2016; Stein et al., 2003). This finding is relevant because it emphasizes the importance of recognizing teachers as a primary source of support to students with trauma histories. Teachers, classroom assistants, and paraprofessionals have opportunities to implement TIC strategies in the classroom. However, classroom assistants and paraprofessionals were recorded as primary facilitators far less than teachers (63% versus 16%) in the current review findings. This was a surprising finding considering classroom assistants and paraprofessionals often have more opportunities to provide one-on-one supports to struggling students in the classroom compared to teachers (Fisher & Pleasants, 2012; Giangreco, Suter, & Doyle, 2010).

All studies implemented TIC strategies that were designed to increase TIC strategies within safety, trust, student empowerment, school personnel support, collaboration, and cultural responsiveness (SAMHSA, 2014). Student empowerment (n = 70) were more often identified in the review findings. These findings were supported in the literature (e.g., Bloom, 1995, 2012; Chafouleas et al., 2016; Harris & Fallot, 2001; Osher et al., 2016) that discussed TIC implementation strategies in schools that encouraged student empowerment. For example, studies (n = 19, 100%) highlighted the importance of empowering students by providing psychoeducation for increasing SEL, coping skills, mindfulness, and resiliency. By incorporating

these therapeutic strategies into classroom instruction within the school-based TIC intervention, students ultimately benefitted from statistically significant academic, behavior, and trauma-related outcomes (Jaycox et al., 2009; Langley et al., 2015; Stein et al., 2003).

School-based TIC safety (*n* = 28), collaboration (*n* = 28), personnel support (*n* = 27), and trust (*n* = 23) strategies were identified at a similar rate within the review findings. This finding is supported in the literature (Chafouleas et al., 2016; Harris & Fallot, 2001; Souers & Hall, 2016) that noted the importance of these factors working conjunctively to create a trauma-informed school environment. Studies that aligned school safety, collaboration, personnel support, and trust TIC strategies with school policies and procedures provided an environment for optimal learning for students who were exposed to trauma (Crosby et al., 2018; Dorado et al., 2016; Holmes et al., 2015; Parris et al., 2015). Previous research has discussed and supported the importance of implementing trauma-informed school-based strategies designed to build safe (Bath, 2008; Carello & Butler, 2015; Cook et al., 2003, 2005; Harris & Fallot, 2001), trusting (Chafouleas et al., 2016; Souers & Hall, 2016) and supportive student-teacher relationships (Cook et al., 2005; Harris & Fallot, 2001; Pianta et al., 1999) to mitigate the effects of trauma exposure.

SAMHSA's (2014) conceptual framework for a trauma-informed approach is situated in a set of four assumptions that include the 4R's (i.e., realizing, recognizing, responding, and resisting re-traumatization). These assumptions provide a foundation for examining school-based TIC PD components within the literature. All of the included studies implemented TIC PD components were designed to encourage school-based facilitators and school staff realize (*n* = 41), recognize (*n* = 25), respond (*n* = 32), the impact of trauma and resisting re-traumatization (*n* = 16) of students. Researchers suggested that defining trauma and increasing awareness about the

impact exposure is an important TIC PD component for school-based staff (Anderson et al., 2015; Chafouleas et al., 2016; Oehlberg, 2008; Phifer & Hull, 2016). The literature (Jones, 2013; Phifer & Hull, 2016) supports this finding that suggests educators must be exposed to TIC PD components specifically designed to respond appropriately to the consequences of trauma exposure among students. Correspondingly, resources such as toolkits (e.g., Guarino et al., 2009), training curricula (e.g., Chafouleas et al., 2016; Hopper et al., 2010), and school-based service delivery models (Chafouleas et al., 2016; Cole et al., 2013) have been made available to assist school-based personnel in responding to students exposed to trauma.

Limitations and Future Directions

This literature review included some limitations. First, the inclusion and exclusion criteria limited the ability to include grey literature or studies outside the U.S. Second, only 19 published studies were identified that met inclusion and exclusion criteria. Third, only two of the 19 studies implemented school-based TIC in pre-k settings. Future research might evaluate school-based TIC intervention implementation effectiveness, acceptability and benefits, and feasibility across a variety of P-12 school settings.

Fourth, the included studies provide limited details about the how TIC strategies and PD components were facilitated and implemented within each school-based TIC intervention. Future research might identify specific TIC strategies and PD components within the literature by school location, role (e.g., general education teachers, special educators, paraprofessionals), teacher demographics (e.g., grade level taught or years of experience), and student demographics (e.g., amount of trauma history or disability).

Fifth, student disability demographics was not reported in any of the included studies. Since SWD are often more at risk for higher trauma exposure compared to their peers without

disabilities, this limits the ability of the current review to discuss the usefulness of school-based TIC for SWD. Future research might encourage the use of school-based TIC interventions, strategies, and TIC PD components for special educators and SWD in special education settings. Despite the limitations, the results of this systematic literature review highlight school-based facilitator involvement, TIC intervention strategies, and TIC PD components that supported the successful implementation of school-based TIC, However, readers should be cautious about how to best interpret findings from the current systematic review.

Conclusion

Despite the limitations, the results of this systematic literature review are encouraging and can be used preliminarily by researchers and practitioners as well as support the need for future evaluation of TIC intervention implementation in P-12 school settings. The current systematic literature review is the first step in identifying effective TIC strategies and TIC PD components for school-based facilitators. The next step would be to encourage more peer-reviewed publication of school-based TIC implementation within a trauma-informed conceptual framework approach (Chafouleas et al., 2016; SAMHSA, 2014). The findings highlighted the involvement of school-based facilitators such as teachers, classroom assistants, and paraprofessionals to support school-based TIC planning and implementation. Further, the current review findings emphasized TIC strategies aimed at empowering students exposed to trauma. Last, the current review described TIC PD components designed to help school-based realize the impact of trauma and respond to trauma exposure. Ultimately, more research is needed to determine the involvement of school-based facilitators as they implement school-based TIC strategies and the utilization of TIC PD components with diverse populations of students.

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2 EXAMINING TRAUMA-INFORMED CARE KNOWLEDGE, SKILLS, DISPOSITIONS, AND PROFESSIONAL DEVELOPMENT NEEDS IN THERAPEUTIC ALTERNATIVE SCHOOLS

Childhood trauma involves exposure to single or multiple trauma such as crime, violence, and abuse either directly or indirectly experienced before the age of 18 (Bell & Jenkins, 1991; Finkelhor, Turner, Shattuck, & Hamby, 2013; McLaughlin et al., 2013). Childhood trauma exposure can refer to an event experienced that has lasting adverse effects on a child's physical, social, emotional, or spiritual well-being (APA, 2013; Cook et al., 2005; Substance Abuse and Mental Health Services Administration (SAMHSA, 2014). Events that can be considered traumatic in the early developmental stages of life vary. For example, events such as such as a car accident, witnessing divorce, chronic illness, the death of a loved one, and rape or sexual assault are all considered traumatic events in the eyes of a child (National Child Traumatic Stress Network [NCTSN], 2009). Regardless of the exact event, when trauma exposure occurs in early childhood, it can significantly affect a child's physical, social, and emotional well-being throughout their entire life (Felitti et al., 1998, NCTSN, 2009).

The effects of childhood trauma exposure can be profound (Anda et al., 2006). The impact of trauma exposure can be felt across emotional, physical, and mental health. Childhood trauma exposure can impair the essential elements of learning, including thinking, attentiveness, and the ability to process new thoughts (Anda et al., 2006; APA, 2008; De Bellis, 2001; Perry, 2000; Sterling & Amya-Jackson, 2008). Researchers (e.g., De Bellis, 2001; Felitti et al., 1998; Stirling & Amaya-Jackson, 2008) have suggested that children who are exposed to significant trauma face a 76% likelihood of having one or more delays in their language, emotional or brain

development. Emotionally, childhood trauma victims can often experience feelings of anxiety, worry, shame, guilt, helplessness, hopelessness, grief, sadness and anger (Anda et al., 2006; De Bellis, 2001). Physically, children who are exposed to abuse and trauma may develop a heightened stress response (De Bellis, 2001; Perry, 2000). Psychologically, trauma exposure is linked to higher rates of anxiety, depression, suicide and self-harm, post-traumatic stress disorder (PTSD) drug and alcohol misuse and disability (Felitti et al., 1998). More so, trauma exposure can interfere with essential social, emotional, cognitive and physical tasks of early childhood and adolescent development by changing neurobiological functioning (Anda et al., 2006; Felitti et al., 1998; Perry, 2000). Such traumatic events may contribute to why children who experience trauma are often assigned to special education services with higher frequency (Macomber, 2009; Sullivan & Knutson, 2000).

Special education classroom personnel are in an ideal position to support SWD who have encountered a traumatic event by creating safe and trusting school and classroom environments (Bath, 2008; Stoesz et al., 2016). Daily tasks (e.g., providing direct instructional supports in positive learning environments, teach acceptable social skills as determined by the students' Individualized Education Programs [IEPs], and provide crisis intervention) of special educators can be embedded into TIC practices implemented in classrooms and schools (Carter, O'Rourke, Sisco, & Pelsue, 2009; Chafouleas et al., 2016; Douglas, Chapin, & Nolan, 2016; Harris & Fallot, 2001). Therefore, it is imperative to closely assess and examine the TIC knowledge, skills, dispositions, and PD needs of special education classroom personnel. However, very few studies have been published that directly assesses school teachers' and personnel TIC knowledge, skills, dispositions, or PD needs (Pressley et al., in preparation). For example, in a systematic literature review, Pressley and colleagues (in preparation) found that all studies

utilized a checklist or survey to assess teachers' and personnel TIC knowledge and skills, dispositions, or PD needs. However, no studies have been published that specifically assessed the TIC knowledge, skills, dispositions, or PD needs of special education teachers and personnel (Pressley et al., in preparation). Thus, it is imperative for special education classroom personnel to have the necessary TIC knowledge, skills, dispositions, and professional development (PD) to meet the needs of students with disabilities (SWD) who have been exposed to trauma. Further, assessing educator and school personnel TIC knowledge, skills, dispositions, and PD needs is the first step in implementing TIC successfully in schools (Anderson, Blitz, & Saastamoinen, 2015; Chafouleas et al., 2016; Harris & Fallot et al., 2001; Pressley et al., in preparation).

Knowledge: Childhood Trauma Exposure among SWD

Much of the trauma-related research involving SWD has been conducted in medical, social service, law enforcement, and school settings (Giardino, Hudson, & Marsh, 2003; Sullivan & Knutson, 2000). Those studies report the risk of maltreatment, stress, and trauma among children with disabilities is 3.44 times that of children without disabilities (e.g., Sullivan & Knutson, 2000). For example, in a school-based epidemiological study (Sullivan & Knutson, 2000) of 40,211 school-aged children enrolled in the Omaha Public Schools, 11% experienced maltreatment. For the 4,000 plus children who were maltreated, 22% had an identified disability for which they were receiving special education services in school (Sullivan & Knutson, 2000). Thirty-one percent of the children with an identified disability had social service or police records of maltreatment. Sullivan and Knutson (2000) identified disabilities among the maltreated children such as: (a) emotional and behavior disorder (EBD, 37.4%); (b) intellectual disability (ID, 24.1%); (c) specific learning disability (SLD, 16.4%); (d) other health impairment (OHI, 11.2%); (e) speech-language impairment (6.5%); (f) deaf/hard of hearing (D/HH, 1.3%);

(g) multiple disabilities (1.2%); (h) orthopedic impairment (1.2%); (i) visual impairment & blindness (0.4%); and (j) autism (0.1%). Further, SWD who have been exposed to trauma often displayed a higher combination of academic, behavioral and social problems (Turner, Vanderminden, Finkelhor, Hamby, & Shattuck, 2011). SWD who are exposed to trauma deal with issues such as poor language, concentration, understanding, problem-solving, and emotional regulation (Cross, 2012; Painter & Scannapieco, 2013; Perry & Azad, 1999) compared to the students without disabilities who encountered trauma evident across multiple child-serving agencies including schools.

Childhood trauma exposure such as child abuse and neglect have damaging effects on the capacity of SWD to benefit from special education services offered in traditional school settings (Finzi-Dottan, Dekel, Lavi, & Su'ali, 2006; Jones et al., 2012). SWD who have trauma exposure have significantly lower math and reading achievement than non-trauma exposed peers with disabilities and both traumatized and non-traumatized peers without disabilities (Jones et al., 2012). Further, trauma-exposed children with and without disabilities miss significantly more school days than non-trauma-exposed peers. Research conducted on childhood trauma indicates that chronic exposure to child abuse, family violence, and other types of interpersonal trauma can result in dysregulation and can negatively affect functioning in several areas of daily life (Van der Kolk, 2001). SWD who are exposed to trauma encounter many more academic and behavior school-related problems such as academic failure, suspensions, and expulsion in mainstream schools (Foley & Pang, 2006; Lehr & Lange, 2003; Van der Kolk, 2001). Therefore, therapeutic alternative schools that prioritize behavioral and social-emotional skills in addition to academic progress may be the settings necessary for students to heal after trauma exposure before returning to traditional school settings.

Skills: TIC in Therapeutic Alternative Schools for SWD

The U.S. Department of Education defines an alternative school as "A public elementary/secondary school that (1) addresses needs of students that typically cannot be met in a regular school, (2) provides nontraditional education, (3) serves as an adjunct to a regular school, or (4) falls outside the categories of regular, special education, or vocational education" (U.S. Department of Education 2008, p. C-1). Students who attend alternative schools are typically in danger of educational failure (Foley & Pang, 2006; Lehr, Tan, & Ysseldyke, 2009). Alternative schools are designed to address the needs of SWD and at-risk for disabilities that typically cannot be met in regular schools (Lange & Sletten, 2002; U.S. Department of Education, 2002). Of these SWD in alternative schools, a substantial number have experienced some chronic stress or trauma (Crosby, Day, Baroni & Somers, 2015; Foley & Pang, 2006; Lehr & Lange, 2003; Roberts, 2013; Zetlin, 2006).

Therapeutic alternative schools provide individualized support for students with social and emotional problems that create academic and behavioral barriers to learning. These programs target high-risk student populations—offering counseling, access to social services, and educational remediation (Raywid, 1995). Therapeutic alternative schools are designed to provide wraparound services for children and adolescents with EBD, LD, ADHD, and ODD, and link supports from school to home. They are separate schools that operate within the students' district public schools. It is often in therapeutic alternative schools (Raywid, 1995) where SWD may receive cognitive, behavioral and counseling supports from qualified adults (e.g., special education professionals, social workers, occupational therapists) in the school setting (Farmery, 2002; Roberts, 2013). It is often in therapeutic alternative schools where TIC supports can be implemented to support students who require therapeutic services that address trauma exposure.

A disproportionate percentage of SWD (e.g., LD, EBD, ADHD, and OHI) and mental health disorders (e.g., anxiety, clinical depression, and PTSD) are served in therapeutic alternative schools (Lehr, Tan, & Ysseldyke, 2009; Foley & Pang, 2006; Hoge, Liaupsin, Umbreit, &. Ferro, 2014; Wasburn & Moses, 2011). For many of these children, childhood trauma exposure exacerbates their academic and behavioral difficulties (Cook et al., 2005; Flower et al., 2011). SWD placed in therapeutic day school settings manifest severe social-emotional issues, which hinder them academically and behaviorally (Crosby et al., 2015; Foley & Pang, 2006; Lehr & Lange, 2003). Therapeutic alternative schools strive to provide a safe learning environment, which supports academic, behavior, and social-emotional growth through skill building, educational challenges, and therapeutic interventions (Foley & Pang, 2006; Flower et al., 2011; Lehr & Lange, 2003). In these settings, classroom strategies are needed to effectively reduce student anxiety and depressive symptoms, improve self-esteem and coping skills, and address social-emotional difficulties (Merrell & Gueldner, 2010; Roberts, 2013; Stoesz et al., 2016).

Incorporating TIC into therapeutic alternative schools is one way to meet the needs of SWD who encounter childhood trauma (Chafouleas, Johnson, Overstreet, & Santos, 2016; Harris & Fallot, 2001; Lehr et al., 2009; Overstreet & Chafouleas, 2016). An organization that is trauma-informed: (1) realizes the adverse effects of trauma, (2) recognizes the triggers, and symptoms of trauma, (3) responds by discussing knowledge about trauma (4) and seeks to resist Re-traumatization (SAMHSA, 2014). A trauma-informed approach can be incorporated in any program that is explicitly designed to address the consequences of trauma exposure among the population that it serves. Practices within TIC can be implemented across a variety of child-

serving agencies including schools. Table 1.2 lists and defines TIC key areas for schools within SAMHSA's (2014) conceptual framework for a trauma-informed approach.

Table 1.2
TIC Key Area for Schools

Key Area	**Definition** ***The school's ability to*:**
*Safety	Ensure physical and emotional safety for all students and school personnel
*Trust	Maintain trust among students and personnel while being transparent about school policy and procedures
*Personnel Support	Establish supportive environments building on key relationships to increase TIC practice sustainability
*Cultural Responsiveness	Move past cultural stereotypes and biases (e.g., based on race, ethnicity, sexual orientation, age, geography), offers gender-responsive services, leverages the healing value of traditional cultural connections, and recognizes and addresses historical trauma to implement culturally relevant interventions and practices
*Collaboration	Recognize that healing happens in relationships and in the meaningful sharing of power and decision-making by ensuring everyone has a role to play in a trauma-informed approach

Note. TIC = Trauma-Informed Care; *Key areas and definition adapted from SAMHSA TIC Guiding Principles, 2014

TIC implemented within therapeutic alternative schools acknowledge a students' symptoms and behaviors as potential trauma-related coping strategies and questions what has happened to, rather than what is wrong with the student (Carello & Butler, 2015; Harris & Fallot 2001). Further, school personnel (e.g., administrators, special education classroom personnel, cafeteria workers, bus drivers) must consider the intersection of co-occurring trauma exposure and disability diagnosis. Every aspect of therapeutic alternative school's' policies, practices, and procedures should reflect sensitivity to trauma exposure and disability diagnosis within the guiding principles of TIC (Harris & Fallot, 2001). Thus, the adoption and integration of TIC often require an organization to experience a conceptual shift in its efforts to recognize and

respond to students who have experienced a childhood trauma exposure. More so, school personnel (e.g., special education teachers, paraprofessionals, school-based social workers, and school-based mental health counselors) in therapeutic alternative schools are often the first responders to the diverse psychological needs of students in therapeutic alternative schools (Harris & Fallot, 2001; Pressley, Houchins, & Varjas, in preparation).

Specifically, special education classroom personnel can incorporate TIC skills that include: (a) safety, (b) trust, (c) personnel support, (d) cultural responsiveness, and (e) collaboration, and (SAMHSA, 2014). For example, one of the most effective practices teachers may utilize is create a safe, respectful, and positive environment in their classroom by establishing consistent rules and routines (Pressley et al., in preparation; Shamblin, Graham, & Bianco, 2016). Similarly, teachers can establish trust by forming positive teacher-student relationships as a key foundation for TIC practice (Dorado et al., 2016; Keesler, 2016; Martinez, & Leibovitz, 2016; McConnico et al., 2016; Pressley et al., in preparation). Personnel support can involve utilizing classroom consultation and peer-based mentoring to support TIC implementation in schools (Holmes et al., 2015; McConnico et al., 2016; Pressley et al., in preparation). Collaboration involves interagency coordination and information sharing between child welfare, juvenile justice, and mental health systems to ensure stability and continuity of TIC services (Day et al., 2015; Pressley et al., in preparation). Lastly, cultural responsiveness involves practices such as assessing the current school culture to determine strengths and areas of needs in responding to students who have been traumatized (Plumb et al., 2016; Pressley et al., in preparation). All students benefit from incorporating TIC practices within SAMHSA's guidelines into schools, but it is especially helpful for SWD who have experienced trauma. Special education classroom personnel play an increasingly important role in helping schools achieve

optimal student academic, behavior, and social-emotional outcomes (Anderson et al., 2015; Brown & Devecchi, 2013; Manz, Power, Ginsburg-Block, & Dowrick, 2010). More so, special education teachers must have the belief that they are ultimately responsible for implementing TIC practices in their school and classrooms.

Dispositions: Teacher Responsibility in Supporting SWD Exposed to Trauma

The National Council for the Accreditation of Educator Preparation (NCATE, 2001) provides the following definition of teacher dispositions: "The values, commitments, and professional ethics that influence behaviors toward students, families, colleagues, and communities and affect student learning, motivation, and development as well as the educator's professional growth" (pg. 30). Dispositions are guided by constructs such as fairness, honesty, and responsibility (NCATE, 2001). For example, positive teacher disposition statements might include a belief that all students can learn and a responsibility to provide safe and nurturing learning environment (NCATE, 2001). This definition supports the notion that special education classroom personnel should not only have such beliefs and attitudes but also have a personal responsibility to be guided by them. More so, the growth of school-based mental health initiatives within PBIS (e.g., Simonsen & Sugai, 2013), SEL (e.g., Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Weissberg, Durlak, Domitrovich, & Gullotta, 2015) and TIC interventions (e.g., Chafouleas et al., 2016; Pressley et al., in preparation) in schools has led to new roles and responsibilities for special education classroom personnel. Ultimately, special education classroom personnel should feel responsible for supporting students who they have knowledge of trauma exposure.

Teacher professional responsibility is the willingness of teachers to take responsibility for students' learning and to acknowledge students' achievement as directly related to the quality of

teaching, rather than external sources, including student demographics (Guskey, 1984; Lee & Smith, 1996; Lauermann & Karabenick, 2011, 2013). Lauermann and Karabenick (2013, p.13) noted that teachers responsibility could be “approach-oriented” (e.g., to produce positive student outcomes after trauma exposure) or “avoidance-oriented” (e.g., to prevent a positive student outcome or potentially re-traumatize), and it can “refer to past, present, or future events” (e.g., one-time trauma exposure or chronic trauma exposure). Lauermann and Karabenick (2011, 2013) noted that it was important to recognize that teachers' professional responsibility is embedded in a variety of outcomes (e.g., student achievement; student relationships; student motivation, and teaching). Understanding teachers’ level of personal responsibility provides a context by which to explore special education classroom personnel personal responsibility dispositions for supporting SWD that they have knowledge of trauma exposure.

Teachers who have high levels of responsibility for their students’ wellbeing are inclined to have academic, behavior, and social-emotional student outcomes (De George-Walker, 2012; Higgins, 2016; Marzano, Pickering, & Pollock, 2001; Tschannen-Moran & Woolfolk Hoy, 2001). To be effective in supporting SWD who have encountered trauma, teachers should feel some level of personal responsibility in implementing practices in that support student wellbeing (Brophy, 1983; Guskey, 1981; Marzano, Pickering, & Pollock, 2001; Tschannen-Moran & Woolfolk Hoy, 2001). However, as special education classroom personnel are becoming progressively aware of the responsibility of supporting students who encounter trauma (Carello & Butler, 2014), many may feel unprepared about how to provide trauma-informed supports and require TIC PD supports (Alisic, Bus, Dulack, Pennings, & Splinter, 2012; Burgess & Mayes, 2007).

TIC PD Needs of Special Education Classroom Personnel

For special education classroom personnel to demonstrate TIC knowledge and skills, PD opportunities should be designed to encourage efficient and effective implementation. For example, increased TIC PD has the potential to allow teachers to improve knowledge (e.g., topics related to TIC), skills (e.g., trauma-informed strategies), and dispositions (e.g., responsibility) to support SWD who are exposed to trauma (Anderson et al., 2015; Brownell, Sindelar, Kiely, & Danielson, 2010; Sutherland, Denny, and Gunter, 2005; Wasburn & Moses, 2005). Anderson and colleagues (2015) identified innovative TIC PD within a school-university collaboration to strengthen the pedagogical foundation for classroom personnel in elementary schools through trauma-informed practices. The overall goals of this collaboration were to: (1) increase classroom personnel understandings of the barriers to learning for children that experience trauma and to (2) identify the supports that would increase the use of trauma-informed practices in schools (Anderson et al., 2015). The researchers (Anderson et al., 2015) examined the PD needs of school personnel (e.g., general education teacher, special educators, and paraprofessionals) and explored what they perceived as facilitators and barriers TIC PD participation. One relevant theme that emerged from the study (Anderson et al., 2015) suggested that classroom personnel do not receive adequate TIC PD. Although participating school personnel expressed appreciation for the inclusion of PD resources from the university, they described challenges, most notably around the direct implementation of their learning (Anderson et al., 2015). Mainly, participants noted that it would be advantageous to create universally accepted TIC PD for educators, special educators, and paraprofessionals designed to meet their specific needs related to TIC practice implementation for SWD who have childhood trauma exposure. For special education classroom personnel to meet the academic, behavior, and social-emotional needs of SWD who have been exposed to trauma; it takes TIC PD designed to build

content knowledge, teaching skills, and personal responsibility dispositions that translate student-centered beliefs into action (Harris & Fallot, 2001; Ko et al., 2008; National Council for Accreditation of Teacher Education [NCATE], 2001).

In addition to the limited research on TIC knowledge, skills, and dispositions of special education classroom personnel (Pressley et al., in preparation), little is known about the unique TIC PD needs of special education classroom personnel in therapeutic alternative schools. Special education classroom personnel have had limited exposure to TIC PD designed explicitly for SWD in therapeutic alternative school settings (Alisic et al., 2012; Burgess & Mayes, 2007; Pressley et al., in preparation). Further, levels TIC PD need may differ depending on school location and teacher demographics such as grade level taught and years of experience teaching (Avalos et al., 2011; Berry, Petrin, Gravelle, & Farmer, 2011; Garet et al., 2001). For example, in a review of publications in *Teaching and Teacher Education* over ten years (i.e., 2000 to 2010) on teacher PD, Avalos (2011) found that school location (i.e., culture and social environment) ultimately influenced knowledge acquisition and skills utilized. Further, researchers (Garet et al., 2001) reported the teacher demographic that had a consistent effect on knowledge and skills was grade level taught. For example, high school teachers reported having had fewer opportunities for active learning and less change in teaching practice. Further, researchers (Avalos et al., 2011; Garet et al., 2001 reported teachers' years of experience (e.g., novice vs experienced teachers) ultimately impacted PD needs. Thus, it is imperative to examine the reciprocal relationships that exist among special education classroom personnel TIC PD need related to school location, grade level, and years of experience.

Rationale

Exploratory survey studies can yield rich data that lead to important recommendations for initial investigation of an area of study or phenomenon (Glass & Hopkins, 1984). More specifically, the use of survey methodology in this study allowed the primary researcher to assess perceived PD needs of special education personnel as it relates to TIC knowledge, skills, dispositions in therapeutic alternative schools. Special education classroom personnel are instrumental in delivering school-wide practices that address psychological well-being, including coping with trauma exposure (Brunzell, Waters, & Stokes, 2015; Stoesz et al., 2016; Wolmer, Hamiel, & Laor, 2011). Moreover, special education classroom personnel can deliver TIC to support academic, behavior, and social-emotional learning instruction to SWD who encounter childhood trauma (Giangreco, Suter, & Doyle, 2010). Special education classroom personnel in therapeutic alternative schools were surveyed because they are specifically trained to provide ongoing therapeutic services for students diagnosed with EBD. However, researchers (Anderson et al., 2015) have suggested that special education classroom personnel have expressed confusion about what specific TIC knowledge, skills, and dispositions are needed to effectively implement TIC. Ultimately, examining the interactions of special education classroom personnel's dispositions could potentially affect the amount knowledge of and skills (Desimone, 2009; Desimone, 2011) they perceive are necessary for implementing effective TIC practice in schools.

Thus, the proposed study examined special education classroom personnel's perceived TIC knowledge, skills, dispositions, and PD needs in therapeutic alternative schools for SWD. Specifically, the survey targeted special education classroom personnel who work directly with SWD who they identify as having been exposed to childhood trauma. Studying findings from this unique population may provide researchers, school administrators special educators, and paraprofessionals with a better understanding of knowledge, skills, and dispositions that are

necessary to best embed TIC into special education school and classroom settings. Apart from drawing attention to an under-researched domain of TIC in schools (e.g., Chafouleas et al., 2016; Harris & Fallot, 2001), this survey study's main attribution is in the implementation of a researcher-created online survey that examined TIC in therapeutic alternative schools for SWD. This is the first known study to that explore these concepts within therapeutic alternative schools and provide insights into how these survey constructs interact with special education classroom personnel demographics and therapeutic alternative school contexts.

Research Questions

The research questions are as follows:

1. Does the trauma-informed care educator (TICE) survey have the necessary factors that allow for the investigation of special education classroom personnel TIC knowledge, skills, dispositions, and PD needs? I hypothesized that the survey would have a statistically significant 4-factor loading with acceptable internal consistency ($0.7 \leq \alpha < 0.8$).
2. Is there a statistically significant difference between special education teachers and paraprofessionals in their perceived level of (a) TIC knowledge, (b) skills, (c) personally responsibility, and (d) level of TIC PD need? I hypothesize that no statistical difference on TIC (a) knowledge, (b) skills, (c) personal responsibility dispositions, and (d) level of TIC PD need would exist between special educator and paraprofessional groups.
3. Is there a statistically significant difference in TIC PD need by special education classroom personnel (a) grade level taught, (b) location, and (c) years of experience in therapeutic alternative schools? I hypothesized that a statistically significant difference would exist between special education classroom personnel's (a) grade level taught (b) location of, and (c) years of experience in therapeutic alternative schools relative to TIC PD need.

Method

Design

This study applied an exploratory survey research design method (Christensen & Johnson, 2013; Dillman et al., 2014; Fowler, 2013). Exploratory survey design consists of two distinct phases: (1) survey development (Creswell, 2003; Dillman et al., 2014) followed by (2) quantitative data analysis (Fowler, 2013). The first stage of research involved designing the TIC survey to determine construct factors and was followed by collecting and analyzing data based on the identified constructs. The quantitative data analysis consisted of conducting an exploratory factor analysis (EFA; Fabrigar, Wegener, MacCallum, & Strahan, 1999; Thompson, 2004) to determine latent factors and to analyze data further using an independent sample t-test, and one-way analysis of variance (ANOVA) to explore significant differences.

Setting

Therapeutic alternative schools. Eight therapeutic alternative school sites were included in the current study because of the high rates of the target population of special education classroom personnel who serve SWDs that have encountered childhood trauma. The list of the therapeutic alternative school sites was secured from the Georgia Department of Education website (http://www.gadoe.org/Curriculum-Instruction-and-Assessment/Special-Education-Services/Pages/Georgia-Network-for-Special-Education-and-Supports.aspx) listing a directory of program names. The eight sites were purposively selected for survey administration based on proximity and convenience to the affiliated university. These therapeutic alternative school programs supported local school systems by providing special education instruction and therapeutic care for SWD ages 5 to 21 throughout the state of Georgia (Georgia Department of Education, 2014). These programs provided comprehensive educational and therapeutic support

services to SWD who could potentially qualify for more restrictive placements (Georgia Department of Education, 2014). The majority of students in these settings had a primary EBD identification or multiple co-occurring disabilities (e.g., EBD and LD, EBD and OHI, or EBD and Autism Spectrum Disorder; Georgia Department of Education, 2014). Students receiving special education services through the therapeutic alternative school programs were referred by their local school system through the IEP process for academic, behavior, and/or social-emotional impairments.

Participants

Participants were conveniently sampled from the eight therapeutic alternative school sites. The primary researcher contacted the therapeutic alternative school program directors and site coordinators using the Georgia Department of Education website information (Georgia Department of Education, 2014) to obtain potential special education classroom personnel survey respondents that made up the sampling frame. The sampling frame (Cochran, 1977; Dillman et al., 2014) was created from a list of special education classroom personnel within each of the targeted therapeutic alternative school programs. An a priori power analysis for a one-way ANOVA with one level and three dependent variables was conducted using the G*Power calculator (Faul et al., 2013) to determine adequate sample size using an alpha of 0.05, a power of 0.80, and medium effect size of .30 (Cohen, 1988, 1992). Based on meeting the assumptions within a one-way ANOVA, the minimum sample size required was 156.

Inclusion criteria. Special education classroom personnel (e.g., special educators and paraprofessionals) had to be currently working in the therapeutic alternative schools and employed in the corresponding school district for at least one year before survey administration. Special education teachers had to have a minimum of a provisional certification in general or

special education. Paraprofessionals had a minimum of a high school diploma. Special educators were assigned students that they were currently providing direct academic, behavioral, and/or social-emotional intervention supports at the time of survey administration. Paraprofessionals were assigned students that they were providing academic and/or behavioral supports alongside one or more assigned special educator at the time of survey administration.

TICE Survey Development

The TICE survey was developed based on the results of a systematic literature review by Pressley and colleagues (in preparation) that examined school-based TIC intervention facilitators, strategies, and PD components. The knowledge and skills sections within the TICE survey mirrored the TIC strategies aimed at the empowering school-based personnel (i.e., safety, trust, personnel support, collaboration, and cultural responsiveness (Pressley et al., in preparation). The TIC PD need items mirrored the survey items within each knowledge and skills sections. The TICE survey contained five sections: (1) percentage of trauma exposure among SWD, (2) perceived level TIC knowledge and PD need, (3) frequency of TIC skills implementation and PD need, (4) TIC personal responsibility dispositions, and (5) demographics. Survey sections are described below.

Percentage of trauma exposure among SWD. Participants were asked to answer two questions about their knowledge of trauma exposure among students in the current school year. Specifically, participants were asked: (a) “How many students they are currently assigned?” and (b) “Of those students that you are assigned, approximately what percentage do they have knowledge of childhood trauma exposure?” Participants reported in numerical value from 1 to 100 (open box) and the percentage from 0 to 100 in increments of 10 (drop-down menu). See Appendix D for survey items within the student demographics section.

Perceived level TIC knowledge and PD need. Items were drawn from a systematic literature review (Pressley et al., in preparation) that revealed eight survey items that addressed the essential topics that are important to understanding guiding principles within TIC implementation in schools. Participants were asked questions about their perceived knowledge of trauma and TIC topics. Participants were asked to rate their level of knowledge on a 4-point Likert-type scale ranging from *not at all knowledgeable* (1) to *completely knowledgeable* (4). Then, survey participants were asked to rate how much they would like PD on each TIC topic on a 4-point Likert-type scale ranging from *not at all* (1) to *very much* (4). See Appendix E for survey items within TIC knowledge and PD need section.

Frequency of TIC skills implementation and PD need. Items were drawn from a systematic literature review (Pressley et al., in preparation) that identified TIC school-based practices that teachers and paraprofessionals implemented in schools and classrooms. Further, TIC skills items were grouped within key domains of TIC: (a) Safety, (b) Trust, (c) Personnel Support, (d) Collaboration, and (e) Cultural Responsiveness (Chafouleas et al., 2016; Harris & Fallot, 2001; Pressley et al., in preparation; SAMHSA, 2014). Participants were asked to rate how often they implemented each practice within the previous year on a 4-point Likert-type scale ranging from *never* (1) to *always* (4). A total of 22 items were included in the survey. Participants were asked to rate how much they would like PD on each TIC skills topic on a 4-point Likert-type scale ranging from *not at all* (1) to *very much* (4). See Appendix F for survey items within the TIC skills implementation and PD need section.

TIC personal responsibility dispositions. Participants were asked about the extent they believed they were personally responsible for supporting SWD who they had knowledge of trauma exposure. Survey participants were asked how much they felt responsible within the

listed statements on a 4-point Likert type scale ranging from *not at all responsible* (1) to *completely responsible* (4). The thirteen items within the responsibility section were modified from within the Teacher Responsibility Scale (TRS; Lauermann & Karabenick, 2013). The TRS was developed using in-service teacher participant samples to assess teachers' sense of responsibility. The sample participants were asked to think of a target class when responding to the responsibility items within the prompt: "Imagine that the following situations would occur in your target class. To what extent would you feel personally responsible that you should have prevented each of the following?" (Lauermann & Karabenick, 2013, p. 13). The results showed that the four factors (i.e., responsibility for *student motivation* [$\alpha = .84$], responsibility for *student achievement* [$\alpha = .84$], responsibility for *relationships with students* [$\alpha = 78$], and responsibility for *teaching* [$\alpha = .79$]) were related and different from factors of teachers' efficacy (Lauermann & Karabenick, 2013). The four constructs that measure sense of responsibility (Lauermann & Karabenick, 2013) were modified and used in the current study to assess special educators and paraprofessionals' sense of responsibility for supporting students exposed to trauma. See Appendix G for survey items within the teacher responsibility section.

Demographics. Participants were asked to provide demographic information (e.g., age, sex, ethnicity, years of experience, years teaching in therapeutic alternative schools, years teaching in their current position, highest degree status). Survey items such as sex, ethnicity, and highest degree status responses were provided through a drop-down feature on the electronic survey. Demographic survey items such as age and years of experience were open-ended to allow teachers to fill-in corresponding information. See Appendix H for survey items within the special education classroom personnel demographics section.

The *Qualtrics* (Snow & Mann, 2013) platform was utilized for the online survey (Dillman et al., 2014). *Qualtrics* is a password protected web-based program that allows the user to create surveys and generate data-based reports. An online survey (Dillman et al., 2014) was selected over pen and pencil questionnaire given the advantage of the internet in reaching the target sample and allowed for consistency of data collection and analysis. Survey items were randomized within each section to eliminate responder bias and decrease survey respondent fatigue (Dillman et al., 2014; Fox & Tracy, 1986; Warner, 1965).

Pilot Testing

Pilot testing was conducted to examine if the survey formatting and content readability was feasible and modified for increased clarity. The formatting iteration included examining the online format of the survey for ease of implementation and recording the duration of the online survey administration. The content iteration was used to examine how survey participants interpreted the proposed survey questions and instructions (Dillman et al., 2014; Hertzog, 2008). Both format and content iterations were pilot tested with 13 special education classroom personnel outside the target sample (Dillman et al., 2014). After the formatting iteration, it was determined that the average time to take the survey was 22 minutes. This amount of time minimized the possibility of survey respondent fatigue (Dillman et al., 2014) and reduced the need to delete any survey questions (Fowler, 2013). Verbal feedback received during the formatting iteration included removal of the completion bar at the bottom of the survey because it was distracting and did not accurately assess completion based on the question format. During the content iteration, pilot test participants they were asked to give feedback within each section of the survey. Each pilot survey respondent was asked, “How could this section be improved?” and was given the opportunity to provide verbal and written feedback. The prompt for the

dispositions section of the survey was reworded based on feedback received from the pilot study participants. The primary researcher worked with the pilot study participants to shorten the prompt to allow for more efficient interpretation. Last, pilot test participants gave feedback to improve grammar, spelling, and sentence structure of survey items which were addressed and corrected by the primary researcher.

Dependent Variables

The dependent variables were factors that were identified through the EFA of the TICE survey (Dillman, Christian, & Smyth, 2014; Fowler, 2013; Thompson, 2004). The TICE survey was designed to potentially examine four hypothesized dependent variable factors within special education classroom personnel perceived levels of TIC knowledge, skills, dispositions, and PD needs. An operational definition of the four hypothesized factors are listed and discussed below.

TIC Knowledge. It was hypothesized that special education classroom would have low rates (i.e., mean score less than 3.0) related to trauma and TIC knowledge. Eight TICE survey items focused on the participants' level of perceived knowledge about trauma and TIC in schools.

TIC Skills. It was hypothesized that special education classroom personnel would have low rates (i.e., mean score less than 3.0) related to specific TIC skills implemented in therapeutic alternative school settings. Twenty-two TICE survey items examined how often participants perceived that they implemented specific TIC skills with their SWD who they had knowledge of trauma exposure.

TIC Teacher Responsibility Dispositions. It was hypothesized that special education classroom personnel would have moderate rates (i.e., mean score greater than 3.0) of TIC personal responsibility dispositions (Lauermann & Karabenick, 2012). Thirteen items asked

participants the extent they believed they were personally responsible for supporting SWD who were exposed to trauma.

TIC PD Needs. It was hypothesized that special education classroom personnel would have high rates (i.e., mean score greater than 3.5) of TIC PD need considering this a new concept for this population of teachers within this school setting. Thirty items (8-TIC knowledge and 22-TIC skills) focused on participants' perceived need for additional training. Items mirrored each of the TIC knowledge and skills items within the TIC knowledge (n = 8) and skills (n = 22) sections.

Independent Variables

The independent variables were the demographic data (e.g., location of therapeutic alternative school, years of experience in therapeutic alternative schools, grade level taught, and role within therapeutic alternative schools) that existed among the special education classroom personnel. The independent variables consisted of two or more categorical, independent groups.

Data Collection Procedures

Participant recruitment. Once university IRB approval was gained, the primary researcher contacted two therapeutic alternative school program directors to gain approval to conduct the survey study with special education classroom personnel at their corresponding school sites. Survey participant recruitment involved gaining data collection approval from each therapeutic alternative school site coordinator (n = 8) and scheduling the in-person study introduction. Initially, each therapeutic alternative school site program director and site coordinators were contacted (i.e., via email) to introduce the study purpose and procedures, the research team, and incentives for participation. Once the program director or site coordinator replied to the email, the primary researcher scheduled an in-person meeting or conference call to discuss implementing the online survey with special education classroom personnel at their

specific therapeutic alternative school site. Once approval was gained, the in-person survey introduction date was scheduled with each site. Table 2.2 summarizes survey response data for each included therapeutic alternative school site.

Table 2.2
Survey Response Data

Therapeutic Alternative School Site	**Potential Special Education Classroom Survey Participants**	**Survey Responses Received on In-person Survey Introduction**	**Survey Responses Received at Follow-up**
Site 1*	14	13	0
Site 2*	27	30	0
Site 3**	27	23	1
Site 4*	25	21	1
Site 5*	14	11	2
Site 6*	28	20	1
Site 7**	29	28	0
Site 8*	22	21	0
Total	**186**	**167**	**5**

Note. Site names are not shown for anonymity. Potential survey participants were based off number given by program director during the in-person meeting or conference call to introduce the study. *In-person study introduction by primary researcher. **In-person study introduction by research team member.

Research team training. The research team consisted of the primary researcher and a colleague with PhD in special education and worked in an administrative capacity serving SWD in the therapeutic alternative school setting. Each member of the research team was provided brief training that demonstrated how to introduce the survey study to potential participants using a script (see Appendix C) and PowerPoint presentation (see Appendix I) and given an opportunity to practice the study introduction and receive constructive feedback from the primary researcher. Each member was provided feedback until 100% mastery was achieved introducing the survey.

In-person study introduction. The in-person survey introduction was conducted by the primary researcher at six of the eight sites and by a member of the research team at two of the eight sites. The same script and PowerPoint presentation (see Appendix I) were used at each of the sites to allow for fidelity of implementation. The brief (15-minute) in-person study introduction took place during a staff meeting (i.e., 6 of 8 sites) or PD learning day (i.e., 2 of 8 sites). The in-person study introduction allowed potential survey participants to ask any questions and receive an in-person response. Mainly, questions asked were technology related (e.g., can I take the survey on my mobile phone) and ensured the link was received from the site coordinator (e.g., what email should I receive the link). The incentive (i.e., Amazon echo dot raffle) was discussed and participants were given instructions on how to enter the raffle and note the code on a corresponding raffle ticket (see Appendix J). Each participating therapeutic alternative school site received breakfast (i.e., 2 of 8 sites) or lunch (i.e., 6 of 8 sites) food during the in-person survey introduction to increase the likelihood of higher survey response rates (Dillman et al., 2014).

Consent. A total of 172 survey respondents consented to complete the survey. An electronic version of the consent form (see Appendix K) was attached to the online survey, and participants had the opportunity to read and accept or decline involvement. In the event survey participants did not give consent, the survey advanced to a closing statement, and the participant was thanked for his or her time. There were two survey responses recorded where the participant did not give consent.

Survey implementation. TICE survey participants were forwarded an anonymous link to the survey by his or her corresponding school site coordinator after the in-person introduction. Anonymity was designed in the survey to increase the survey response rate. Participants were

given the opportunity to complete the online survey on a personal or work computer in a classroom or computer lab, tablet, or mobile device during the corresponding in-person survey introduction day. Participants were asked to complete the survey by the end of the day but were told they had the week to complete. Because the survey was anonymous, survey participants were not allowed to create any identifying credentials to log-in that might link their personal information to the survey. Therefore, participants were not able to log back onto a survey that was previously started.

Follow-up. Program directors and site coordinators were sent a template email message to forward that consisted of study information and link to complete the survey with brief instructions for completion and incentive procedures. A follow-up email message with the online survey link was sent to the school site coordinator five days after the in-person survey introduction to forward to any potential survey participants. This message contained study information, link to complete the survey, and a friendly reminder to complete the survey within 48 hours of the date of the message. Five survey respondents completed the survey after the initial in-person introduction and follow-up message.

Incentives. After completing the survey, participants were thanked for their time with an end of survey message and provided an opportunity to enter a raffle for an *Amazon Echo Dot*. This link allowed potential participants to enter the raffle without being linked to their survey response. The raffle survey asked each participant what therapeutic alternative school site they were employed; then they were given an anonymous code generated by the *Qualtrics* software. This code was included in the drawing per each therapeutic alternative school site. The *Amazon Echo Dot* was left with a front office personnel member at each site. Once survey implementation and follow-up were completed for each target therapeutic alternative school site,

the primary researcher conducted the drawing by generating a randomized code that corresponded with each school site. The front office personnel member was then notified of the winning number. The front office personnel member then informed (i.e., voice announcement or via email) the special education classroom personnel of the winning raffle code. Once the winning code was matched, the participant received the *Amazon Echo Dot* from the designated front office personnel person. There were 157 total raffle entries from the 172 completed surveys. A total of eight *Amazon Echo Dots* were raffled (i.e., one per each participating school site).

Data Analysis

The TICE survey response data were exported directly from the Qualtrics software to Statistical Packages for the Social Science (SPSS, version 25). The explore function in SPSS was used to ensure that data entered were in the appropriate ranges and values, thus minimizing the presence of data analysis errors. A total of 172 survey responses were screened for any outliers (Fowler, 2013). Survey responses (n = 5) were removed because of survey incompletion defined as having less than 80% of the survey items completed (i.e., 66 of 71 survey items complete; Fowler, 2013). Survey responses (n = 3) where participants marked other and specified a non-teaching or paraprofessional role (e.g., administrator, mental health therapist, and social worker) were removed. Fourteen demographic role values (i.e., where the participant marked other, and the role included primary teaching responsibility) were identified and coded as special education teacher. For example, participants who marked they were curriculum coaches or lead teachers were coded as special education teacher because they held special education teacher certification and were assigned SWD who they provided direct instruction.

Further, SPSS was used to conduct the EFA, independent sample *t*-test, and the one-way analysis of variance (ANOVA). Data analysis within the EFA consisted of a three-step process within a principal component analysis (PCA; Thompson, 2004) that examined (a) suitability of data, (b) factor component extraction, and (c) factor rotation and interpretation. To examine suitability of data the Kaiser Mayer-Olkin (KMO), Bartlett's Test of Sphericity, and the Correlation Matrix were examined. Kaiser's criterion, scree test for the number of components (i.e., Eigenvalue over 1), and the component matrix were examined for the factor component extraction. Last, the orthogonal and oblimin rotation methods were utilized to examine the factor rotation and determine overall factor interpretation.

Data analysis within the independent sample *t*-test consisted of examining the independent variables (i.e., special educator and paraprofessionals) and the dependent variables identified from the EFA to test for differences among the population. Further, Levene's test was utilized to examine equality of variances. Data analysis within the one-way ANOVA consisted of examining the independent variables (i.e., school location, grade level taught, and years of experience teaching in a therapeutic AS setting) for significant differences against the dependent variable (i.e., level of TIC PD need). Further, Levene's test was utilized to examine equality of variances. Last, if any significant differences existed, a post hoc test (i.e., Tukey) was utilized to test for where the significant differences existed.

Results

A total of 71 survey items from the TICE survey assessed special education classroom personnel TIC knowledge, skills, dispositions, and PD needs in therapeutic alternative schools. A total of 164 survey respondents met full inclusion criteria and self-reported their perceived level of TIC knowledge, the frequency of TIC skills, level of TIC personal responsibility dispositions,

and TIC PD need. Survey respondents took on average 18.67 minutes to complete the survey. The TICE survey was administered to special education classroom personnel who were conveniently chosen from eight therapeutic alternative school sites throughout the state of Georgia. Survey participants were employed across eight therapeutic alternative school sites that serviced SWD across 11 school districts and counties. Of the 164 survey responders, approximately 42% (n = 68) were special educators, and 59% (n = 96) were paraprofessionals employed in therapeutic alternative schools in urban (16%), rural (43%), and suburban (41%) school locations in the state of Georgia. Respondents taught across elementary (32%), middle (34%), and high school (35%). Survey respondents had approximately 1-4 (69%), 5-9 (18%), and 10+ (13%) years of experience in a therapeutic alternative school setting. Table 3.2. provides a summary of demographic data of the special education classroom personnel survey participants.

Table 3.2
TICE Survey Participants (N = 164) Demographics

Identifier	**Descriptor**	**Frequency**	**Percent**
Role	Special Education Teacher	68	41.5
	Paraprofessional	96	58.5
Sex	Female	88	54.3
	Male	74	45.7
Race	African American or Black	103	65.1
	American Indian or Alaska Native	5	3.2
	Asian	2	1.3
	Caucasian or White	46	29.1
	Other	2	1.3
Degree	High School Diploma	14	8.6
	Associate	26	16.0
	Bachelor	51	31.3
	Master	50	30.7
	Specialist	16	9.8
	Doctoral	6	3.7
Years of Experience in Special Education	1-4	76	46.3
	5-9	40	24.4
	10+	48	29.3

Setting	Urban	26	16.1
	Rural	69	42.9
	Suburban	66	41
Grade Level Taught in the 2017-2018 school year	Elementary (K – 5)	51	31.7
	Middle School (6 – 8)	54	33.5
	High School (9 – 12)	56	34.8
Years of Experience in Therapeutic Alternative School	1-4	113	68.9
	5-9	29	17.7
	10+	22	13.4

Note. Missing cases: sex (*n* = 2); race (*n* = 6); degree (*n* = 1); setting (*n* = 3); grade level (*n* = 3)

Special education classroom personnel reported the total student assigned (*M* = 24.5, *SD* = 28.9) and percentage of students assigned they have knowledge of trauma exposure (*M* = 80.3, *SD* = 23.5). Table 4.2 provides a summary of student demographics reported by special education classroom personnel.

Table 4.2
Student Demographics Reported by Special Education Classroom Personnel

Question	***M***	***SD***
How many students are currently assigned to you?	24.50	28.90
Of those students who are assigned to you; approximately what percentage do you have knowledge of having trauma exposure?	80.3	23.57

Note. Missing 8 cases. *M* = mean; *SD* = Standard Deviation. Assignment numbers ranged from 1 to 100.

Exploratory Factor Analysis

RQ 1: Research question 1 examined the hypothesis that the TICE survey will have a statistically significant 4-factor loading with acceptable internal consistency ($0.7 \leq \alpha < 0.8$).

Methodology. The EFA was used to examine the factor loading of the 71-item TICE survey for construct validity. The TIC knowledge, skills, dispositions, and TIC PD needs survey items were grouped into 16 total survey variable constructs. These variable constructs from each survey item were devised within the hypothesized TICE survey constructs based on TIC guiding

principles (i.e., safety, trust, support, culture, collaboration) for knowledge (n = 1) and skills (n = 5), and TIC PD need (n = 6), and personal responsibility dispositions (n = 4) based on the TRS (Lauermann & Karabenick, 2012). Appendix L displays each survey variable and corresponding survey items. The initial correlation matrix demonstrated that all 16 variable constructs significantly correlated at least 0.3 with at least other item suggesting an adequate factorability (see Appendix M for correlation matrix for 16 TIC variable constructs). Second, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was demonstrated at .823 above the recommended value of .6, and Bartlett's Test of Sphericity was significant (X^2 (120) = 1107.53, $p < .05$). The diagonals of the anti-image correlation matrix were all over .6. Finally, the commonalities were all above .5 (see Table 5.2). This further confirms that each item shared some common variance with other items. Given these initial indicators, the EFA was deemed to be suitable for all 16 items.

Table 5.2
SPSS output for commonalities on a principal component analysis with varimax rotation for 16 items from the researcher-created TICE survey (N = 164)

Survey Item	**Initial**	**Extraction**
TIC	1.000	.669
TIC_PD	1.000	.667
SAFETY	1.000	.652
SAFETY_PD	1.000	.800
TRUST	1.000	.683
TRUST_PD	1.000	.835
PERSONNEL	1.000	.714
PERSONNEL_PD	1.000	.781
COLLABORATION	1.000	.563
COLLABORATION_PD	1.000	.652
CULTURE	1.000	.647
CULTURE_PD	1.000	.710
ACHIEVEMENT	1.000	.807
RELATIONSHIPS	1.000	.752
MOTIVATION	1.000	.624
TEACHING	1.000	.653

Note. K = Knowledge; TIC = Trauma-Informed Care; PD = Professional Development; SK = Skills; DI = Dispositions

A Principal Component Analysis (PCA; Thompson, 2004) was used to identify and compute scores for any underlying factors with the researcher created TICE survey (Pressley et al., in preparation). Initial Eigenvalues over 1 indicated that the first three factors explained 32.24% (i.e., TIC PD need), 26.14% (i.e., TIC Knowledge and Skills) and 11.67% (i.e., TIC Personal Responsibility Dispositions) of the variance respectively. A fourth factor, which had an Eigenvalue just below 1 ($\lambda = .829$) was considered as well. Solutions for three and four factors were examined using the oblimin and varimax rotations of the factor loading matrix. No items were removed as all the items contributed to a simple factor structure and met the minimum criteria of having a primary factor loading of .7 and above and no cross-loading of 0.4 or above.

Results. Although a four-factor solution was hypothesized, ultimately, the three-factor solution, which explained 70.1% of the variance, was preferred because of (a) the scree plot (see Appendix N) examination leveling off after three factors, (b) an insufficient number of survey items loading, and (c) difficulty interpreting the fourth factor alongside the other three factors. Both three-factor oblimin and varimax solutions were explored. However, the varimax (i.e., orthogonal) rotation was chosen for the final solution because it allotted for fewer cross-loadings and a clearer factor structure. All the items in the analysis had primary loadings of 0.7 or greater. Two variables (i.e., TIC [-.349 on TIC PD need and .732 on TIC Knowledge and Skills] and *Motivation* [.369 on TIC Knowledge and Skills and .681 on TIC Dispositions]) had cross-loadings. However, these two items had strong primary loadings (i.e., TIC (.732) and Motivation (.681) across other factors). The factor loading matrix for the final solution is presented in Table 6.2.

Table 6.2
Factor loadings based on a principal component analysis with varimax rotation for 16 items based on a three-factor solution from the researcher-created TICE survey (N = 164)

Survey Item	**Component**		
	TIC PD Need	TIC Knowledge and Skills	TIC Dispositions
TRUST_PD	.900		
PERSONNEL_PD	.870		
SAFETY_PD	.864		
TIC_PD	.816		
CULTURE_PD	.805		
COLLABORATION_PD	.792		
PERSONNEL		.835	
TRUST		.826	
CULTURE		.794	
SAFETY		.767	
COLLABORATION		.738	
TIC	-.349	.732	
RELATIONSHIPS			.858
ACHIEVEMENT			.854
TEACHING			.786
MOTIVATION		.369	.681
Eigenvalues	5.16	4.18	1.87
% of Variance	32.24	26.14	11.67

Note. TIC = Trauma-Informed Care; PD = Professional Development; Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization. Rotation converged in 5 iterations. Factor loadings < .3 are suppressed.

Three of the four hypothesized factor labels suited the extracted variables and were retained. Internal consistency for each of the factors was examined using Cronbach's Alpha. The alphas were substantial: .81 for TIC PD Need (6 items); .84 for TIC Knowledge and Skills (6 items), and .86 for TIC Personal Responsibility Dispositions (4 items). No substantial increase in

alpha for any of the factors could have been achieved by removing survey items. Table 7.2 displays descriptive information for three survey factors.

Table 7.2
Descriptive information for the three TICE Survey factors (N = 164)

Factor	**Number of Variables**	**Mean (*SD*)**	**Skewness**	**Kurtosis**	**Cronbach's α**
TIC Professional Development Need	6	3.48 (.42)	-.772	.389	.81
TIC Knowledge and Skills	6	2.57 (.60)	-.357	-.057	.84
TIC Dispositions	4	2.53 (.40)	-.057	-.362	.86

Note. TICE = Trauma-Informed Care Educator; TIC = Trauma-Informed Care; *SD* = Standard Deviation

Mean scores were created for each of the three factors based on the mean of the TICE survey items which their primary loadings corresponded. Higher scores indicated higher reported levels of TIC knowledge, skills, personal responsibility dispositions, and TIC PD need. TIC PD Need was the factor that special education classroom personnel reported the most, with a negatively skewed distribution. Personal responsibility dispositions were reported least and also had negatively skewed distribution. The skewness and kurtosis were well within normal range for assuming a normal distribution, and an examination of histograms suggested a normal distribution (see Appendix O). A varimax rotation was used, and small correlations existed between each of the composite scores: -.48 between TIC PD Need and TIC Knowledge and Skills; .33 between TIC Knowledge and Skills and TIC Personal Responsibility and .36 TIC PD Need and TIC Personal Responsibility. Overall, the EFA revealed that three distinct factors were underlying special education classroom personnel responses to the researcher-created TICE

survey and that these factors were moderately internally consistent. Sixteen survey variable constructs were included that contained 71 survey items where an approximate normal distribution was evident for the composite score data for this study. Thus, the data were well suited for statistical analysis.

Independent Sample t-Test

RQ 2: Research question 2 examined the hypothesis that there was no significant difference between special educators and paraprofessionals' TIC (a) knowledge, (b) skills, (c) personal responsibility dispositions, and (d) TIC PD need in therapeutic alternative schools. The combined mean scores were compared within the researcher-created online TICE survey, and the results revealed no statistically significant differences among special educators and paraprofessionals TIC (a) knowledge and skills, (b) personal responsibility dispositions, and (c) PD need.

Methodology. RQ 2A results were collected from the mean scores from the researcher-created TICE survey knowledge and skills sections and demographic question number 12, "What is your primary role during the 2017-2018 school year?" The means of the reported perceived TIC knowledge and skills from the two groups of special education classroom personnel were calculated. An independent sample *t*-test was used to determine the significant difference between the levels of perceived TIC knowledge and skills and the independent variable of special education teachers and paraprofessionals.

Results. The *t*-test revealed there was not a statistically significant difference in the TIC knowledge and skills scores for special education teachers (M = 2.6, SD = .53) and paraprofessionals (M = 2.5, SD = .65); t (162) = .571, p = .571. Table 8.2 displays the mean perceived TIC knowledge and skill scores for special education teachers and paraprofessionals.

Table 8.2
Total TIC Knowledge and Skills Score by Special Educators and Paraprofessionals

Role	***M***	***SD***
Special Education Teacher	2.60	.52
Paraprofessional	2.55	.65

Note. TIC = Trauma-informed Care; *M* = mean; *SD* = Standard Deviation

Methodology. RQ 2B results were collected from the mean scores from the researcher-created TICE survey teacher responsibility dispositions section and demographic question number 12, "What is your primary role during the 2017-2018 school year?" The means of the reported perceived levels of personal responsibility from the two groups of special education classroom personnel were calculated. An independent sample *t*-test was used to determine the significant difference between the levels of perceived personal responsibility and the independent variable of special education teachers and paraprofessionals.

Results. The *t*-test revealed there was not a statistically significant difference in the TIC personal responsibility dispositions scores for special education teachers ($M = 2.6$, $SD = .66$) and paraprofessionals ($M = 2.5$, $SD = .63$); $t(152) = 1.27$, $p = .206$. Table 9.2 displays the mean perceived TIC teacher responsibility dispositions scores for special education teachers and paraprofessionals.

Table 9.2
Total TIC Personal Responsibility Disposition Score by Special Educators and Paraprofessionals

Role	***M***	***SD***
Special Education Teacher	2.61	.66
Paraprofessional	2.48	.63

Note. TIC = Trauma-informed Care; *M* = mean; *SD* = Standard Deviation

Methodology. RQ 2C results were collected from the mean scores from the researcher-created TICE survey TIC PD need sections and demographic question number 12, "What is your primary role during the 2017-2018 school year?" The means of the reported perceived TIC PD need from the two groups of special education classroom personnel were calculated. An independent sample *t*-test was used to determine the significant difference between the levels of perceived amount of TIC PD need and the independent variable of special education teachers and paraprofessionals.

Results. The *t*-test revealed there was not a statistically significant difference in the TIC PD need scores for special education teachers (M = 3.43, SD = .40) and paraprofessionals (M = 3.5, SD = .43); t (162) = -1.09, p = .278. Table 10.2 displays the mean perceived TIC PD need scores for special education teachers and paraprofessionals.

Table 10.2
Total TIC PD Need Score by Special Educators and Paraprofessionals

Role	***M***	***SD***
Special Education Teacher	3.43	.40
Paraprofessional	3.50	.43

Note. TIC = Trauma-informed Care; PD = Professional Development; M = mean; SD = Standard Deviation

One-Way ANOVA

RQ 3: Research question 3 examined the hypothesis that there was a statistically significant difference between special education classroom personnel levels of reported TIC PD need and (a) school location, (b) grade level taught, and (c) years of experience in a therapeutic alternative school setting. The results indicated there was no significant interaction of perceived levels of TIC PD need in school location or grade level taught.

Methodology. RQ 3A results were collected from the TICE survey demographic question number 17 (see Appendix H), "What is primary setting of your school (during the 2017-2018 school year) located?" Results were analyzed using a one-way ANOVA with one subject factor (i.e., special education classroom personnel TIC PD Need) and the school location (i.e., suburban, urban, and rural) groupings.

Results. Table 11.2 displays the one-way ANOVA for RQ 3A. The one-way ANOVA analysis revealed no statistically significant differences between special education classroom personnel and the location (i.e., suburban, urban, and rural) groupings on the level of TIC PD need scores (F (2,158) = 2.462, p = .089).

Table 11.2
One-Way ANOVA of Perceived TIC PD Need by School Location

Location	**Sum of Squares**	***df***	**Mean Square**	**F**	***p***
Between Groups	.84	2	.42	2.46	.089
Within Groups	26.81	158	.17		
Total	27.64	160			

Note. *df* = degrees of freedom; Location = Suburban, Rural, and Urban

School locations did not contribute to the level of TIC PD need of special education classroom personnel. Sample means for the special education classroom personnel, and school location are displayed in Table 12.2.

Table 12.2
Perceived TIC PD Need Mean Score by School Location

Location	***n***	***M***	***SD***	**SE**	**Min**	**Max**
Rural	26	3.40	.47	.09	2.47	4.00
Suburban	69	3.43	.42	.05	2.08	4.00
Urban	66	3.57	.38	.05	2.72	4.00

Total	161	3.48	.42	.03	2.08	4.00

Note. *M* = mean; *SD* = Standard Deviation; *SE* = Standard Error

Methodology. RQ 3B results were collected from the TICE survey demographic question number 13 (see Appendix H), "Which of the following BEST describes the grade level you taught during the 2017-2018 school year?" Results were analyzed using a one-way ANOVA with one subject factor (i.e., special education classroom personnel TIC PD Need) grouping and the grade level taught (i.e., Elementary (Pre-K-5th), Middle School (6th-8th), and High School (9 – 12th).

Results. Table 13.2 displays the one-way ANOVA for RQ 3B. The one-way ANOVA analysis revealed no statistically significant differences between special education classroom personnel and the grade level (i.e., elementary, middle, and high) groupings on the level of TIC PD need (F (2,158) = 2.105, p = .125).

Table 13.2
One-Way ANOVA of Perceived TIC PD Need of Special Education Classroom Personnel by Grade Level Taught

Grade Level	**Sum of Squares**	***df***	**Mean Square**	***F***	***p***
Between Groups	.72	2	.34	2.11	.125
Within Groups	26.95	158	.17		
Total	27.67	160			

Note. *df* = degrees of freedom; Grade Level = Elementary, Middle, and High

Grade level taught did not contribute to the level of TIC PD need of special education classroom personnel. Sample means for the special education classroom personnel and grade level taught are displayed in Table 14.2.

Table 14.2
Perceived TIC PD Need Mean Score by Grade Level Taught

Grade Level	*n*	*M*	*SD*	SE	Min	Max
Elementary (PreK - 5th)	51	3.41	.48	.07	2.08	4.00
Middle (6th - 8th)	54	3.44	.41	.05	2.37	4.00
High (9th - 12th)	56	3.56	.34	.05	2.72	4.00
Total	161	3.47	.42	.03	2.08	4.00

Note. *M* = mean; *SD* = Standard Deviation; *SE* = Standard Error

Methodology. RQ 3C results were collected from the TICE survey demographic question number 16 (see Appendix H), "What are the total number of years (including the 2017-2018 school-year) that you were employed within a therapeutic program setting?" Results were analyzed using a one-way ANOVA with one subject factor (i.e., special education classroom personnel TIC PD Need) grouping and years of experience in a therapeutic alternative school setting (i.e., 1-4, 5-9, and 10+ years).

Results. The one-way ANOVA analysis revealed a statistically significant difference between special education classroom personnel years of experience in a therapeutic alternative school setting on their perceived level of TIC PD need (F (2,161) = 3.88, p = .023). Table 15.2 displays the one-way ANOVA for RQ 3C.

Table 15.2
One-Way ANOVA of Perceived TIC PD Need of Special Education Classroom Personnel by Years of Experience in Therapeutic Alternative School Setting

Years	Sum of Squares	*df*	Mean Square	*F*	*p*
Between Groups	1.30	2	.65	3.88	.023
Within Groups	26.83	161	.17		

Total	28.13	163

Note. *df* = degrees of freedom; Years = 0-4, 5-9, and 10+

Sample means for the special education classroom personnel TIC PD need by years of experience in a therapeutic alternative school setting are displayed in Table 16.2.

Table 16.2
Perceived TIC PD Need Mean Score by Years of Experience in Therapeutic Alternative School Setting

Years	***n***	***M***	***SD***	**SE**	**Min**	**Max**
1-4	113	3.47	.425	.039	2.08	4.00
5-9	29	3.34	.38	.070	2.47	4.00
10+	22	3.66	.35	.074	3.00	4.00
Total	164	3.48	.41	.032	2.08	4.00

Note. TIC = Trauma-informed Care; PD = Professional Development; *M* = mean; *SD* = Standard Deviation; *SE* = Standard Error

To determine the difference among the three categories, a Tukey post hoc test revealed that special education classroom personnel with 10+ years of experience had a significantly higher perceived level of TIC PD need compared to those who had 5-9 years of experience in therapeutic alternative school settings ($\overline{x}$ = 3.66 ± .35 vs. 3.34 ± .38; p = .016). However, there was no statistically significant difference between the TIC PD need of special education classroom personnel with 10+ years of experience compared to those who had 1-4 years of experience in therapeutic alternative school settings ($\overline{x}$ = 3.66 ± .35 vs 3.47 ± .42 years, p = .42). There was no statistically significant difference between the 1-4 years and 5-9 years groups (p = .084). Therefore, the 10+ years of experience group was statistically different from the 5-9-year group but not the 1-4-year group. Table 17.2 displays the Tukey post hoc comparisons among years of experience groups.

Table 17.2
ANOVA Comparisons of TIC PD need from Number of Years of Experience in Therapeutic Alternative School Settings

Group	***n***	***M***	***SD***	**Tukey's HSD Comparisons**		
				1-4 Years	5-9 Years	10+ Years
1-4 Years	113	3.47	.42		.265	.120
5-9 Years	29	3.34	.38			
10+ Years	22	3.66	.35		.016	

Note. TIC = Trauma-informed Care; PD = Professional Development; *M* = mean; *SD* = Standard Deviation

Discussion

The primary purpose of this exploratory survey study was to develop the TICE survey to examine the TIC knowledge, skills, dispositions, and PD needs among special education classroom personnel (n = 164) in therapeutic alternative schools. Based on the exploratory analysis results, three factors were identified as a structure that researcher and school-based personnel can use to evaluate (1) TIC PD Need, (2) TIC Knowledge and Skills, and (3) TIC Personal Responsibility Dispositions among special education classroom personnel in therapeutic alternative schools. The three factors had internal reliability coefficients of .8 or higher. This indicates that the TICE survey was highly effective in measuring these TIC factors among special education classroom personnel in therapeutic alternative schools. This finding is relevant because this unique study contributes to the school-based TIC and special education literature being the first reliable and valid survey to measure these factors with special education classroom personnel in therapeutic alternative schools. The results within the TICE survey set the stage for a discussion about implementing TIC strategies and the TIC PD needs for this unique population of special educators and paraprofessionals in therapeutic alternative schools. Upon further development, the TICE survey may be useful for assessing the exact knowledge and skills of school-based staff to directly target and design TIC PD for this population. The TIC

survey could also be used as a pre-post measure to examine implemented TIC PD among school-based staff in therapeutic alternative schools

TIC PD Need among Special Education Classroom Personnel in Therapeutic Alternative Schools

Special education classroom personnel demographics, knowledge, skills, and dispositions reported within the current study provide guidelines for offering the most useful and beneficial TIC PD experiences in therapeutic alternative schools based on (1) years of experience teaching in an alternative school setting (i.e., 1-4, 5-9, and 10+ years), (2) location (i.e., urban, rural, and suburban), and (2) grade level taught (i.e., elementary, middle, and high). However, the lack of significance found in this study related to TIC PD need with school location and grade level does not correspond with broader-based studies related to special education PD need in schools. For example, prior research suggests that special educator PD needs significantly differed by school location (e.g., Berry et al., 2011; Halvorsen, Lee, & Andrade, 2009), grade level (Carver, Lewis, & Tice, 2010; Garet et al., 2001), and years of experience teaching (Avalos et al., 2011). Each area is discussed further below.

Years of experience teaching in therapeutic alternative school. The current study findings reported most of the TICE survey respondents reported fewer years of experience (i.e., 1-4 years, 68.9%) compared to more years of experience (i.e., 5-9 years, 17.7% and 10+ years, 13.4%) teaching in therapeutic alternative schools. This finding corresponds to previous research (Billingsley et al., 2006) that provided data on years of experience demographics of special education teachers of students with EBD. Billingsley and colleagues (2006) reported teachers of students with EBD had significantly fewer years of special education teaching experience than other special educators. This finding is pertinent to therapeutic alternative schools in that

research (Foley & Pang, 2006; Rumberger & Thomas, 2000) suggests that there are more novice teachers in these school settings. This finding is relevant because it highlights the need for TIC interventions and PD to be designed to consider student responses to trauma exposure and the unique needs of novice teachers in therapeutic alternative schools tasked to support students in these settings. For example, TIC PD may be offered with content specific to this unique population of students (e.g., challenging behaviors) and teachers (e.g., more novice teachers) more frequently than other training (e.g., 4 times per year versus once per year) and ongoing support throughout the school-year (Desimone et al., 2011; Garet et al., 2001).

Previous research (Avalos et al., 2011; Carver, Lewis, & Tice, 2010; Garet et al., 2001) suggests that TIC PD needs differed among special education classroom personnel based on years of experience taught within the school setting (i.e., therapeutic alternative school). The current study found significant differences among the TIC PD need for special education classroom personnel with 10+ years of experience compared to those who had 5-9 years of experience in therapeutic alternative school settings. However, there were no significant differences in special education classroom personnel with 10+ compared to those with 1-4 years of experience in therapeutic alternative school settings. This finding is relevant because it suggests that TIC PD should be adapted especially for special education classroom personnel with 5-9 and 10 or more years of experience in therapeutic alternative schools. For example, previous research (Melnick & Meister, 2008; Stough, Montague, Landmark, & Williams-Diehm, 2015) that examined the PD needs of more experienced teachers that suggested teachers with more years of experience ultimately benefit from PD supports related to classroom management. This finding is beneficial to future school-based TIC studies because it provides a foundation for conversations aimed at designing TIC PD around classroom management to meet the needs of

special education classroom personnel with more years of experience in these settings compared to special education classroom personnel with fewer years of experience.

School location. More survey respondents were represented in rural (*n* = 69, 42%) compared to urban (*n* = 36, 15%) and suburban (*n* = 66, 40%) settings. This is similar composition of national data by Carver and colleagues (2010) that reported higher offerings of alternative school programs in rural (47%) compared to urban (24%), suburban (39%), and town (35%) that were housed within traditional schools. Previous research (e.g., Berry et al., 2011; Halvorsen, Lee, & Andrade, 2009) suggests that TIC PD need should differ among special education classroom personnel based on school location. However, the current study found no significant differences among TIC PD need and school location. This finding is relevant because it suggests that this population does not differ in TIC PD need by the location of the therapeutic alternative school. This finding is beneficial to future studies because it suggests the need for the TIC survey to be refined to better examine school location as a potential factor for TIC PD need.

Grade level taught. More survey respondents were represented from the high school level (*n* = 56, 35%) compared to elementary (*n* = 51, 31%) and middle (*n* = 54, 33%). This finding is similar to national composition (Carver et al., 2010) that reported higher offering of alternative school programs for high school students (88% – 96%) compared to middle schools (41% - 63 %) and elementary (8% - 18%) administered by a school district. Previous research (Carver, Lewis, & Tice, 2010; Garet et al., 2001) suggests that TIC PD need should differ among special education classroom personnel based on grade level taught within the school setting (i.e., therapeutic alternative school). For example, previous research (Carver, Lewis, & Tice, 2010) suggested PD should be modified for the grade level to consider developmental and social considerations. However, the current study found no significant differences among the TIC PD

need and grade level taught. This finding is relevant because it suggests that special education classroom personnel do not significantly differ in TIC PD need by grade level taught within the therapeutic alternative school.

Trauma-Informed Special Educators and Paraprofessionals

The current study research findings supported the hypothesis that special educators and paraprofessionals hold similar TIC PD need, TIC knowledge and skills, and personal responsibility dispositions. Given that TIC is a relatively new concept in special education (Chafouleas et al., 2016; Harris & Fallot, 2001; Ko et al., 2008), these findings provide further evidence as to why special educators and paraprofessionals should receive the similar TIC training and supports. This possibility is supported by prior research (e.g., Giangreco et al., 2010; Stoesz et al., 2016; Wasburn-Moses, 2005) showing that special education paraprofessionals take on similar day-to-day responsibilities of the special educator as it relates to supporting SWD in therapeutic alternative schools. As such, supports given to special educators and paraprofessionals should be provided similar TIC PD supports in therapeutic alternative schools. Further, more paraprofessionals (59%) were reported in the current study sample population compared to special educators (42%) in the current study. These findings correspond to empirical reports (e.g., Foley & Pang, 2006; Lehr & Lange, 2003; Lehr, Tan, & Ysseldyke, 2009) identifying higher ratios of paraprofessionals to teachers. For example, Foley and Pang (2006) reported one of the main educational support service providers in alternative school programs were paraprofessionals (50%) among others such as social workers (74%), counselors (58%), and school psychologists (46%).

This finding is also relevant to therapeutic alternative schools in that multiple paraprofessionals might be placed in a classroom with one lead teacher (Lehr & Lange, 2003;

Lehr, Tan, & Ysseldyke, 2009; Foley & Pang, 2006). Further, paraprofessionals might be assigned one student or support multiple students in the classroom with one-on-one instruction or intensive disability-related supports (Fisher & Pleasants, 2012; Giangreco, Suter, & Doyle, 2010). This finding highlights the need for paraprofessionals to be included in TIC PD training opportunities alongside classroom teachers. Ultimately, this finding supports the need for paraprofessionals to have a more inclusive and perhaps primary role in implementing TIC implementation strategies in the classroom.

Limitations and Recommendations for Future Research

This study has several limitations that should be considered and recommendations to improve future research analysis. First, the research data were limited to 164 special education classroom personnel due to the research data collection timeline. More so, this relatively small sample size might not be fully representative of the special education classroom personnel employed throughout therapeutic alternative schools. Although the included sample met sample size requirements for medium effect size, future research might survey a larger sample size might provide more comprehensive results within the effectiveness of utilizing the survey to measure the TIC PD need, knowledge and skills, and dispositions.

Second, an EFA was used to examine a new survey instrument that measured a relatively small convenience sample of special education classroom personnel's TIC knowledge and skills, and personal responsibility dispositions. Further, the internal consistency of these factors was above .8. Although the preliminary psychometric results are promising ("good" in statistical reporting standards), future research might further validate the TICE survey instrument using confirmatory factor analysis (Thompson, 2004) with a larger sample size that could potentially lead to improvements in the factor structure.

Third, although this current survey study reported significantly different findings for TIC PD needs compared to special education personnel years of experience taught (i.e., 10+ years compared to 5-9 years), lack of significant findings relative to school location and grade level taught could be a limitation of the study. Teachers with more years of experience reported higher TIC PD need compared to novice teachers. Therefore, future research might survey a more broad and diverse sample of special education classroom personnel with more refined survey items that detect significant findings. For example, potentially extending the Likert scale (i.e., 6-point) within the TICE survey might allow for a more extensive examination of significant differences.

Fourth, the researcher in this study did not collect data regarding TIC training or PD participants received before survey implementation. Previous research (Desimone, 2009; Garet et al., 2001) supports the notion that repeated exposure to PD ultimately affects the level of perceived knowledge and skills. Consequently, special education classroom personnel exposed to prior TIC training may have selected lower levels of TIC PD need relative to the other survey respondents. Future research might ask respondents to report the amount of previous TIC training received (e.g., number of hours) and the content (e.g., list of potential TIC PD topics) before survey implementation.

Fifth, although this current survey study examined TIC PD need to improve special education classroom personnel knowledge and skills, the primary researcher did not specifically ask about ways to tailor TIC PD for this unique population and setting. Future research might explore the types of needed TIC PD implementation procedures (e.g., length, duration, ongoing supports) that would be most useful for this population and school setting. Further, conducting an interview study or focus group could allow for qualitative data that would assist in designing TIC PD for special education classroom personnel in therapeutic alternative schools (Creswell, 2003;

Crosby et al., 2015). For example, participants can be asked about specific TIC PD needs designed for optimal TIC strategy implementation and support that have proved to be useful in the past.

Last, although the current study examined TIC knowledge and skills PD needs, the current study did not ask about TIC PD needs related to TIC dispositions (e.g., responsibility for student motivation, relationships, achievement, and/or teaching), implementation features (e.g., frequency, length, and/or collaboration), or student-related outcomes (e.g., academic, behavior, and/or social-emotional). Future research might utilize PD contexts such as Desimone's (2009) conceptual framework that provides a comprehensive model that highlights the interactive relationships among the core features of PD, teacher knowledge, skills, dispositions, and student outcomes to modify the TICE survey. Using this theoretical framework could ultimately assist future researchers in developing extensive TIC training designed to increase implementation of TIC strategies in therapeutic alternative schools and classrooms. Future research might utilize this conceptual framework (e.g., Desimone, 2009. 2011; Garet et al., 2001) to design TIC PD that considers core features of effective PD (i.e., content focus, active learning, coherence, duration, and collective participation) for special education classroom personnel in therapeutic alternative schools and examine the effectiveness of the implemented TIC PD increasing student-related outcomes. Figure 1.2 represents a modified version of this model within confines of the current study and concepts for future studies designed to examine TIC PD in therapeutic alternative schools.

Conclusions

As TIC frameworks become more embedded into schools (Chafouleas et al., 2016; Harris & Fallot, 2001; Pressley et al., in preparation), special education classroom personnel will

require TIC PD that meet the needs of SWD who are exposed to trauma. The findings from this exploratory survey study could potentially lead to the development of TIC PD specifically designed to meet the needs of special education classroom personnel and SWD dealing with the adverse effects of childhood trauma exposure in therapeutic alternative schools. Special education classroom personnel are instrumental in supporting SWD's well-being after childhood trauma exposure. Examining special education classroom personnel TIC knowledge and skills, personal responsibility dispositions, and TIC PD need provided valuable information about how to best design TIC PD for this unique population. Use of the TICE survey findings will ultimately lead to increased knowledge, skills, and dispositions of special education classroom personnel in implementation TIC in therapeutic alternative schools by providing foundational knowledge to future researchers designing TIC PD for these school settings.

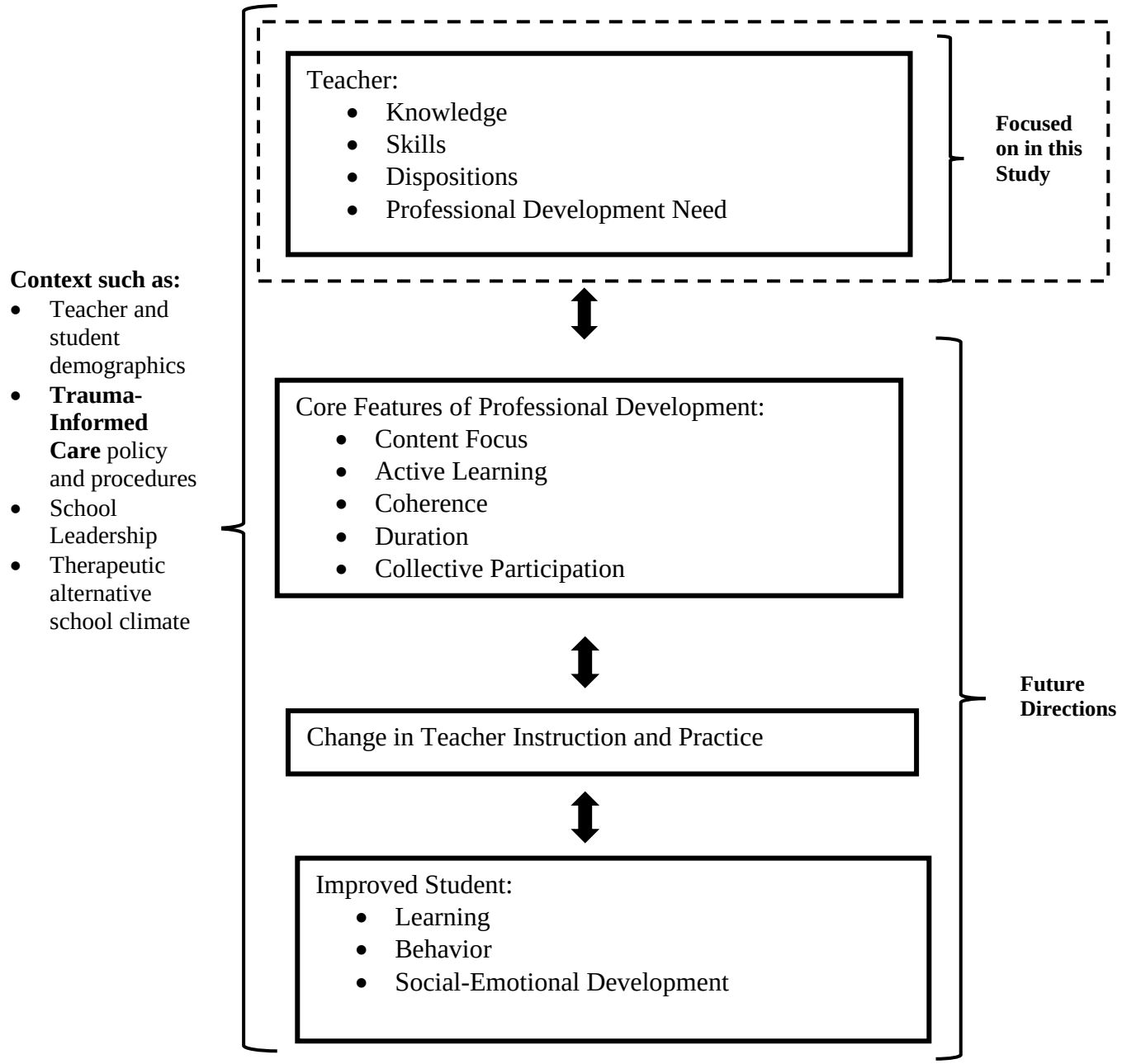

Figure 1.2. Desimone's (2009) core conceptual framework for professional development. Modified from Desimone (2009, p. 185).

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APPENDICES

Appendix A

Systematic Literature Review Abstract Review Form

Systematic Review of School-Based TIC Programs Publications
Abstract Review Form

Title: _____

Author(s): _____

Inclusion / Exclusion Criteria			
Published in English	Yes	No	Cannot Determine
Published in 1997-2017	Yes	No	Cannot Determine
A qualitative and/or quantitative study that assessed a TIC program model in *school* setting	Yes	No	Cannot Determine
Utilized a school-based TIC program model that served children and adolescents within the United States	Yes	No	Cannot Determine
Described trauma-informed practices for *school-based personnel*	Yes	No	Cannot Determine
Described TIC PD for school-based personnel	Yes	No	Cannot Determine
Note. *School* is defined as a preschool setting such as Head Start or pre-school or K-12 public school (i.e., traditional, alternative, day-school, charter); *School-based personnel* is defined as administrators, teachers, paraprofessionals, school psychologists; school-based social workers.			

Retain For:

- ☐ Background / Discussion
- ☐ Review of References
- ☐ Other: _____

Appendix B

TIC Strategy and PD Component - Coding Manual and Consensus Coding Results

Codebook Used to Define Codes (SAFETY)				
Level 1 Codename • **Level 2 Codename**	**Code Definition**	**Code Includes**	**Code Excludes**	**Tally (Pg #)**
Safety	**Ensure physical and emotional well-being for all students and school-based personnel**	**Wellbeing, safety**	**Trust, collaboration, empowerment, culture, support**	
• Consistency in Daily Routines	Establishing dependable and structured procedures for academic and behavior supports for trauma-exposed students	Dependable, Consistent	Predictable	
• Predictability	Anticipating expectations when a change is implemented or during periods of transition. Change is implemented with considerations for expectations and values.	Predictable	Dependable, Consistent	
• Non-Violent Learning Environment	Creating peaceful and nurturing environments including classrooms, hallways, playgrounds, and school bus) that are attentive to transitions and sensory needs	Physical, Peace, nurture, caring	Emotional, psychological	
• Emotional Well-being	Ensure emotional wellbeing for students	Emotional, psychological	Physical environment	
• Evaluation of Discipline Policies	Evaluation of discipline policies to reward students for positive behaviors instead of punitive discipline measures.	Policies, Discipline	Emotional, psychological	
• Identifying Triggers	Recognizing and preventing trauma-related triggers in the school and classroom setting.	Triggers	Emotional, psychological	
• **Other Safety Level 2**				

Codebook Used to Define Codes (TRUST)				
Level 1 Codename • **Level 2 Codename**	**Code Definition**	**Code Includes**	**Code Excludes**	**Tally (Pg #)**
Trust	**Maintain confidence among students and personnel relationships while being transparent about school policy and procedures**	**Trust, relationships, transparency**	**Safety, collaboration, empowerment, culture, support**	
• Develop Mutually Respectful and Positive Relationships	Fostering relationships that are compassionate and attuned as well as dependable and trustworthy.	Compassionate, dependable	Attachment, Policy, transparency	
• Establish Appropriate Attachment	Fostering healthy attachment relationships that consider the developmental needs of the student	Attachment	Compassionate, dependable, policy, transparency	
• Provide Clear Explanations About Policy and Procedure	Establishing trauma-informed policy and procedures that are designed to foster trust and transparency among school personnel, parents, and students	Policy, transparency	Compassionate, dependable, Attachment	
• **Other Trust Level 2**				

Codebook Used to Define Codes (EMPOWERMENT)				
Level 1 Codename • **Level 2 Codename**	**Code Definition**	**Code Includes**	**Code Excludes**	**Tally (Pg #)**
Student Empowerment	**Provide opportunities for school-based personnel to create an environment that allows students to feel validated and affirmed within daily interactions in the school.**	**Validation, affirmation, training, psychoeducation, student skills or methods, choice**	**Safety, collaboration, trust, culture, support**	
• Social-Emotional Skills	Training provided to students to increase expand their emotional vocabulary, while learning to identify, express, and manage their feelings related to trauma exposure	Social-emotional, SEL, soft skills	Coping, resiliency, regulation	
• Coping Skills	Training provided to students to increase methods to deal with stressful situations related to trauma exposure.	Coping, ability to cope, stress, methods,	SEL, resiliency, regulation	
• Resiliency Skills	Training provided to students to increase skills to build the capacity to recover quickly from trauma-related experiences.	Resilience, resiliency, recover	SEL, coping, regulation	
• Self-Regulation	Training provided to students to increase emotion regulation skills to respond to traumatic triggers in a socially acceptable way.	Regulation, self-regulation, self-control	SEL, coping, resiliency	
• **Other Empowerment Level 2**				

Codebook Used to Define Codes (PERSONNEL SUPPORT)				
Level 1 Codename • **Level 2 Codename**	**Code Definition**	**Code Includes**	**Code Excludes**	**Tally (Pg #)**
Staff Support	**Establish TIC school environments building on critical resources and supports provided to school-based staff to increase TIC practice and sustainability.**	**School staff Supports, resources, training**	**Safety, empowerment, collaboration, trust, culture**	
• Psychoeducation	Training provided to school-based staff in order to increase personal and professional coping skills related to trauma healing.	Staff-centered training, support provided to school staff	Consult, reflection, mentoring, secondary trauma. self-care	
• Classroom Consultation	Providing classroom personnel with performance feedback and consultation in implementing specific TIC practices.	Consult, perfromance feedback	Psychoeducation, reflection, mentoring, secondary trauma. self-care	
• Opportunities for Reflective Practice	Providing school personnel with opportunities for self-reflection for effective TIC practice implementation.	Reflection, self-reflection	Consult, psychoeducation, mentoring, secondary trauma. self-care	
• Peer-Based Mentoring	Providing school personnel opportunities for peer-based mentaoring for effective TIC practice implementation.	Mentoring, mentor	Consult, reflection, psychoeducation, secondary trauma. self-care	
• Responding to Secondary and Vicarious Trauma	Defining and recognizing secondary and vicarious trauma exposure among school personnel and putting procedures in place to mediate the effects.	Secondary trauma supports, vicarious trauma	Consult, reflection, mentoring, psychoeducation, self-care	
• Self-Care	Increased knowledge of appropriate and healthy self-care activities for school personnel working directly with students who have encountered trauma.	Self-care, staff well-being	Consult, reflection, mentoring, secondary trauma. psychoeducation	
• **Other Support Level 2**				

Codebook Used to Define Codes (COLLABORATION)				
Level 1 Codename • **Level 2 Codename**	**Code Definition**	**Code Includes**	**Code Excludes**	**Tally (Pg #)**
Collaboration	***Meaningful sharing of power and decision-making by ensuring everyone has a role to play in a trauma-informed approach***	***Power, decision-making, inclusion***	**Safety, empowerment, culture, trust, support**	
• Communication Across Service Providers	School personnel working together to discuss trauma-related student needs with primary facilitator to create plans and brainstorm student-focused solutions.	Service providers included in TIC	Parents, siblings, caregivers	
• Include Parents in Intervention Psychoeducation	Include primary caregivers in discussion of trauma-related student needs, working with primary facilitator to create plans, and brainstorming student-focused solutions.	Parents, siblings, and caregiver included in TIC	Service providers	
• **Other Level 2**				

TIC Strategy Consensus Coding Results

	INDENTIFIED STRATEGIES																																				
	Publication	Safety	Con	Pre	Non-Vio	Emo	Eval	Trigger	Trust	Rel	Attach	Pol	Empowerment	SEL	Cop	Res	Reg	Prob	Mind	Rel	Support	Psy	Con	Reflec	Ment	Culture	Assess	Mod	Def	Act	Collaboration	Service	Parents	Comm	Peer		Total
1	Allision (2017)	1	0	0	0	1	0	0	1	1	0	0	5	1	1		0	1	1	1	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0		9
2	Crosby (2018)	2	0	0	1	1	0	0	1	0	1	0	1	0	0	0	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0		6
3	Day (2015)	1	0	0	0	1	0	0	2	1	1	0	2	1	0	1	0	0	0	0	1	1	0	0	0	1	0	1	0	0	0	0	0	0	0		7
4	Dorado (2016)	3	0	1	1	0	0	1	1	1	0	0	2	1	0	1	0	0	0	0	2	1	1	0	0	2	0	0	1	1	3	1	1	1	0		13
5	Goodkind (2010)	1	0	0	0	1	0	0	1	1	0	0	5	1	1	0	0	1	1	1	1	1	0	0	0	2	0	1	1	0	4	1	1	1	1		14
6	Hansel (2010)	1	0	0	0	1	0	0	1	1	0	0	4	1	1	1	0	0	1	0	1	1	0	0	0	1	1	0	0	0	3	1	1	1	0		11
7	Holmes (2015)	2	0	0	1	1	0	0	1	0	1	0	5	1	1	0	1	1	1	0	3	1	1	0	1	0	0	0	0	0	1	0	1	0	0		12
8	Jaycox (2009)	1	1	0	0	0	0	0	1	1	0	0	5	0	1	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	1	1	0	0	0		9
9	Jaycox (2010)	1	0	0	0	1	0	0	1	1	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	4	1	1	1	1		8
10	Kataoka (2011)	1	0	0	0	1	0	0	1	1	0	0	1	0	1	0	0	0	0	0	1	1	0	0	0	0	0	0	0	0	3	1	1	0	1		7
11	Langley (2015)	1	0	0	0	1	0	0	1	1	0	0	5	1	1	0	0	1	1	1	2	1	1	0	0	0	0	0	0	0	1	0	1	0	0		10
12	McConnico (2016)	1	0	0	1	0	0	0	2	1	1	0	3	1	0	1	0	0	1	0	2	1	0	1	0	1	0	0	0	1	1	0	0	1	0		10
13	Parris (2015)	5	1	1	1	1	0	1	2	1	1	0	4	1	0	0	1	0	1	1	2	1	1	0	0	0	0	0	0	0	0	0	0	0	0		13
14	Perry (2016)	1	0	0	0	1	0	0	1	1	0	0	5	1	1	1	0	1	0	1	1	1	0	0	0	0	0	0	0	0	1	0	1	0	0		9
15	Powell (2016)	1	0	0	1	0	0	0	1	1	0	0	4	1	1	1	0	0	1	0	1	1	0	0	0	0	0	0	0	0	1	0	0	0	1		8
16	Santiago (2016)	1	0	0	0	1	0	0	1	1	0	0	4	1	1	1	0	0	1	0	1	1	0	0	0	2	0	1	1	0	1	0	1	0	0		10
17	Santiago (2014)	1	0	0	1	0	0	0	1	1	0	0	4	1	1	1	0	0	1	0	1	1	0	0	0	4	1	1	1	1	1	0	1	0	0		12
18	Shamblin (2016)	2	0	0	1	1	0	0	2	1	1	0	5	1	1	1	0	1	1	0	3	1	1	0	1	0	0	0	0	0	1	1	0	0	0		13
19	Stein (2003)	1	0	0	0	0	1	0	1	1	0	0	5	1	1	0	0	1	1	1	1	1	0	0	0	1	0	1	0	0	1	1	0	0	0		10
																																				Grand Total	191

Codebook Used to Define Codes (REALIZE)				
Level 1 Codename • **Level 2 Codename**	**Code Definition**	**Code Includes**	**Code Excludes**	**Tally (Pg #)**
Realize	**Help school-based staff realize the impact of trauma and understand the potential for recovery and healing.**	**Realize, understanding**	**Recognize, respond, resist**	
• Defining Trauma	School personnel are taught about the definition of trauma and potential consequences of trauma exposure among students.	Definition of trauma	Definition of TIC, Learning, Behavior	
• Defining Principles of TIC	School personnel are taught about and given definition of TIC guiding principles of TIC and how practices within each principle applied to their school setting.	Definition of TIC	Definition of trauma, Learning, Behavior	
• Understand how Trauma Affects Learning	School personnel are made aware of the adverse academic consequences that could potentially result from trauma exposure.	Learning, academics	Definition of Trauma, TIC Behavior	
• Understand How Trauma Affects Behavior	School personnel are made aware of the negative behavior consequences that could potentially result from trauma exposure among students.	Behavior, self-regulation, self-control	Definition of Trauma, TIC Learning	
• Other REALIZE level 2				

Codebook Used to Define Codes (RECOGNIZE)				
Level 1 Codename • **Level 2 Codename**	**Code Definition**	**Code Includes**	**Code Excludes**	**Tally (Pg #)**
Recognize	**Recognize the signs of trauma in students, families, school staff, and other school-based employees**	**Recognize, assess, trigger**	**Realize, respond, resist**	
• Trauma Screening and Assessment	School personnel are provided tools and resources for screening and assessing trauma exposure among students. School personnel are given opportunities to practices assessing trauma exposure using screening and assessment tools.	Screener, assessment	Trigger, symptoms	
• Trauma-related Triggers	School personnel are also made aware of triggers that are present in the school setting that could potentially re-traumatize students.	Triggers	Assessment, screener, assessment	
• Trauma Exposure Symptoms	School personnel are given lists of externalizing and internalizing behaviors symptoms demonstrated among students that might indicate trauma exposure.	Symptoms	Assessment, screener, triggers	
• Other RECOGNIZE level 2				

Codebook Used to Define Codes (RESPOND)				
Level 1 Codename • **Level 2 Codename**	**Code Definition**	**Code Includes**	**Code Excludes**	**Tally (Pg #)**
Respond	**Help school staff respond to students by fully integrating knowledge about trauma into policies, procedures, and practices.**	**Respond, procedures, practices, policies**	**Realize, Recognize, Resist**	
• Positive Relationships	Staff personnel are taught how to build healthy positive relationships with students.	Positive relationships		
• Classroom De-escalation	School personnel are taught how to de-escalate the classroom environment if a student is having a trauma-related behavior response.	De-escalation		
• School Crisis Plans	School personnel are provided a framework to develop school plans that mitigated trauma-exposure among students.	Crisis plans		
• Resiliency Skills	School personnel learn how to build capacity to foster resilience in school staff and students.	Resiliency		
• SEL Skills	School personnel learn how to build capacity to promote SEL in school staff and students.	Social-emotional learning, SEL soft-skills		
• Other RESPOND level 2				

Codebook Used to Define Codes (RESIST)				
Level 1 Codename • **Level 2 Codename**	**Code Definition**	**Code Includes**	**Code Excludes**	**Tally (Pg #)**
Resist	**Actively resist re-traumatization of students, families, school staff, and other school-based employees.**	**Resist re-traumatization**	**Realize, recognize, respond**	
• Self-Care Practices	School personnel are taught self-care practices.	Self-care	Self-reflection Coping skills Healing strategies	
• Self-Reflection	School personnel are taught how to and are provided opportunities for self-reflection	Self-reflection	Self-care Coping skills Healing strategies	
• Coping Skills	School personnel are taught how to build healthy coping skills to mediate working with students who have encountered trauma.	Coping skills	Self-reflection Self-care Healing strategies	
• Healing Strategies	School personnel are taught healing response strategies that could support students after trauma exposure.	Healing strategies	Self-Care, Self-reflection Coping skills	
• Other RESIST level 2				

TIC PD Components Consensus Coding Results

	IDENTIFIED PD COMPONENTS																												
	Publication	**Realize**	Trauma	TIC	Learn	Beh	Rel	**Recognize**	Screen	Trigg	Symp	**Respond**	Rel	De-esc	Crisis	Res	SEL	Imp	**Resist**	Care	Refl	Cop	Heal		**Total**
1	Allision (2017)	1	1	0	0	0	0	1	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0		3
2	Crosby (2018)	3	1	0	1	1	0	2	1	1	0	1	0	1	0	0	0	0	0	0	0	0	0		6
3	Day (2015)	3	1	1	0	0	1	1	1	0	0	6	1	1	1	1	1	1	2	1	0	0	1		12
4	Dorado (2016)	4	1	0	1	1	1	1	1	0	0	0	0	0	0	0	0	0	4	1	1	1	1		9
5	Goodkind (2010)	1	1	0	0	0	0	1	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0		3
6	Hansel (2010)	3	1	0	0	1	1	1	1	0	0	3	0	1	0	0	1	1	1	1	0	0	0		8
7	Holmes (2015)	4	1	0	1	1	1	3	1	1	1	1	0	0	0	0	1	0	1	0	0	0	1		9
8	Jaycox (2009)	1	1	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	1	0	0	0	1		4
9	Jaycox (2010)	1	1	0	0	0	0	1	1	0	0	2	1	0	0	0	1	0	0	0	0	0	0		4
10	Kataoka (2011)	1	1	0	0	0	0	1	1	0	0	3	1	0	0	0	1	1	0	0	0	0	0		5
11	Langley (2015)	3	1	0	1	1	0	1	1	0	0	1	0	0	0	0	0	1	1	0	0	0	1		6
12	McConnico (2016)	3	1	0	1	1	0	2	1	1	0	3	1	1	0	1	0	0	0	0	0	0	0		8
13	Parris (2015)	3	1	0	1	1	0	2	1	0	1	1	0	0	0	0	1	0	0	0	0	0	0		6
14	Perry (2016)	4	1	1	1	1	0	1	1	0	0	0	0	0	0	0	0	0	1	0	0	0	1		6
15	Powell (2016)	1	1	0	0	0	0	2	1	0	1	2	1	0	0	0	0	1	1	0	0	1	0		6
16	Santiago (2016)	1	1	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	2	0	0	1	1		5
17	Santiago (2014)	1	1	0	0	0	0	1	1	0	0	1	1	0	0	0	0	0	2	0	0	1	1		5
18	Shamblin (2016)	2	1	1	0	0	0	1	1	0	0	3	0	1	0	1	1	0	0	0	0	0	0		6
19	Stein (2003)	1	1	0	0	0	0	1	1	0	0	1	0	0	0	0	0	1	0	0	0	0	0		3
	Total	41	19	3	7	8	4	25	19	3	3	32	8	5	1	3	7	8	16	3	1	4	8		**114**

Appendix C

TICE Survey – In-Person Survey Introduction Script and Instructions

TIC Special Education Classroom Personnel Survey
The purpose of this study is to examine special educators and paraprofessionals perceptions about TIC knowledge, skills, dispositions, and professional development needs to create trauma-informed care training practices in therapeutic alternative schools. This survey study is being conducted through Georgia State University. This online survey asks about your perceptions of: 1. Trauma exposure among your students with disabilities 2. Knowledge about trauma and trauma-informed care 3. Trauma-informed practices used school-wide and in the classroom 4. Beliefs about personal responsibility in supporting trauma-exposed students 5. Trauma-informed are professional development needs Please do not type your name on the survey. Your responses will be anonymous and will never be linked to you personally. Your participation is entirely voluntary. If there are any items that you feel uncomfortable answering, please skip them. Please attempt to complete the survey in one sitting. At the end of the survey, you will have access to a link to enter a drawing for an *Echo* Dot. One person from each GNETS program will have an opportunity to win this prize valued at $50. Thank you for your cooperation!

Appendix D

TICE Survey – Student Demographics: Trauma Exposure among Students with Disabilities

Survey Question #	Trauma Exposure among Students with Disabilities Directions: (a) Please answer each question with the corresponding number of students for the current school year. (b) Please answer each question with the corresponding percentage of students for the current school year.		
	Prompt	Definition	Report
	a) How many students are currently assigned to you? _____Students	The number of students that were assigned to the teacher / paraprofessional.	Total Number of students.
	b) Of those students who are assigned to you; approximately what percentage do you have knowledge of having a <u>trauma exposure?</u> ____Percent	An incident that causes physical, emotional, spiritual, or psychological harm.	Percentage of students who they have knowledge of trauma exposure.
Note. American Psychological Association. (2008). Children and Trauma: Update for Mental Health Professionals. Presidential Task Force on Posttraumatic Stress Disorder and Trauma in Children and Adolescents			

Appendix E

TICE Survey – TIC Knowledge

Survey Question #	TIC Knowledge Directions: Please rate how knowledgeable you are on the following topics and how much you would like additional training.								
	Prompt	How knowledgeable are you on this trauma-informed care topic? (*Check one*)					How much would you like additional training on this topic? (*Check one*)			
		LESS←		→MORE			LESS←		→MORE	
	Topic:	Not at all Knowledgeable	Slightly Knowledgeable	Moderately Knowledgeable	Completely Knowledgeable		None	Not Really	Some	Very Much
	a) The definition of trauma exposure	○	○	○	○		○	○	○	○
	b) Guiding principles of trauma-informed care	○	○	○	○		○	○	○	○
	c) Screening students for trauma exposure	○	○	○	○		○	○	○	○

	d) Recognizing trauma exposure symptoms among students with disabilities	○	○	○	○		○	○	○	○
	e) How trauma affects students' learning	○	○	○	○		○	○	○	○
	f) How trauma affects students' behavior	○	○	○	○		○	○	○	○
	g) Promoting healing among students who have been traumatized	○	○	○	○		○	○	○	○
	h) How to create school crisis plans related trauma exposure	○	○	○	○		○	○	○	○

Appendix F

TICE Survey – TIC Skills

Survey Question #	Trauma-Informed Skills Directions: Please rate how often you implemented each practice during the previous school year and how much you would like additional training.									
Prompt		How often? (*Check one*)					How much would you like additional training? (*Check one*)			
		LESS←		→MORE			LESS←		→MORE	
	Key Area Practice	Never	Rarely	Often	Always		None	Not really	Some	Very Much
	Safety a) Recognized trauma exposure symptoms among students	○	○	○	○		○	○	○	○
	b) Evaluated students' Individual Education Plans (IEP) for trauma-related experiences	○	○	○	○		○	○	○	○

	c) Evaluated students' psychological assessments for trauma-related experiences.	○	○	○	○		○	○	○	○
	d) Established consistent routines to reduce trauma-related triggers	○	○	○	○		○	○	○	○
	e) Assured physical safety in the event of a trauma-related response	○	○	○	○		○	○	○	○
	f) Assured emotional safety in the event of a trauma-related response	○	○	○	○		○	○	○	○
	g) Identified trauma-related triggers among students	○	○	○	○		○	○	○	○
	Trust a) Established meaningful relationships with students who you had knowledge of trauma exposure	○	○	○	○		○	○	○	○

	b) Gained students' trust after a trauma-related experience	○	○	○	○		○	○	○	○
	c) Gained parent trust after a trauma-related experience	○	○	○	○		○	○	○	○
	d) Described trauma-related school policy to student	○	○	○	○		○	○	○	○
	e) Described trauma-related school policy to parent	○	○	○	○		○	○	○	○
	Personnel Support a) Participated in classroom consultation to improve trauma informed care practice	○	○	○	○		○	○	○	○
	b) Participated in self-care activities to improve trauma-informed care practice	○	○	○	○		○	○	○	○

	c) Utilized teacher mentor to improve trauma-informed care practice	○	○	○	○		○	○	○	○
	d) Utilized opportunities for reflective trauma-informed care practice	○	○	○	○		○	○	○	○
	e) Participated in activities to increase teacher resiliency to support students who have been exposed to trauma	○	○	○	○		○	○	○	○
	f) Recognized secondary trauma exposure among another teacher or personnel member	○	○	○	○		○	○	○	○
	Collaboration a) Discussed student trauma exposure with other services providers (e.g., social workers, school counselor, therapist)	○	○	○	○		○	○	○	○

	b) Included parents in mental health promotion activities for students who experienced trauma	○	○	○	○		○	○	○	○
	Cultural Responsiveness a) Assessed cultural differences when responding to trauma among students	○	○	○	○		○	○	○	○
	b) Promoted trauma awareness activities	○	○	○	○		○	○	○	○

Appendix G

TICE Survey – TIC Dispositions Teacher Responsibility

Survey Question #	Trauma-Informed Care Dispositions Directions: Please rate the level of responsibility you feel within the following statements. Think of your students that you are currently assigned who you have knowledge of trauma exposure when responding to the following items: (*Check one*)				
Prompt	"Imagine that the following situations would occur in your class. To what extent would you feel PERSONALLY RESPONSIBLE that you should have prevented each of the following for a student who you have knowledge of trauma exposure?"				
	I would feel personally responsible if…	LESS←			→MORE
		Not at all Responsible	Slightly Responsible	Moderately Responsible	Completely Responsible
	Student Achievement a) a student of mine failed to make excellent progress throughout the school year	○	○	○	○
	b) a student of mine failed to learn the required material	○	○	○	○
	c) A student of mine had very low achievement.	○	○	○	○
	d) A student of mine failed my class.	○	○	○	○
	Student Relationships e) A student of mine thought he/she could not count on me when he/she needed help with something.	○	○	○	○
	f) A student of mine did not think that he/she can trust me with his/her problems in or outside of school.	○	○	○	○
	g) A student of mine did not believe that I truly cared about him/her.	○	○	○	○

	Student Motivation h) A student of mine was not interested in the subject I teach.	○	○	○	○
	i) A student of mine did not value teach the subject I teach.	○	○	○	○
	j) A student of mine disliked the subject I teach.	○	○	○	○
	Teaching k) A lesson I taught failed to reflect my highest ability as a teacher.	○	○	○	○
	l) A lesson I taught was not as effective for student learning as I could have possibly made it.	○	○	○	○
	m) A lesson I taught was not as engaging for students as I could have possibly made it.	○	○	○	○

Appendix H

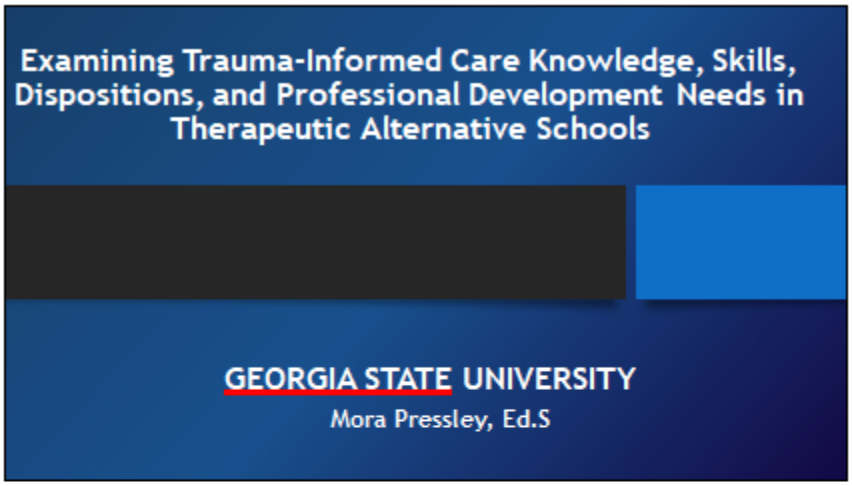
TICE Survey – Special Educator and Paraprofessional Demographic Questions

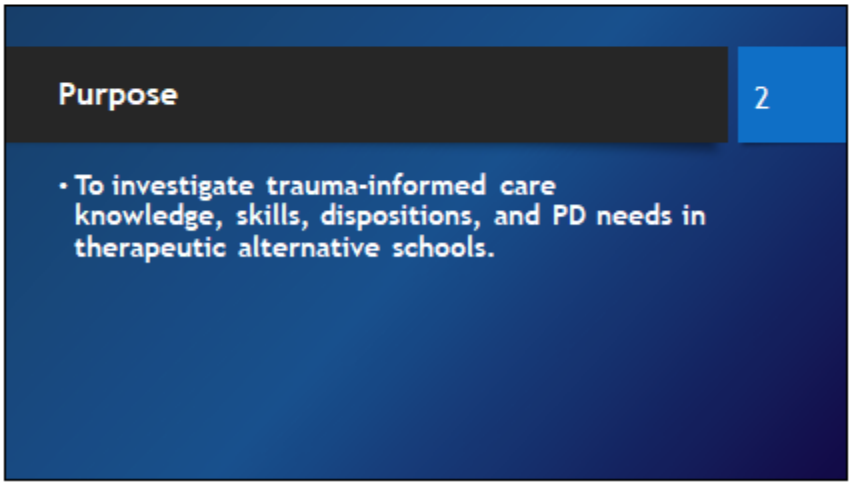
Demographics Directions: Please answer the following questions:
1. What is your sex? (Check one.) □ Female □ Male
2. What is your age in years? _____ years
What race/ethnic group do you most identify? (Check one.) □ African American □ American Indian □ Asian American □ Caucasian □ Hawaii/Pac. Islander □ Latino/a □ Mixed Race □ Other (Please specify) _____
What is your primary role during the 2017-2018 school year? (Check one.) □ Special Education Teacher □ Paraprofessional □ Other (Please specify) _____

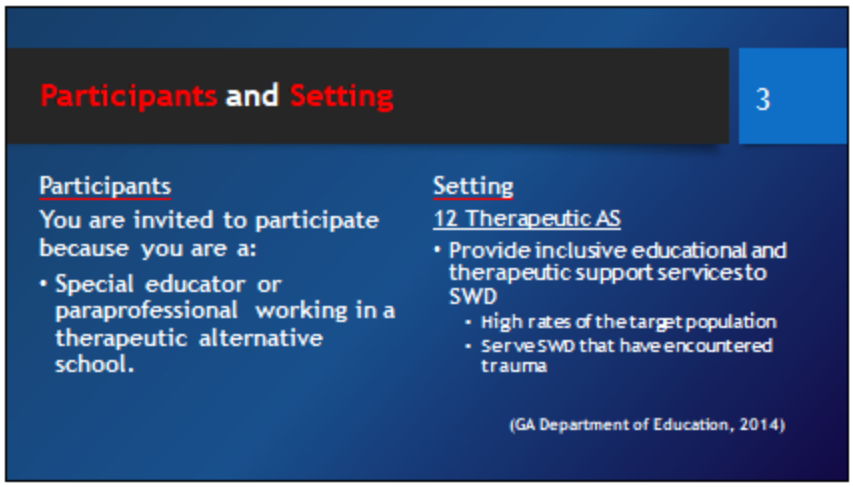
Which of the following BEST describes the grade level you taught during the 2017-2018 school year? (Check one) ☐ Elementary (Pre-K – 5th) ☐ Middle School (6th – 8th) ☐ High School (9 – 12th)
Which is the highest degree of education you have earned? (Check one) ☐ High School Diploma ☐ Associate ☐ Bachelor ☐ Master ☐ Specialist ☐ Doctorate
What was the total number of years (including the 2017-2018 school-year) that you were employed within a special education setting? (Type in the number of years)_____ Years
What is the total number of years (including the 2017-2018 school-year) that you were employed within a therapeutic program setting? (Type in the number of years) _____ Years
What is primary setting of your school (during the 2017-2018 school year) located? (Check one.) ☐ Rural ☐ Suburban ☐ Urban

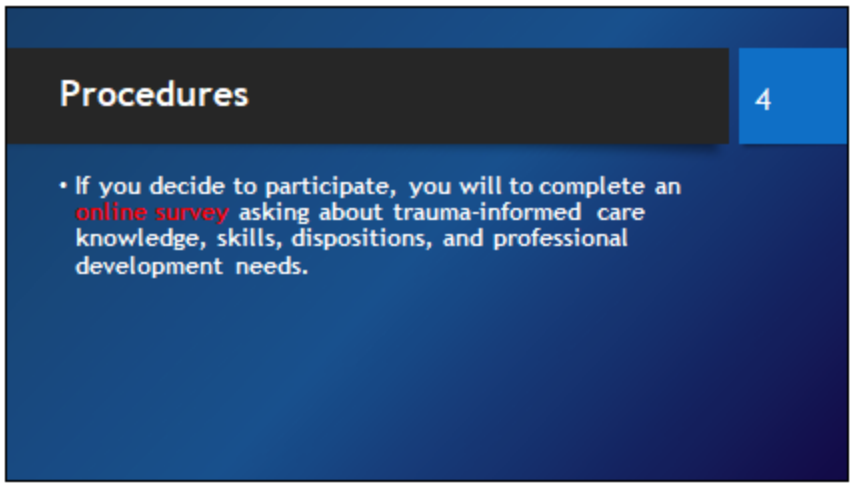
Appendix I

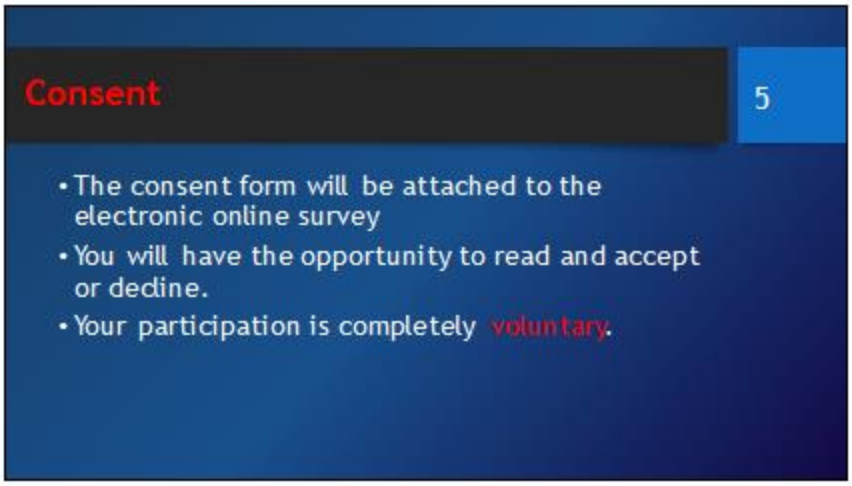
In-Person Study Introduction PowerPoint Slides

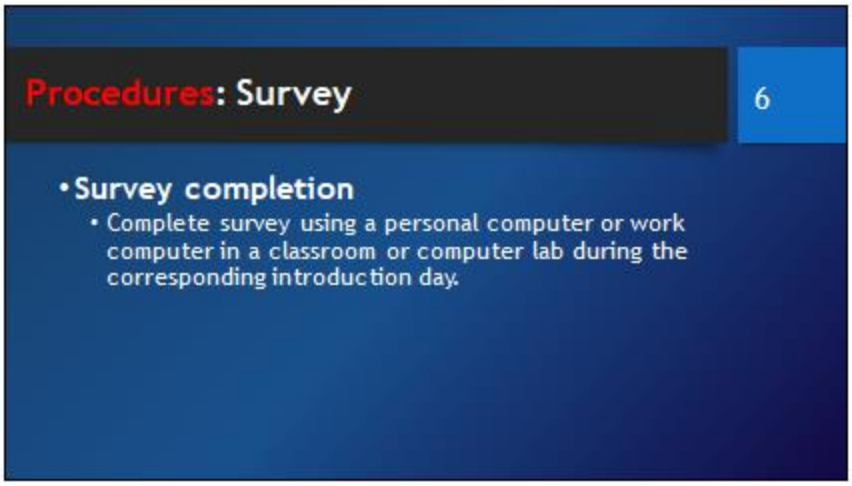





Participants and Setting
3
Participants
You are invited to participate because you are a:
• Special educator or paraprofessional working in a therapeutic alternative school.
Setting
12 Therapeutic AS
• Provide inclusive educational and therapeutic support services to SWD
• High rates of the target population
• Serve SWD that have encountered trauma
(GA Department of Education, 2014)


Procedures
4
• If you decide to participate, you will to complete an online survey asking about trauma-informed care knowledge, skills, dispositions, and professional development needs.


Consent
5
• The consent form will be attached to the electronic online survey
• You will have the opportunity to read and accept or decline.
• Your participation is completely voluntary.


Procedures: Survey
6
• Survey completion
• Complete survey using a personal computer or work computer in a classroom or computer lab during the corresponding introduction day.

Incentive

Amazon Echo Dot Raffle

- You will be given an opportunity to enter into a raffle after you have completed the survey
- One Amazon Echo Dot will be raffled per GNETS program site
- You will notified of the winning code within one week.

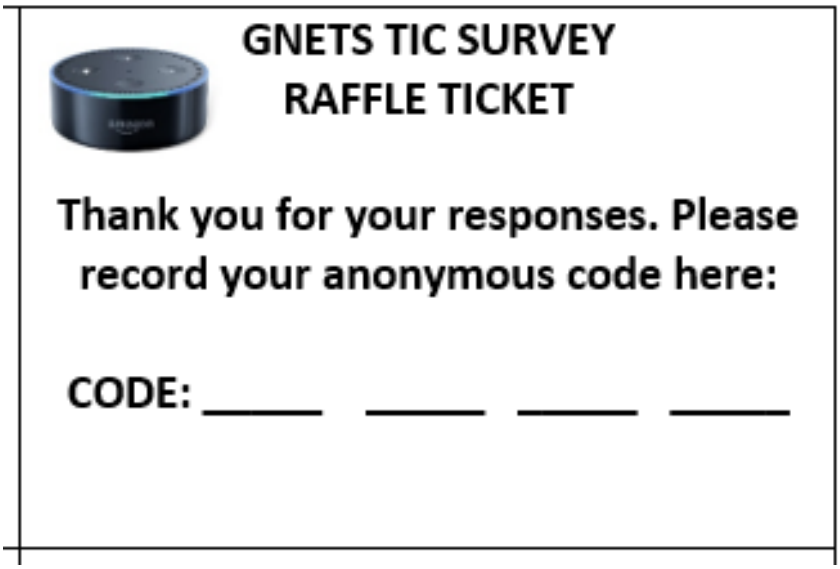
THANK YOU!

8

- Please let me know if you have any questions or concerns
  - Mora Pressley, Ed.S.
    - Mobile: 843-425-4742
    - Email: mpressley4@student.gsu.edu
  - The link will be sent to you via email

Appendix J

Raffle Ticket



Appendix K

Consent Form

Georgia State University
Department of Educational Psychology and Special Education
Informed Consent
Special Education Classroom Personnel Consent Form

Title: Examining Trauma-Informed Care Knowledge, Skills, Dispositions, and Professional Development Needs in Therapeutic Alternative Schools

Principal Investigator: Dr. David E. Houchins

Student Principal Investigator: Mora Pressley, M.Ed.

I. Purpose:
You are invited to participate in a research study. The purpose of the study is to investigate trauma-informed care knowledge, skills, dispositions, and PD needs in therapeutic alternative schools. You are invited to participate because you are special educator or paraprofessional working in a therapeutic alternative school. Approximately 160 participants will be recruited for this study. Participation will require approximately 20 minutes of your time during one of your work days. Participation is voluntary.

II. Procedures:

If you decide to participate, you will to complete an online survey asking about trauma-informed care knowledge, skills, dispositions, and professional development needs.

III. Risks:

If at any time, you feel any emotional discomfort or distress during in-person study introduction or at any time while completing the survey, you can decline participation and can contact the Co-PI, Dr. Kristen Varjas, a mental health professional, at 404-413-8190 if needed.

IV. Benefits:

Participation in this study may or may not benefit you personally. Overall, we hope to gain information about the trauma-informed care professional development needs in alternative school settings.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. If you decide not to be in the study or stop during the study, you will not be penalized.

VI. Confidentiality:

We will keep your records private to the extent allowed by law. Dr. David Houchins, Mora Pressley, Dr. Kris Varjas, and the research team will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP). We will use a number code rather than your name on study records. The information you provide will be stored in a locked file cabinet and on a password- and firewall-protected computer. Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

VII. Contact Persons:

Contact Dr. David E. Houchins at 404-413-8338, dhouchins@gsu.edu, Mora Pressley at 843-425-4742, or Dr. Kris Varjas at 404-413-8190 if you have questions, concerns, or complaints about this study. You can also call if think you have been harmed by the study. Call Susan Vogtner in the Georgia State University Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu if you want to talk to someone who is not part of the study team. You can talk about questions, concerns, offer input, obtain information, or suggestions about the study. You can also call Susan Vogtner if you have questions or concerns about your rights in this study.

VIII. Copy of Consent Form to Subject:

You can request a copy of the consent form to keep for your records.

If you are willing to participate in this survey?

__Yes (You will begin survey and have opportunity to end survey at any point and enter raffle)
__No (You will be forwarded to link to enter raffle)

Appendix L

Variable Constructs with Survey Items

Variable	Number of Survey Items	Survey Items
TIC	8	*Knowledge: What level?* 1. The definition of trauma exposure 2. Guiding principles of trauma-informed care 3. Screening students for trauma exposure 4. Recognizing trauma exposure symptoms among students with disabilities 5. How trauma affects students' learning 6. How trauma affects students' behavior 7. Promoting healing among students who have been traumatized 8. How to create school crisis plans related trauma exposure
SA	7	*Safety: How often?* 1. Recognized trauma exposure symptoms among students 2. Evaluated students' Individual Education Plans (IEP) for trauma-related experiences 3. Evaluated students' psychological assessments for trauma-related experiences. 4. Established consistent routines to reduce trauma-related triggers 5. Assured physical safety in the event of a trauma-related response 6. Assured emotional safety in the event of a trauma-related response 7. Identified trauma-related triggers among students
TR	5	*Trust: How often?* 1. Established meaningful relationships with students who you had knowledge of trauma exposure 2. Gained students' trust after the trauma-related experience 3. Gained parent trust after the trauma-related experience 4. Described trauma-related school policy to student 5. Described trauma-related school policy to parent
PS	6	*Personnel Support: How often?* 1. Participated in classroom consultation to improve trauma-informed care practice 2. Participated in self-care activities to improve trauma-informed care practice

		3. Utilized teacher mentor to improve trauma-informed care practice 4. Utilized opportunities for reflective trauma-informed care practice 5. Participated in activities to increase teacher resiliency to support students who have been exposed to trauma 6. Recognized secondary trauma exposure among another teacher or personnel member
CO	2	*Collaboration: How often?* 1. Discussed student trauma exposure with other services providers (e.g., social workers, school counselor, therapist) 2. Included parents in mental health promotion activities for students who experienced trauma
CR	2	*Cultural Responsiveness: How often?* 1. Assessed cultural differences when responding to trauma among students 2. Promoted trauma awareness activities
SA	4	*Student Achievement: How responsible?* 1. A student of mine failed to make excellent progress throughout the school year 2. A student of mine failed to learn the required material 3. A student of mine had very low achievement. 4. A student of mine failed my class.
SR	3	*Student Relationships: How responsible?* 1. A student of mine thought he/she could not count on me when he/she needed help with something. 2. A student of mine did not think that he/she can trust me with his/her problems in or outside of school. 3. A student of mine did not believe that I truly cared about him/her.
SM	3	*Student Motivation: How responsible?* 1. A student of mine was not interested in the subject I teach. 2. A student of mine did not value learning the subject I teach. 3. A student of mine disliked the subject I teach.
TE	3	*Teaching: How responsible?* 1. A lesson I taught failed to reflect my highest ability as a teacher. 2. A lesson I taught was not as effective for student learning as I could have possibly made it. 3. A lesson I taught was not as engaging for students as I could have possibly made it.

TIC_PD	8	*Knowledge: How much additional training?* 1. The definition of trauma exposure 2. Guiding principles of trauma-informed care 3. Screening students for trauma exposure 4. Recognizing trauma exposure symptoms among students with disabilities 5. How trauma affects students' learning 6. How trauma affects students' behavior 7. Promoting healing among students who have been traumatized 8. How to create school crisis plans related trauma exposure
SA_PD	7	*Safety: How much additional training?* 1. Recognized trauma exposure symptoms among students 2. Evaluated students' Individual Education Plans (IEP) for trauma-related experiences 3. Evaluated students' psychological assessments for trauma-related experiences. 4. Established consistent routines to reduce trauma-related triggers 5. Assured physical safety in the event of a trauma-related response 6. Assured emotional safety in the event of a trauma-related response 7. Identified trauma-related triggers among students
TR_PD	4	*Trust: How much additional training?* 1. Established meaningful relationships with students who you had knowledge of trauma exposure 2. Gained students' trust after a trauma-related experience 3. Gained parent trust after a trauma-related experience 4. Described trauma-related school policy to student 5. Described trauma-related school policy to parent
PS_PD	6	*Personnel Support: How much additional training?* 1. Participated in classroom consultation to improve trauma-informed care practice 2. Participated in self-care activities to improve trauma-informed care practice 3. Utilized teacher mentor to improve trauma-informed care practice 4. Utilized opportunities for reflective trauma-informed care practice

		5. Participated in activities to increase teacher resiliency to support students who have been exposed to trauma 6. Recognized secondary trauma exposure among another teacher or personnel member
CO_PD	2	*Collaboration: How much additional training?* 1. Discussed student trauma exposure with other services providers (e.g., social workers, school counselor, therapist) 2. Included parents in mental health promotion activities for students who experienced trauma
CU_PD	2	*Cultural Responsiveness: How much additional training?* 1. Assessed cultural differences when responding to trauma among students 2. Promoted trauma awareness activities
Note. TIC = Trauma-Informed Care; TIC_PD = Trauma-Informed Care Professional Development; SA = Safety; SA_PD = Safety_Professional Development; TR = Trust; TR_PD = Trust_Professional Development; PS = Personnel Support; PS_PD = Personnel Support_Professioonal Development; CO = Collaboration; CO_PD = Collaboration_Professional Development; CU = Culture; CU_PD = Culture_Professional Development; AC = Achievement; RE = Relationships; MO = Motivation; TE = Teaching		

Appendix M

Correlation Matrix for the 16 TICE Survey Items

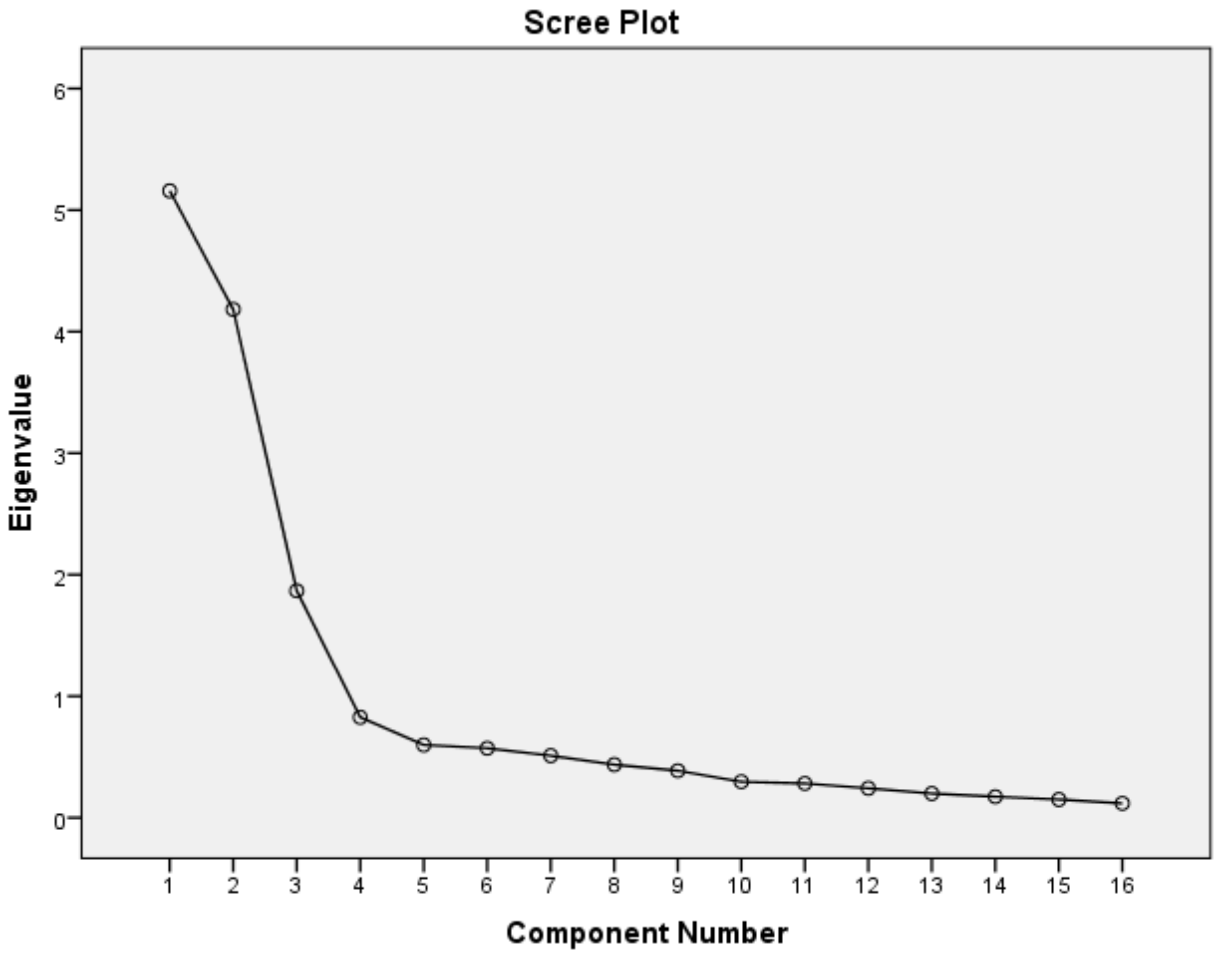
Correlation

	TIC	TI_PD	SA	SA_PD	TR	TR_PD	PS	PS_PD	CO	CO_PD	CU	CU_PD	AC	RE	MO	TE
TIC	1.000	-.254	.642	-.287	.529	-.228	.545	-.162	.374	-.338	.550	-.265	.196	.101	.218	.018
TIC_PD	-.254	1.000	-.149	.740	-.016	.703	.060	.703	.095	.497	-.048	.478	.148	.124	.129	.164
SA	.642	-.149	1.000	-.057	.621	.004	.593	.057	.465	-.135	.526	.069	.330	.228	.307	.193
SA_PD	-.287	.740	-.057	1.000	-.019	.813	.094	.709	.185	.574	.069	.694	.327	.353	.252	.286
TR	.529	-.016	.621	-.019	1.000	.018	.672	.067	.498	-.029	.547	.003	.215	.078	.294	-.023
TR_PD	-.228	.703	.004	.813	.018	1.000	.123	.777	.119	.640	.017	.743	.260	.228	.256	.277
PS	.545	.060	.593	.094	.672	.123	1.000	.175	.538	-.031	.562	.079	.229	.049	.427	.153
PS_PD	-.162	.703	.057	.709	.067	.777	.175	1.000	.125	.657	.082	.656	.222	.204	.252	.275
CO	.374	.095	.465	.185	.498	.119	.538	.125	1.000	-.110	.628	.077	.259	.104	.313	.080
CO_PD	-.338	.497	-.135	.574	-.029	.640	-.031	.657	-.110	1.000	-.126	.735	.085	.146	.085	.199
CU	.550	-.048	.526	.069	.547	.017	.562	.082	.628	-.126	1.000	-.027	.335	.126	.351	.058
CU_PD	-.265	.478	.069	.694	.003	.743	.079	.656	.077	.735	-.027	1.000	.272	.287	.261	.351
AC	.196	.148	.330	.327	.215	.260	.229	.222	.259	.085	.335	.272	1.000	.683	.715	.566
RE	.101	.124	.228	.353	.078	.228	.049	.204	.104	.146	.126	.287	.683	1.000	.477	.610
MO	.218	.129	.307	.252	.294	.256	.427	.252	.313	.085	.351	.261	.715	.477	1.000	.425
TE	.018	.164	.193	.286	-.023	.277	.153	.275	.080	.199	.058	.351	.566	.610	.425	1.000

Note. TICE = Trauma-Informed Care Educator; TIC = Trauma-Informed Care; TIC_PD = Trauma-Informed Care Professional Development; SA = Safety; SA_PD = Safety_Professional Development; TR = Trust; TR_PD = Trust_Professional Development; PS = Personnel Support; PS_PD = Personnel Support_Professioonal Development; CO = Collaboration; CO_PD = Collaboration_Professional Development; CU = Culture; CU_PD = Culture_Professional Development; AC = Achievement; RE = Relationships; MO = Motivation; TE = Teaching

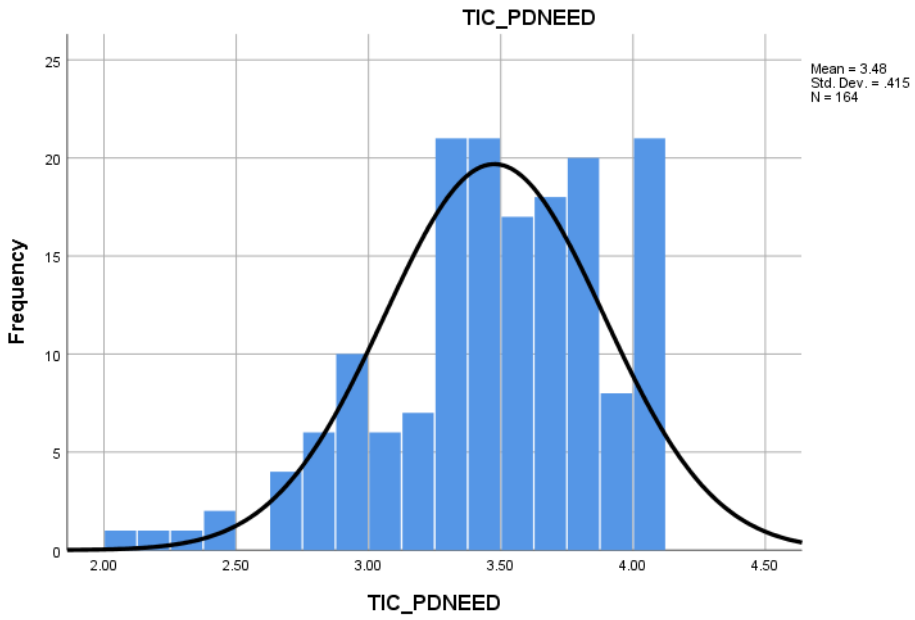
Appendix N

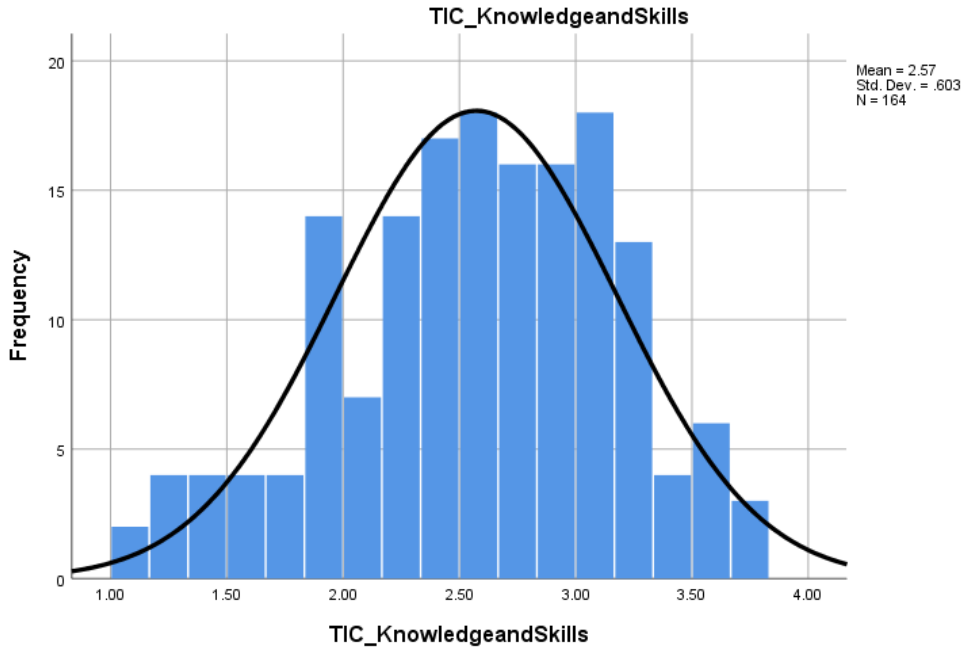
Exploratory Factor Analysis: Scree Plot

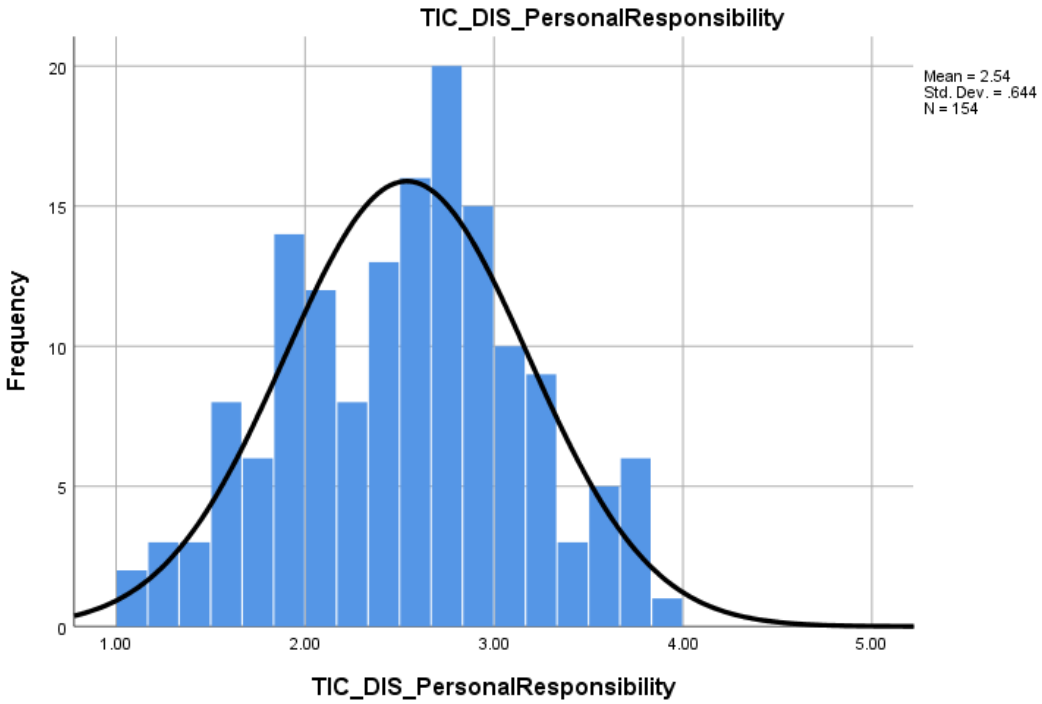


Appendix O

Exploratory Factor Analysis: Histograms






TIC_DIS_PersonalResponsibility
Mean = 2.54
Std. Dev. = .644
N = 154
Frequency
20
15
10
5
0
1.00
2.00
3.00
4.00
5.00
TIC_DIS_PersonalResponsibility

Appendix P

Definition of Terms

Childhood Trauma refers to the chronic stress and adverse life event directly or indirectly experienced by a child or adolescent before the age of 18.

Special Education Classroom Personnel refers to special education teachers and paraprofessionals that work in a therapeutic alternative school setting and serve students with disabilities who may have encountered childhood trauma.

Therapeutic Alternative Schools refer to school settings which provide academic, behavior, and social-emotional supports to students with primarily EBD who otherwise cannot be served in their traditional or homeschool setting.

Trauma-Informed Care (TIC) refers to a systematic framework in which to serve students in schools who require additional psychological supports because of childhood trauma exposure.

TIC Dispositions refer to the personal responsibility that special education classroom personnel indicate is necessary to support their students with disabilities who encounter childhood trauma.

TIC Knowledge refers to the understanding of trauma and TIC that special education classroom personnel must have to implement TIC skills in schools effectively.

TIC Professional Development refers to the trauma and TIC training that special education classroom personnel must participate in that supports increased TIC knowledge, skills, and dispositions.

TIC Skills refer to the practices, procedures, and policies that are implemented by special education classroom personnel school-wide that consider the unique needs of students with disabilities who are exposed to childhood trauma.