



Trauma Competent Caregiving: A Pilot Examination of a Virtual Trauma-Informed Caregiver Training for Foster and Kinship Parents

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Abstract

Young people in the foster care system are at an increased risk of exposure to early trauma, yet evidence-based, trauma-informed training is not yet widely implemented to support foster and kinship parents who care for youth in the system. The purpose of this study is to pilot a virtual trauma-informed caregiving curriculum, Trauma Competent Caregiving (TCC), to provide preliminary evidence of its acceptability and utility for a sample of foster and kinship caregivers in the United States. Due to high rates of attrition, limited conclusions could be drawn from planned quantitative analyses; however, meaningful results were pulled from qualitative data collected following the trial's completion. Findings suggest that foster parents found the virtual TCC curriculum to be appropriate, relevant, and meaningful in their role as foster or kinship parents. They had some challenges with the time commitment and presentation of materials but desired wider dissemination of this and similar training opportunities. Additionally, caregivers suggested the need for improved research practices in the system that offered support for diverse caretakers, addressed their demanding schedules, and provided quality and ongoing access to meaningful, evidence-based information. This study provides preliminary support for the use of the virtual TCC curriculum for foster and kinship caregivers in the United States, and it adds to the growing literature supporting the development of evidence-based practices in the foster care system.

Keywords Foster care · Kinship care · Trauma-informed care · Caregiver training · Evidence-based training

In 2021, the Adoption and Foster Care Analysis and Reporting System reported that approximately a quarter of a million youth are placed in the United States' foster care system each year (Annie & Casey Foundation, 2021). The foster care system is a public institution designed to provide temporary residence and provision to children and youth following court-ordered removal from a primary caregiver's home (Font & Gershoff, 2020). The most cited reasons for removal and placement in foster care range from neglect (63%), caregiver drug abuse (36%) or mental illness (14%), and/or physical abuse (12%; Annie & Casey Foundation, 2021). These youth are typically either placed

in a nonrelative foster home (50%), a relatives' home (i.e., kinship parent; 33%), a group home (6%), or an institution (7%), depending on the circumstances for removal, availability of placements, and the unique needs of the child (e.g., physical disabilities, behavioral needs; Annie & Casey Foundation, 2021; Font & Gershoff, 2020). Though the foster care system remains the "least detrimental alternative" for young people living in these unsafe conditions, there is still a need to promote improved practices within the system, especially as it pertains to caregiver preparation and trauma-informed supports (Font & Gershoff, 2020, p. 24; Goldstein et al., 1986).

The developmental histories of young people in the foster care system are likely to involve exposure to complex trauma, and consequently, researchers and practitioners must work towards the development of appropriate practices to address mental health concerns, neurocognitive delays, and behavioral/adjustment challenges that often stem from exposure to early traumatic experiences (Beyerlein & Bloch, 2014; Middleton et al., 2019). This type of progress can be challenging when the reality of the foster

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care system involves a shortage of trained caregivers and placements, conflicting legal requirements (e.g., laws varying across state lines, no definition of the “best interest of the child”), and overburdened employees (Aarons et al., 2010; Beyerlein & Bloch, 2014; James, 2004; Newton et al., 2000; Zhang et al., 2021). These challenges often result in multiple placement transitions and/or prolonged time in the foster care system, which further increases the risk for trauma exposure (Colley et al., 2017; Peterson, 2018).

Despite these existing realities, the evidence is clear that trained caregivers (i.e., foster and kinship parents) in the system can mitigate or even prevent many of these challenges (Magee et al., 2019). However, evidence-based, trauma-informed training and resources for caregivers in the system are still limited and not adequately implemented in practice (Benesh & Cui, 2015; Middleton et al., 2019). Consequently, foster parents continue to leave the system at an alarming rate due to unaddressed challenges and lack of system support (Rhodes et al., 2001). Therefore, the purpose of this study is to build upon the work of Smeyne and colleagues (under review) to provide additional empirical support for a trauma-informed caregiver curriculum, Trauma Competent Caregiving (TCC), by piloting a virtual, accessible, and evidence-based intervention for families in the foster care system (National Research Agenda Project for a 21st Century Child and Family Well-Being System (NRAP), 2023).

The Impact of Early Trauma Exposure

Given the commonly cited reasons for placement in the foster care system (e.g., neglect, physical abuse, caregiver instability), it is estimated that 90% of youth in foster care are exposed to traumatic experiences and demonstrate complex trauma responses both before and during their time in the system (Berardi & Morton, 2017; Colley et al., 2017; Pecora, 2019). It is well documented that individuals exposed to childhood trauma present an increased risk for a number of physical challenges, including, but not limited to, disease, obesity, hypertension, sexually transmitted infections, diabetes, and coronary heart disease (Agorastos et al., 2019; Anda et al., 2008; Felitti et al., 1998; McFarlane, 2013). Additionally, exposure to adverse childhood experiences increases the likelihood that one will meet the diagnostic criteria for psychiatric disorders (i.e., depression, ADHD, eating disorders, reactive attachment disorder), engage in disordered substance use, demonstrate a disorganized attachment style with important adults, exhibit impaired executive functioning, and present with an increased risk for self-harm and/or suicidality (Carlson et al., 1989; Carrión & Wong, 2012; Cook et al., 2005; Felitti et al., 1998).

Unfortunately, these effects of trauma exposure are cumulative in nature, and most caregivers in the system report feeling ill-prepared to acknowledge, understand, and manage these symptoms across time (Hughes et al., 2017). Consequently, young people who enter the foster care system with a history of adverse childhood experiences often undergo long durations of time in the system combined with frequent placement transitions and lack of adequate trauma-informed care, thereby presenting an even higher risk for some of the challenging physical and psychological outcomes listed above (Gaille, 2017; Hughes et al., 2017; Middleton et al., 2019). This highlights the dire need to prepare caregivers in the foster care system with evidence-based strategies to mitigate the risks of trauma exposure and limit ongoing exposure through improved system practices (Rubin et al., 2007; Vacca, 2008).

Current Status of Trauma-Informed Caregiving Trainings

Federal law mandates the implementation of pre- and in-service training for caregivers in the foster care system and even specifies that all foster parent training programs be “trauma-informed” (Family First Prevention Act, 2017; Foster Care Independence Act, 1999; Middleton et al., 2019). However, the specific requirements for these trainings vary by state and by licensing agency, and implemented trainings are rarely based on empirical evidence or scientific theory (Benesh & Cui, 2015). Instead, most pre-service and in-service trainings are based on anecdotal experiences of caregivers in the system, or they are merely adaptations of general caregiving curricula with minimal evaluative data to support or appropriately modify their use in the foster care system (Benesh & Cui, 2015). Consequently, appropriate implementation of evidence-based, trauma-informed, and system-tailored caregiver trainings has not been widely successful within the child welfare system, warranting a need for research to develop and/or evaluate training programs that will adequately equip caregivers to address the unique experiences and needs of young people in the foster care system (Colley et al., 2017; Rhodes et al., 2001).

According to Fratto (2016), to optimally support caregivers of children with histories of trauma, caregiver-based interventions should include five key elements: (1) improved caregiver knowledge of common psychological responses to trauma, (2) improved caregiver awareness and implementation of evidence-based coping skills, (3) assurance of space for a child to process traumatic events, (4) maximization of a child’s felt safety in the presence of their caregiver, and (5) opportunities for a caregiver to support a child’s autonomy, confidence, and self-worth. These five elements align with the principles of Contemporary Trauma Theory, a

strengths-based theoretical approach to trauma that discourages researchers, practitioners, and caregivers from seeing exposure to early adverse childhood experiences as a form of injury, but rather as an opportunity to build on a child's existing strengths (Diamond, 2013; Ginwright, 2018; Middleton et al., 2019; Siegel & Stroufe, 2011).

Some researchers have initiated the development of trauma-informed treatment and caregiver training grounded within this theoretical framework and have also sought to uniquely adapt and evaluate their use in the child welfare system. For example, promising training curricula for use within the broader child welfare system include Pathways to Permanence (Filipelli et al., 2021), Resource Parent Curriculum (Murray et al., 2019), Model Approach to Partnerships in Parenting (Gibbs et al., 2022), and Trust-Based Relational Intervention (Purvis et al., 2013). All these training programs provide an integrative, strengths-based approach to address the psychological and physical processes involved with trauma exposure and consequent healing (e.g., sensory processing, biological stress responses, attachment regulation). They emphasize the importance of consistent, predictable, and enriching caregiving practices to support the development of secure attachment relationships and a child's healthy growth (Perry, 2005). Despite this promising work, these training courses have yet to be widely implemented in the foster care system largely due to poor dissemination and practical restraints (e.g., costs of implementation, time commitments; Middleton et al., 2019). This is likely the result of limited research conducted within the foster care system to support the unique implementation of such evidence-based curricula among foster and kinship caregivers (NRAP, 2023).

Additional factors inhibiting the participation of caregivers in evidence-based, trauma-informed training in the foster care system include unique foster and kinship parent needs, such as time, transportation, and childcare (Cooley et al., 2019; Smeyne et al., under review - a). As a result, in-person training sessions, though highly valued, are challenging for foster and kinship caregivers to attend (Cooley et al., 2019; Gibbs et al., 2022; Smeyne et al., under review - a). Consequently, many foster care agencies have transitioned to virtual training options for caregivers (Cooley et al., 2019; Gibbs et al., 2022; Ranahan et al., 2023). Virtual in-service training options have demonstrated increased retention, satisfaction, and knowledge among foster parents when compared to in-person training options (Gibbs et al., 2022; Pacifici et al., 2005, 2006; White et al., 2014, 2019). These virtual teaching platforms permit added flexibility for both caregivers and child welfare staff, and they offer an opportunity to reach a wider audience (Delaney et al., 2012; Ranahan et al., 2023). However, they do come with potential technological challenges and prevent opportunities for

critical connections with other adults (Smeyne et al., under review - a; Ranahan et al., 2023).

Lastly, research conducted by the National Child Traumatic Stress Network (NCTSN) suggests that trauma-informed training for caregivers working with youth with histories of trauma will not meet maximum effectiveness unless caregivers themselves are optimally supported and provided with the space and tools to process their own experiences with trauma, both before and potentially while providing care to children in the system (Miller et al., 2019; Peterson, 2018; Walsh et al., 2019). Given such high prevalence of trauma among children and families in the foster care system, it is imperative that practitioners and caregivers can identify their own experiences and responses to trauma to avoid burnout or even potential retraumatization (Miller et al., 2019; Peterson, 2018; Walsh et al., 2019). Thus, appropriate training and support for caregivers in the foster care system should be evidence-based, flexible and accommodating to the unique needs of foster and kinship caregivers and involve some degree of peer support and/or self-care to sustain the provision of high-quality care to youth exposed to early childhood trauma (Mead & Macneil, 2004). In response to the empirical evidence available thus far, the NCTSN proposes that the following Seven Essential Skills be incorporated into all trauma-informed work:

- 1) Maximize physical and psychological safety for children and families.
- 2) Identify trauma-related needs of children and families.
- 3) Enhance child well-being and resilience.
- 4) Enhance family well-being and resilience.
- 5) Enhance the well-being and resilience of those working in the system.
- 6) Partner with youth and families.
- 7) Partner with agencies and systems that interact with children and families (Peterson, 2018; Walsh et al., 2019, pp. 411-412).

To address these needs, the virtual TCC curriculum evaluated in this study follows the seven guidelines of NCTSN as well as those proposed by the Substance Abuse and Mental Health Services Administration (SAMHSA, 2014a, 2014b, 2017) which further defines the knowledge, skills, and assessment required to adequately achieve such aims.

Trauma Competent Caregiving

TCC was developed by Back2Back Ministries (2020) to provide practical, effective, and culturally relevant trauma-informed training to professionals working with vulnerable children and families on an international scale (Trauma Free World, n.d.). TCC is a 16.5-hour strengths-based training

delivered by certified TCC trainers involving lecture-style presentations, group discussions, skills training and practice, and video modeling. The structure of TCC is adaptive based on the needs of busy caregivers and professionals. For example, TCC can be implemented across multiple days or weeks, and it can be completed in-person or via synchronous virtual formats while maintaining program fidelity. Grounded in the trauma-informed research literature and following the frameworks provided by SAMHSA (2014a, 2014b, 2017) and the NCTSN (Peterson, 2018; Walsh et al., 2019), the TCC curriculum covers critical content including: the developmental impact of trauma; the role of resiliency; specific caregiver strategies to maximize a child's felt safety, reduce overwhelming emotions and behaviors, support healthy relationships, and develop strength-based stories; and caregiver-centered self-care practices.

TCC has been completed by approximately 5,000 individuals in a variety of caretaking or leadership roles worldwide (Trauma Free World, n.d.). In a small pilot evaluation ($n=25$), participants reported that the training was helpful in their work with vulnerable children, and that it significantly improved their understanding and confidence to implement trauma-informed care while working with youth with histories of trauma ($p<.001$; Trauma Free World, n.d.). In a larger waitlist-control randomized behavioral clinical trial conducted with foster parents in the Midwest, a hybrid model of TCC (i.e., in-person and synchronous virtual participation) demonstrated immediate, positive impacts on foster parent knowledge and confidence implementing trauma-informed care (Smeyne et al., under review - b). Additionally, the children in the participants' care saw an immediate reduction in peer problems and total behavior problems, and an improvement in caregiver-reported prosocial behaviors (Smeyne et al., under review - b). Importantly, foster parents also reported high social validity of the training curriculum (89.8%), though foster parents did report the need to implement the training across one medium (i.e., in-person or virtual) to produce improved results (Smeyne et al., under review - b). Therefore, the purpose of this study is to pilot this training curriculum, utilizing only one medium (i.e., virtual, synchronous platform), to contribute an additional evidence-based, trauma-informed caregiver training for use in the foster care system. Additionally, this study seeks to utilize qualitative data to understand how to improve research and evidence-based practice in the foster care system.

Current Study

The evidence suggests that approximately 90% of youth in the foster care system experience adverse childhood experiences that may be exacerbated by a lack of trauma-informed

training and support for caregivers and professionals in the system (Berardi & Morton, 2017; Colley et al., 2017; Pecora, 2019). In alignment with Contemporary Trauma Theory, there has been a push to develop strength-based caregiver trainings for adults working with youth with histories of childhood trauma; however, there has been limited research evaluating the utility and efficacy of evidence-based programs within the foster care system specifically (Benesh & Cui, 2015; Ginwright, 2018; Purvis et al., 2013). Additionally, there is limited information on how to best support the active participation of caretakers (i.e., foster parents, kinship parents) in critical training opportunities while they fill critical roles for youth in the system (Miller et al., 2019). Thus, the purpose of this study is to provide additional empirical evidence of the efficacy, utility, and acceptability of TCC, a trauma-informed, culturally responsive, and caregiver-centered curriculum, for virtual use in the foster care system. Specifically, this study aims to assess the social validity of the virtual TCC curriculum when completed by foster and kinship caregivers in the foster care system, with a secondary goal of considering how participation in TCC affects caregivers' knowledge of trauma exposure and its effects on a child, confidence implementing trauma-informed caregiving strategies, use of positive caretaking practices, levels of reported stress, and behavioral and post-traumatic stress ratings of the foster children in their care. Qualitative data collected in this study also considers how to promote research and evidence-based practices within the foster care system. Ultimately, the goal of this research is to continue to bridge the existing research-to-practice gap in trauma-informed trainings and supports for foster and kinship caregivers in the U.S. foster care system (NRAP, 2023).

Method

Participants

Approximately 218 foster and kinship caregivers were recruited and enrolled to participate in the pilot trial of the virtual TCC curriculum. By the end of the study, only 33 (15.0%) participants remained enrolled and completed all training and study procedures. As shown in Table 1, reasons for withdrawal from the pilot evaluation of TCC included work commitments ($n=51$), placement-specific needs (e.g., illness, appointment, childcare; $n=8$), and/or unspecified/no shows to training sessions ($n=112$). Due to high rates of attrition, the study team opened an electronic Exit Survey and offered a virtual semi-structured interview to all participants who originally enrolled in the trial ($n=218$) to obtain more in-depth feedback on the TCC curriculum, and to inquire on challenges and desires relating to future research

Table 1 Attrition in pilot trial

Study Phase	Number of Enrolled Participants
Pre-test	<i>n</i> =212
Session 1	<i>n</i> =44
Session 2	<i>n</i> =44
Session 3	<i>n</i> =43
Session 4	<i>n</i> =37
Session 5	<i>n</i> =39
Session 6	<i>n</i> =39
Post-Test	<i>n</i> =33
Exit Survey	<i>n</i> =36
Interview	<i>n</i> =10

and evidence-based practice for caregivers in the foster care system. Thirty-six participants completed the Exit Survey, and 10 of those participants completed the semi-structured interview.

Participant Demographics

Thirty-three participants completed all virtual training sessions and were included in quantitative analyses to

evaluate caregiver and child outcomes following completion of TCC. The majority of the participants identified as female (90.9%), White (72.7%), and Not Hispanic or Latino (97.0%). Participants were mainly between 25 and 54 years of age (81.8%) and had a range of experience in the foster care system (see Table 2).

Due to high rates of attrition, all participants who were initially enrolled (*n*=218) were invited to complete an Exit Survey and semi-structured interview. Thirty-six participants (16.5%) completed the Exit Survey, and 10 participants (4.6%) completed the interview to learn more about promoting research and evidence-based practices in the foster care system (see Table 2). Of the participants who completed the Exit Survey, 2 (5.5%) completed the training in its entirety, 8 (22.2%) did not attend any training sessions, and 26 (72.2%) completed at least one training session. Of the participants who completed the semi-structured interview, 5 (50.0%) completed the training in its entirety, and 3 (30.0%) completed at least one training session, and 2 did not complete any of the training sessions (20.0%). Approximately half of the participants who completed the

Table 2 Participant demographics

Characteristic	Training		Exit Survey		Interviews	
	<i>n</i>	%	<i>n</i>	%	<i>n</i>	%
Sample (% of total sample)	33	15.0	36	16.5	10	4.6
<i>Gender</i>						
Male	2	6.1	16	44.4	0	0.0
Female	30	90.9	20	55.6	10	100.0
Transgender	1	3.0	0	0.0	0	0.0
<i>Age</i>						
18–24	0	0.0	1	2.8	0	0.0
25–34	8	24.2	1	2.8	1	10.0
35–44	12	36.4	12	33.3	4	40.0
45–54	7	21.2	14	38.9	2	20.0
55–64	2	6.1	5	13.9	2	20.0
65–74	3	9.1	3	8.3	1	10.0
75+	1	3.0	0	0.0	0	0.0
<i>Race</i>						
Black	7	21.2	25	69.4	4	40.0
White	24	72.7	9	25.0	6	60.0
Asian	0	0.0	1	2.8	0	0.0
Native Hawaiian/Pacific Islander	0	0.0	1	2.8	0	0.0
American Indian/Alaskan Native	1	3.0	0	0.0	0	0.0
Biracial	1	3.0	0	0.0	0	0.0
<i>Ethnicity</i>						
Hispanic/Latino	1	3.0	5	13.9	0	0.0
Not Hispanic/Latino	32	97.0	29	80.6	10	100.00
<i>Foster Parent Experience</i>						
0–6 months	2	6.1	0	0.0	0	0.0
6–12 months	3	9.1	1	2.8	0	0.0
1–3 years	6	18.2	10	27.8	2	20.0
4–6 years	8	24.2	13	36.1	4	40.0
6–10 years	9	27.3	7	19.4	2	20.0
10+ years	5	15.2	5	13.9	2	20.0

Exit survey were female (55.6%) though all participants who completed the interview were female (100.0%). The majority of participants who completed both the Exit Survey and the interview identified as Black (69.4%, 40.0%) or White (25.0%, 40.0%), were between 18 and 74 years of age, and had more than one year of experience in the foster care system (see Table 2).

Procedures

A pre-post pilot trial was used to evaluate the acceptability, utility, and efficacy of the TCC curriculum. Participants completed two testing points (pre- and post-) and received one intervention (TCC) across a 6-week timeframe. The procedures outlined in this manuscript were approved by the university's Institutional Review Board prior to all recruitment and consenting efforts. Participants from this study were recruited from foster care agencies, community support organizations, and a social media platform that allowed researchers to reach foster and kinship caregivers across the United States. Since all training and research activities were remote, participants were eligible for the study if they were actively licensed foster or kinship caregivers, they spoke English, they lived in the United States, they had access to an electronic device to complete the training and questionnaires, and they demonstrated an interest in learning about trauma-informed caregiving. Participants were excluded if they had prior experience with the TCC curriculum.

Participants completed pre-test measures, received the intervention (i.e., TCC), and then completed post-test measures. The intervention (i.e., TCC) involved 3-hour weekly livestream meetings across 6 consecutive weekends. Participants who attended the training in its entirety received 16.5 h of continuing education credits required for continuation of an active foster or kinship parent license. Since only 15% of the sample completed the training in its entirety, all participants who were initially recruited ($n=218$) were invited to complete an Exit Survey and a semi-structured interview to provide more in-depth information regarding the validity of the TCC curriculum, and to discover strategies to promote research and evidence-based practice in the foster care system. The Exit Survey and semi-structured interviews were completed one week following completion of post-test measures.

Trauma Competent Caregiving

TCC is a 16.5-hour training curriculum comprised of nine modules centered on the guidelines provided by NCTSN (Peterson, 2018; Walsh et al., 2019) and SAMSHA (2014a, 2014b, 2017). Curriculum modules include: Module 1: Trauma and its Impact on the Life of a Child, Module 2:

Trauma's Impact on Child Development, Module 3: Adverse Experiences and Resilience, Module 4: Maximizing Felt Safety, Module 5: Reducing Overwhelming Emotions, Module 6: Modifying Overwhelming Behaviors, Module 7: Supporting Healthy Relationships, Module 8: Developing Strengths-Based Stories, and Module 9: The Critical Importance of Practicing Self-care (see Table 3).

TCC Affiliate Trainer Process

TCC was led by certified TCC trainers who have completed the Affiliate Trainer Process. Trainer recruitment and certification in this process are intentionally inclusive, welcoming individuals from varied professional disciplines, cultural backgrounds, and lived experiences to ensure broad applicability and contextual relevance. An advanced degree is not required; rather, the curriculum prioritizes a demonstrated commitment to trauma-informed care, on-going learning, and a willingness to fully engage with and learn the curriculum. All TCC trainers are required to complete, (1) The full TCC course, (2) a multi-day "Train the Trainer" intensive, (3) a demonstration of facilitation skills, and (4) a mentoring period in which they co-train under a certified lead trainer. To support consistency and ongoing quality, during the trainer certification process trainers are also provided with structured fidelity monitoring that includes both a formal fidelity checklist and live session observations where trainers receive targeted feedback. Adherence to module objectives is reinforced during mentoring and peer review. In addition to this initial preparation, trainers are offered ongoing support to maintain fidelity and skill development. These include (1) opportunities to co-train with lead trainers; (2) an open invitation to re-attend the training any time as participants to attain a fresh insight and deeper connection to the content; (3) access to weekly open office hours with lead trainers for questions, scenario discussions, and content clarification; (4) mentoring groups for newly certified trainers to continue skill-building and reinforce trauma-informed facilitation; and (5) access to updated curriculum materials with expectations for continued engagement to maintain certification. See the Online Resource for the current fidelity reporting system designed to document variations in delivery and provide trainer self-assessments.

TCC Materials and Procedures

In this study, minimal materials were required to implement TCC, and all were supplied by Trauma Free World. These included: a TCC Trainer's Guide, TCC Caregiver Materials and Handouts, and TCC PowerPoint Presentations with embedded resources. All participants were required to virtually attend the 6-training days in real time, and to

Table 3 Overview of the trauma competent caregiving Curriculum (Adapted from Smeyne et al., under review - b)

Module	Key Competencies	Adapted from NCTSN's Essential Elements	Trauma-Competent Caregiver's Essential Skills
Trauma and its Impact on the Life of a Child	Goals of child welfare SAMHSA's trauma-informed approach Essential skills of trauma competent care Types of trauma Long-term impacts of trauma and loss	Original Essential Element 4 Original Essential Element 6	Essential Skill 1: Understand the Impact of Trauma
Trauma's Impact on Child Development	Importance of healthy attachments Attachment styles Self-regulation Sensory processing development Developmental effects of trauma Spiritual development	Original Essential Element 4 Original Essential Element 6	Essential Skill 1: Understand the Impact of Trauma
Adverse Experiences and Resilience	Adverse Childhood Experiences Positive Childhood Experiences Increasing resilience in children	Revised Essential Element 3	N/A
Maximizing Felt Safety	Trauma Loss History Tool Maximizing sense of felt safety	Original Essential Element 1 Revised Essential Element 1	Essential Skill 1: Understand the Impact of Trauma Essential Skill 2: Maximize Felt Safety
Reducing Overwhelming Emotions	Identifying the greatest needs of children and teens Parenting styles and connection Strategies to build connections	Original Essential Element 2	Essential Skill 3: Reduce Overwhelming Emotions
Reduce Difficult Behaviors	Reframing behavior Traditional versus trauma-informed parenting Intervention strategies to manage overwhelming behaviors	Original Essential Element 4	Essential Skill 4: Reduce Difficult Behaviors
Supporting Healthy Relationships	The need to maintain a child's connection to the people and places from their life before entering care Impact of loss on emotional and psychological development How to talk to a child about significant people in their life How to prepare for and process birth family visits	Original Essential Element 7	Essential Skill 5: Support Healthy Relationships
Developing Strengths-Based Stories	Understand challenges in talking to a child about a difficult past Telling children their story in a developmentally appropriate manner Helping children reframe their life story	Original Essential Element 3	Essential Skill 6: Developing Strengths-Based Stories
The Critical Importance of Self-Care	Value of self-care Personal areas of vulnerability and need Steps to personal transformation Healthy and unhealthy ways of handling stress Strategies for personal wellness	Original Essential Element 9	Essential Skill 7: Practicing Self-Care

actively participate in live group discussions via breakout rooms supplied by the study team's virtual platform. Each module involved lecture-style presentations, video models, group discussions, and hands-on activities for genuine skills practice. At the first session, the TCC trainer provided a general introduction to the research study and curriculum content and then dedicated time to building group rapport for optimal discussion. Throughout all sessions, participants were encouraged to ask questions, participate actively in all activities, and generate meaningful discussion based

on the presented content. There were no additional readings or work required outside of each class, though participants were provided with additional resources to be reviewed as desired. To ensure that all study procedures were implemented appropriately across test and waitlist control groups, a fidelity checklist was completed for each TCC module. Upon completion of the training, participants were expected to demonstrate gained knowledge on the impact of early childhood trauma and critical trauma-informed caretaking practices, as well as practical skills that could be used in

the daily lives of participating foster and kinship caregivers. Furthermore, participants kept all study materials for later reference and review.

Outcome Measures

A combination of novel and empirically validated measures was used in the current study to describe the sample and to evaluate study outcomes. Outcome measures to evaluate TCC were collected at two time points (pre-test and post-test), followed by the Exit Survey and semi-structured interview. All questionnaires were delivered electronically via Qualtrics.

Demographic Survey. To describe the sample, the research team devised a basic, non-identifiable demographic survey. This survey was comprised of eleven multiple choice questions including: age range, gender, race, ethnicity, education, employment, type of caregiver (i.e., foster vs. kinship), experience as a foster parent, total number of foster placements, and current number of foster placements. The demographic survey was completed by foster and kinship caregivers during the pre-test.

Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997). The SDQ is a well-known, empirically validated measure designed to evaluate a child's psychological strengths and behavioral challenges. Across 25 items, the SDQ asks caregivers to report the presence of specific behaviors utilizing a 3-point Likert-type scale ranging from 0 = "Not True" to 2 = "Certainly True." Individual item scores are summed and compared to pre-existing norms for interpretation (Goodman, 2001). The SDQ has demonstrated sensitivity to the experiences of youth in foster care, and more generally, it demonstrated acceptable internal consistency ($\alpha=0.73$), test-retest reliability ($r=.62$), and concurrent validity with other validated measures of child behavior (Goodman, 2001; Jee et al., 2011). The SDQ was completed by caregivers at pre- and post-test.

Parental Report of Post-Traumatic Stress Symptoms (PROPS; Greenwald & Rubin, 1999). The PROPS is a 32-item caregiver-report of a child's post-traumatic stress symptoms. This measure utilizes a modern approach to identify post-traumatic stress responses for improved sensitivity to gender-based differences in symptomology (e.g., higher levels of depression in females; Greenwald, 2005; Wamser-Nanney & Cherry, 2018). Caregivers are asked to report on the presence of symptoms on a 3-point Likert-Type Scale ranging from 0 = "Not True or Rarely True" to 2 = "Very True or Often True." Scores are summed, with a value above 16 indicating the presence of clinically significant PTSD-related symptomology (Greenwald & Rubin, 1999). The PROPS correlates highly with qualitative responses of children who have experienced early childhood trauma and

demonstrates acceptable internal ($\alpha=0.93$) and test-retest ($r=.79$) reliability (Greenwald & Rubin, 1999). The PROPS was completed by caregivers at pre- and post-test.

Parental Stress Scale (PSS; Berry & Jones, 1995). The PSS is a self-report measure of caregiver stress and satisfaction. In this 18-item measure, caregivers are asked to report their agreement to statements of distress or satisfaction on a 5-point Likert-type scale: 1 = "Strongly Disagree," 2 = "Disagree," 3 = "Undecided," 4 = "Agree," 5 = "Strongly Agree." Overall, higher scores on the measure indicate a higher level of caregiver stress (Berry & Jones, 1995). The PSS has demonstrated predictive validity with validated measures of caregiver stress and role satisfaction, and acceptable internal ($\alpha=0.83$) and test-retest ($r=.81$) reliability (Berry & Jones, 1995). Importantly, the PSS has been used successfully to evaluate levels of stress and levels of satisfaction among caregivers in the foster care system (Harding et al., 2020). The PSS was completed by caregivers at pre- and post-test.

Alabama Parenting Questionnaire (APQ; Essau et al., 2006). The APQ is a validated self-report measure of five critical parenting dimensions: (1) positive interactions and involvement, (2) supervision and monitoring, (3) positive discipline techniques, (4) consistency in the implementation of positive discipline techniques, and (5) use of corporal punishment. Caregivers are asked to report about their caregiving practices utilizing a 5-point Likert scale ranging from 0 – "Never" to 5 – "Always." All subscales of the APQ have demonstrated strong internal consistency ($\alpha>0.70$; Essau et al., 2006). Additionally, construct validity of the APQ has been established with significant negative relationships between conduct problems and parental involvement and positive parenting, and significant positive relationships between conduct problems and poor parental monitoring and corporal punishment (Essau et al., 2006). To the authors' knowledge, it has only been used to measure the caretaking practices of foster parents in one study evaluating the effects of a behavioral parent training curriculum (Smeyne et al., under review - a). The APQ was completed by caregivers at pre- and post-test.

Trauma Competent Caregiving Quiz. To evaluate curriculum-specific outcomes, the study team used an existing measure of caregiver knowledge of early trauma responses and confidence implementing trauma-informed caretaking strategies (Smeyne et al., under review -b). This measure included a combination of multiple-choice and true-false items. Scores on the measure were summed to generate a Knowledge score and a Total Confidence score, with higher values demonstrating higher levels of knowledge and confidence understanding and implementing trauma-informed caregiving practices. The Trauma Competent Caregiving Quiz was completed by caregivers at pre- and post-test.

Social Validity Questionnaire. To ensure that the TCC curriculum was useful and acceptable for participating foster and kinship parents, the study team also asked caregivers to complete a brief social validity questionnaire adapted from Smeyne et al. (under review - b). The social validity questionnaire is comprised of multiple-choice and short answer questions about the makeup, structure, content, and utility of the TCC curriculum. The Social Validity Questionnaire was completed anonymously by caregivers at the post-test.

Exit Survey. An Exit Survey was generated by the study team to obtain more information related to the high levels of participant attrition. The Exit Survey was offered to any individual who was initially enrolled in the study ($n=218$), though responses remained anonymous using unique research IDs. The Exit Survey was comprised of multiple choice and short answer questions to inquire about participant motivation, overall satisfaction with the research process, barriers to participation, and recommendations to improve the curriculum and research processes. The Exit Survey was completed by participants following the post-test.

Interviews. Ten participants out of the total sample ($n=218$) elected to participate in an interview to: (1) discover the potential reason for the high levels of attrition present in the study; (2) to describe their experiences and perceptions of the research process; (3) to gather additional information regarding the acceptability of the TCC curriculum; and (4) to determine important components of a research agenda to better support and include foster and kinship caregivers in the United States. The interview guide was developed by the research team in collaboration with current foster parents affiliated with the research team to ensure the appropriateness and relevance of the questions posed. Interviewers were blinded to participant attendance during study procedures to minimize bias. Interviews were conducted to supplement and contextualize the quantitative data collected in this pilot study. All interviews were conducted via Zoom after the post-test, and they lasted approximately 30 min. Interviews were recorded and transcribed verbatim for analysis.

Data Analysis

Qualitative. Thematic analysis (Braun & Clark, 2006) was used to code qualitative data collected on the Social Validity Questionnaire, the Exit Survey, and the semi-structured interviews. First, the first and second author familiarized themselves with the raw data. Then, the authors initiated manual open coding, identifying patterns that arose across the three sources based on the following research questions – What were the overall strengths of TCC? What were the overall weaknesses of TCC? What do caregivers suggest to

improve research and evidence-based practices in the foster care system? Once these codes were established, the authors identified themes that made sense of the codes and the dataset as a whole. These themes were collaboratively identified, reviewed, and revised based on their relevance to the research questions. If interpretive discrepancies arose, the data was reviewed until the authors came to a consensus. All themes were quantified based on the number of participants who contributed to their development. Representative quotes were pulled from the data to illustrate each theme.

Quantitative. All quantitative data analyses to evaluate the TCC curriculum were conducted using the Statistical Package for Social Sciences (SPSS, Version 29), and all levels of significance were set at $p<.05$. An a priori power analysis was conducted using G*Power version 3.1.9.7 (Faul et al., 2007) to determine an appropriate sample size based on data from Smeyne and colleagues (under review - b). The effect size in Smeyne and colleagues (under review -b) study was considered to be medium using Cohen's (1998) criteria. The power analysis determined that with a significance criterion $\alpha=0.05$ and power=0.80, a minimum sample size of 27 was needed for a paired-samples t -test. Thus, the sample size of 33 was adequate to explore program effects. However, missing data due to a variety of factors resulted in some comparisons falling below the required sample size. Consequently, confidence intervals and p -values were used when analyzing the quantitative data collected in this study (Greenland et al., 2016).

Descriptive statistics (i.e., mean, standard deviation, skewness, kurtosis) were collected for all dependent variables to describe the dataset and to evaluate the data for normality (see Table 2). Skewness and kurtosis between -2.00 and 2.00 were considered acceptable (George & Mallery, 2010). If data fell outside of this window of normality, non-parametric analyses (i.e., Wilcoxon signed-rank tests) were used. Otherwise, paired-samples t -tests were used to compare outcomes between pre- and post-time points. Effect sizes were calculated using Cohen's d and interpreted as no effect (<0.09), small effect (0.10 – 0.29), medium effect (0.30 – 0.49), and large effect (>0.50 ; Cohen, 1998). Lastly, simple descriptive statistics (frequencies; percentages) were used to describe the quantitative results of the Social Validity Questionnaire.

Results

Qualitative Results

Strengths of TCC. Participants reported eight overall strengths of the virtual TCC curriculum (see Table 4). The first strength identified by participants was the opportunity

Table 4 Strengths and weaknesses of TCC

Strengths	Weaknesses
Opportunity to Connect with Other Foster Parents	Additional Time to Interact with Attendees
Experienced and Knowledgeable Trainers	Inaccessible Training Material
Real-World Examples and Applicability of Content	Time Commitment
High-Quality, Informative Training Materials	Limited Cultural Sensitivity
Evidence-Based Information	Research Surveys
Increased Sense of Confidence	Too Many Break-out Rooms
Increased Willingness to Ask for Additional Support	
Virtual Format	

to connect with a like-minded community who shared similar experiences in the foster care system ($n=18$). One participant reported that *“it was great to talk with other caregivers and share uncensored thoughts and experiences.”* Other participants wrote that they *“loved the camaraderie”* and that they thought *“being in the same breakout session was helpful to get to know others.”* One participant even desired additional time spent in virtual breakout rooms because *“Our discussions were SO good for us, and they always felt way too short. Being able to share your personal experiences and relate it back to the material helped it to stick.”*

Participants also highlighted the strength of having experienced and knowledgeable trainers ($n=12$). Participants described how *“the leaders were so qualified”* and that they *“loved that they were able to teach out of first-hand experience.”* Participants appreciated the trainers’ *“first-hand experience”* and *“positive nature.”* Similarly, participants appreciated the sharing of real-world examples and the applicability of the content ($n=18$). For example, one participant described how *“everything felt very practical.”* Another participant noted how there were a variety of *“good examples”* that *“provided the information [she] needed to help [her foster child] and [herself] work through the problems that will continue to rise.”* Participants also appreciated how the material was *“broad enough to be applied widely, regardless of which kids the attendee had in mind.”*

This applicable course content was also said to come with high-quality, informative training materials ($n=12$). Participants described the training and associated materials as *“engaging”* and coming with *“lots of great resources.”* One participant described how they *“liked the way [the material] was presented,”* and another shared that the training topics were very *“well-organized”* and came with *“an abundance of resources.”* The participants also appreciated the inclusion of evidence-based information ($n=7$) noting their enjoyment of receiving *“first-hand experience shared*

Table 5 Recommendations to improve research and Evidence-Based practice in the foster care system

Recommendations
Capture Unique and Diverse Voices
Show Willingness to Support Foster/Kinship Caregivers
Trauma-Informed Training, Knowledge-Sharing, and Resources
Virtual Training Opportunities
Communicate Research Results and Apply Knowledge

along with science.” Participants felt an increased sense of confidence ($n=4$), and the training encouraged them to be more open to asking for additional support ($n=3$). For example, one participant shared, *“I feel more confident. I think I learned a lot more and was ready to use the methods I learned.”* Another participant shared, *“It helped me to be more open to help and support.”* Lastly, a few participants noted the value of the virtual format of the training ($n=3$).

Weaknesses of TCC. Participants’ perspectives centered on six weaknesses of the TCC training (see Table 4). Several participants commented on the need for additional time to interact with a variety of fellow attendees ($n=5$). Participants described how *“the breakout sessions were short,”* and that *“it would be great to switch up groups halfway to get to know others and to hear different perspectives.”*

Participants also identified some challenges with inaccessible training material ($n=6$). For example, one participant wished for *“More/better visuals”* and noted that *“many of the light-colored slides/boxes were hard to read on Zoom.”* Other participants wished for *“a list of the studies and resources that were mentioned”* and expressed concern that *“it may not be easy to go back and find helpful information.”* One participant additionally noted that the training material was *“too many pages,”* and that *“much of the print was too small to read if it was a part of the slides.”*

A few participants also thought the training required too much of a time commitment ($n=4$). One participant claimed, *“3-hours is a lot when you have placements, but it probably has to be in order to fit all the information in.”* Another participant said that *“the time frame was tough for me as a full-time employee.”*

Additional weaknesses identified by participants included a need for improved cultural sensitivity ($n=3$; *“it would also be great to touch on culture and transracial parenting as it related to trauma”*); the need for *“improved research surveys”* ($n=1$) and the presence of *“too many breakout rooms”* ($n=1$).

Recommendations to Improve Research and Evidence-Based Practice. Given the high rates of attrition, participants were asked to reflect on their participation in the research process to promote evidence-based practices in the foster care system. Five themes emerged from the data (see Table 5). First, participants shared that research needs to capture the unique and diverse voices of individuals in

the foster care system ($n=7$). For instance, one participant shared how, “*People have different experiences and different stories to share. So, listening more frequently would help to update the system, and to understand what ought to be done for foster parents.*” Another participant wished that,

There’s always attention to collecting information and research from a diverse set of people, people with different experiences, backgrounds; making sure that we don’t overlook that piece. Sometimes we collect from such a narrow body that it’s not applicable to everyone.

Participants also desired research opportunities that show that people care and are interested in supporting foster/kinship caregivers ($n=4$). For example, after completing this study, a participant shared that,

It was really helpful to know that there are people out there who actually care about us, like people who actually want to know how you’re coping and how you feel, and I love that. I feel like people want to know what we go through and how to improve the system.

Some suggested that there is a need for continuous learning, specifically trauma-informed training, knowledge-sharing, and resources in the foster care system ($n=5$). One participant shared that, “*The type of education that you’re creating right now is so important.*” Another participant suggested that “*We should hold more trainings. The basic ones they give are fine, but I think they should be teaching, and we should be learning all the time.*” Caregivers suggested the use of virtual opportunities to accommodate the unique and busy schedules of foster/kinship caregivers

but acknowledged that they are not as engaging ($n=5$). For example, a participant shared that they enjoyed this training opportunity because, “*You can join from your home without going through the issue of transportation or being in person. You can tailor your busy schedule to join without affecting your work and every other thing.*” Another participant commented, “*I always enjoy in person better but virtual you can reach a wider variety of people... but it also creates challenges for engagement.*”

Lastly, participants shared that the foster care system needs to be better at communicating results and applying knowledge gained (e.g., advocacy, programming funding; $n=5$). One participant shared that they “*think researchers gather people around, get research done, and then forget until another research comes around.*” Participants further shared that research should, “*enable people to advocate for changes, for major changes, in these systems*” and that research should “*Drive programming, funding, and also get feedback from the people it was intended for.*”

Quantitative Results

Social Validity. At the end of the study, 33 participants completed the Social Validity Questionnaire as part of the post-test. Overall, participants reported an average satisfaction rating of 4.65 out of 5.00 or 93.0% satisfaction (see Table 6). Participants were most likely to report that they would continue to use the strategies learned during the program (94.6%) and that they would recommend the program to others (95.8%). Participants reported the lowest ratings in their confidence to implement the strategies learned during the program (89.0%; see Table 6).

Pre-to-Post-Test Comparisons. As shown in Table 7, there were statistically significant improvements in caregiver-reported peer problems ($Z=-0.29$, $p<.05$, $r=.1$) on the SDQ, parent involvement ($t=-10.46$, $p<.05$, $CI=-5.90$, -3.96 , $d=1.30$) and parental supervision and monitoring ($t=2.11$, $p<.05$, $CI=0.02$, 1.58 , $d=0.23$) on the APQ, and confidence on the Developmental Trauma Questionnaire ($t=2.11$, $p<.05$, $CI=-3.86$, -1.29 , $d=0.64$) between pre- and post- time points. There was also a statistically significant increase in caregiver-reported post-traumatic stress symptoms as reported on the PROPS ($t=-2.56$, $p<.05$, $CI=-9.55$, -0.99 , $d=0.41$), and in caregiver-reported emotional problems as reported on the SDQ ($d=0.51$). However, given the limited sample size, all quantitative results should be considered with caution (see Strengths & Limitations).

Table 6 Social validity ratings of the virtual trauma competent caregiving curriculum ($n=33$).

Question	Score
The content was clear and easy to understand.	4.61/5.00 (92.2%)
The training session presentations, discussions, and activities were relevant and appropriate to my experiences as a foster parent.	4.85/5.00 (91.6%)
The strategies I learned during this program improved my interactions with my foster child/children.	4.55/5.00 (91.0%)
I will continue to use the strategies learned during the program.	4.73/5.00 (94.6%)
I feel confident in my ability to use the strategies I learned in the program.	4.45/5.00 (89.0%)
The time commitment for the training program was acceptable.	4.55/5.00 (91.0%)
I would recommend this training program to others.	4.79/5.00 (95.8%)
Average	4.65/5.00 (93.0%)

Table 7 Pre-to-Post test performance on selected outcome measures

	<i>N</i>	Pre-Test			Post-Test			Mean Diff.	<i>t</i>	<i>CI</i>
		Mean (SD)	Skew	Kurt.	Mean (SD)	Skew	Kurt.			
<i>SDQ</i>										
Emotion Px	24	2.88 (2.56)	0.75	−0.24	4.25 (2.80)	0.24	−1.25	−0.14	−3.27*	−2.25, −0.51
Conduct Px	24	4.25 (2.80)	0.81	0.12	4.25 (2.19)	0.12	−1.03	0.17	0.43	−0.63, 0.96
Hyperactive	24	6.58 (2.59)	−0.02	−1.43	7.13 (2.46)	−0.12	−1.49	−0.54	−0.99	−1.69, 0.61
Peer Px ^Z	24	5.00 (4–5)	1.44	4.37	3.00 (1–5)	0.46	−0.17	---	−0.29*	---
Prosocial	24	6.88 (2.35)	−0.19	−0.73	6.25 (2.21)	0.23	−0.96	0.63	1.59	−0.19, 1.44
Total Px	24	18.50 (6.14)	0.35	−0.48	19.88 (7.73)	0.19	−0.30	−1.38	−1.05	−4.08, 1.33
<i>PSS</i>										
Total Score	33	43.09 (9.95)	0.53	−0.04	44.06 (11.26)	−0.18	−0.54	−0.97	−0.69	−3.83, 1.89
<i>PROPS</i>										
Total Score	22	20.00 (12.53)	0.43	−0.33	25.27 (12.89)	0.02	−0.80	−5.27	−2.56*	−9.55, −0.99
<i>APQ</i>										
Involvement	28	36.04 (3.53)	−0.33	−0.10	40.96 (4.00)	−0.08	−0.54	−4.93	−10.46*	−5.90, −3.96
Positive	28	23.33 (2.62)	0.13	−0.46	23.70 (2.25)	0.91	0.55	−0.37	−1.24	−0.98, 0.24
Supervision	28	14.16 (3.79)	1.08	1.27	13.36 (3.25)	1.11	1.01	0.80	2.11*	0.02, 1.58
Inconsistent	28	13.15 (3.27)	0.56	−0.18	12.70 (2.99)	0.27	−0.52	0.44	1.11	−0.38, 1.27
Corporal	28	3.96 (1.11)	0.86	0.19	4.18 (0.91)	0.32	−0.79	−0.21	−0.92	−0.69, 0.26
<i>Trauma Competent Caregiving Quiz</i>										
Confidence	33	66.03 (3.88)	−0.50	0.33	68.61 (4.09)	−0.57	0.09	−2.58	−4.09*	−3.86, −1.29
Total Correct	33	9.76 (1.35)	−0.18	1.40	10.12 (1.39)	−0.23	−0.19	−0.36	−1.26	−0.95, 0.22

Note: * $p < .05$; Z: Wilcoxon signed-ranked test (Mdn, IQR, Z, r)

Discussion

Evaluation of Trauma Competent Caregiving

Social Validity. Quantitative results from the Social Validity Questionnaire suggest that participants viewed the training as relevant and meaningful to their roles as foster or kinship care providers within the foster care system, supplementing evidence provided by Smeyne and colleagues (under review - b) that this curriculum may offer an important evidence-based model to promote trauma-informed caregiving within the foster care system. Importantly, more meaningful discussion can be applied to the qualitative data provided by the Social Validity Questionnaire, the Exit Survey, and the semi-structured interviews. One of the most recurrent strengths of the TCC program was the ability for participants to interact with a community of foster and kinship caregivers who shared similar experiences within the system. Filling the role of a foster and kinship caregiver can be isolating, especially following the effects of the COVID-19 pandemic (Sharda et al., 2024). Many caregivers in the system report a lack of formal (e.g., social workers) and informal (e.g., peer) support while fostering (Sharda et al., 2024). Importantly, existing research suggests that social support provided by fellow foster/kinship caregivers in the system is one valuable strategy to cope with challenges that arise while fostering (Lietz et al., 2016). Based on the feedback provided by our participants, this study provides additional support for the need to provide opportunities for social

connection for foster and kinship caregivers, and in-service training opportunities provide one way to offer such opportunities (Mead & Macneil, 2004).

Furthermore, many participants identified a major strength in TCC's content makeup and overall presentation by trainers. As identified by the Family First Prevention Services and Act (2017), there is a need for applicable training specifically tailored to the needs of caregivers in the foster care system. Unfortunately, most training that occurs within the foster care system is based on little empirical evidence or is designed for a broader population and does not consider the unique needs of youth and families in the system (Benesh & Cui, 2015). This research aims to contribute towards improved outcomes and experiences within the foster care system by developing and disseminating an evidence-based, effective, and relatable training for caregivers in the system (NRAP, 2023). Participants in this study saw the value in receiving content tailored to their unique experiences, and also highly valued the presentation of new material by trainers with direct experience working with children with histories of early trauma. Relatedly, participants appreciated that TCC offered real-world examples supported by evidence-based information in a virtual, accessible format.

Participants also identified valuable weaknesses of the TCC curriculum that will (1) be utilized by the study team to improve the training materials and overall presentation, and (2) advance the literature to support improved training practices for caregivers in the system. To further emphasize the importance of providing quality social support during

training opportunities for foster and kinship caregivers, participants in this study desired more time to interact with a variety of fellow attendees (Mead & Macneil, 2004). They highlighted the importance of quality time with their peers, and the ability to interact with numerous attendees to hear a wide variety of perspectives. Despite the virtual format, participants desired this time with like-minded peers to better cultivate knowledge gained through meaningful discussion. Additionally, participants noted a particular challenge with the time commitment required to complete this training in full. Foster and kinship caregivers are often inundated with numerous demands, on top of the time required to fulfill basic child rearing roles (Font & Gershoff, 2020; Rhodes et al., 2001). Many of these demands are mandated by the foster care system (e.g., court dates, visitations), including the need to complete in-service training to maintain a license with the state (Family First Prevention Services & Act, 2017).

Furthermore, some participants identified the need for improved cultural sensitivity, or curriculum that explicitly addresses issues such as transracial parenting or cultural diversity. Though the foster care system is highly diverse, with many racial, ethnic, and cultural identities represented, there has been limited work identifying how to promote culturally responsive service delivery within its practices (Cooley & Petren, 2011; Evans, 2023). Research evaluating the cultural sensitivity of foster parent training curricula, such as TCC, serves as one critical next step. TCC currently follows the framework provided by SAMHSA (2014), valuing traditional cultural traditions and intentionally incorporating practices that are responsive to the diverse needs of trainees. For example, TCC spends time coaching caregivers on how to encourage the child in their care to develop, understand, and tell their story in a trauma-informed and culturally honoring way. Additionally, TCC is currently being translated and delivered in diverse languages including Spanish and American Sign Language. Nonetheless, TCC and similar programming may benefit from more direct teaching and applied practice to promote cultural responsiveness by considering how transracial or intersectional factors impact caregiving in diverse circumstances. This may warrant the need for improved cross-cultural collaboration to identify areas of the training that need to be reframed or adjusted to meet the needs of diverse caregivers and the youth in their care (Stanborough et al., 2025).

Ultimately, the goal of this study was to contribute to the development and dissemination of a trauma-informed training that, though demanding a sizable time commitment, would provide a meaningful training opportunity to assist caregivers in meeting the needs of young people in the system. Based on participant feedback, it is clear that the TCC curriculum needs some adjustments to the training material

to achieve this goal, including the provision of accessible and ongoing learning opportunities for caregivers in the system. Additionally, there needs to be some more attention drawn to the realities of experiences of diverse caregivers and youth within the foster care system. Nonetheless, this study adds confidence to relevance and utility of TCC when implemented virtually for foster and kinship caregivers in the United States.

Child and Caregiver Outcomes. Beyond its social validity, this study also provides preliminary data evaluating the efficacy of the virtual TCC curriculum for caregiver and child-based outcomes among foster and kinship caregivers in the United States; however, given this study's high rates of attrition and resulting small sample size, all quantitative results should be interpreted with caution. Overall, quantitative and qualitative data suggest that the virtual TCC curriculum is both appropriate and effective for caregivers in the foster care system. Simple quantitative comparisons between pre- and post-time points suggest that participation in the Trauma Competent Caregiving training resulted in significant improvements in child outcomes including reduced problems with peers, and significant improvements in caregiver outcomes including an increase in parental involvement and confidence implementing trauma-informed care and a decrease in poor practices of parental supervision and monitoring. Improved parenting practices and confidence implementing trauma-informed care can be instrumental in providing a supportive home environment for youth who have experienced trauma and may be a particular strength of this curriculum (Angelow et al., 2023; Patterson et al., 2018).

It's important to note, however, that results from this study also saw an increase in post-traumatic stress symptoms of the children in the participants' care. Based on existing research, this increase in caregiver-reported PTSD symptomology is likely the result of caregivers being better equipped to identify post-traumatic stress symptoms after participating in the training (Angelow et al., 2023). Increased caregiver knowledge about trauma can increase caregiver sensitivity to potential symptoms that may otherwise be overlooked (Angelow et al., 2023). Additionally, there was a significant increase in caregiver-reported emotional problems following completion of the training. This may similarly be the result of increased caregiver awareness and tendency to report challenging behaviors, or it may signal the need for additional supportive services (i.e., individualized therapy and/or caregiver coaching) to supplement caregiver training curriculum (Angelow et al., 2023; Konijn et al., 2020). Follow-up analyses are needed to determine if these trends will continue over time.

Though these quantitative analyses provide information regarding the potential efficacy of the virtual TCC

curriculum, this study's small sample size warrants that these quantitative findings be interpreted with caution, particularly results associated with the SDQ (i.e., reduced problems with peers, increased emotional problems), APQ (i.e., increased parental involvement), and the PROPS (i.e., increased PTSD symptomology) as sample size fell just below what was required for optimal statistical power. It is also important to consider this study's high rates of attrition which seem to counter existing claims that virtual training options may increase participation and attendance in foster caregiving training options (White et al., 2019; Ranahan et al., 2023). It is evident that replication of this virtual curriculum with a larger sample size and longitudinal follow-up are required to make more meaningful claims based on the data provided. Additionally, future replication should consider potential differential effects across demographic variables (e.g., foster vs. kinship caregivers).

Improving Research in the Foster Care System

In response to high levels of attrition and ongoing evidence suggesting the need for improved research to support evidence-based practices within the U.S. foster care system, data were collected to determine how research supporting evidence-based practices could be improved for caregivers in the foster care system. Caregivers who participated in this study suggested the importance of projects that value the diverse makeup of those who serve in the foster care system, and the need for access to ongoing learning opportunities to support positive caregiving practices. Existing evidence suggests that many caregivers in the system feel a lack of support to maintain challenges that arise while fostering (Colley et al., 2017; Rhodes et al., 2001). Improving access to evidence-based information and resources could offset these experiences, while also potentially improving foster parent retention and placement stability (Cooley et al., 2019). However, as noted by the caregivers in this study, these efforts must translate to practice to make a difference, thereby emphasizing the importance of closing the research-to-practice gap (NRAP, 2023). Strategies such as participatory or action research approaches should be considered to improve the connection between knowledge production and system change (Smeyne, 2024).

Furthermore, research and training experiences must account for the demanding schedules of foster and kinship caregivers who must balance parenting on top of numerous system demands (e.g., court visits, visitations, child appointments; Smeyne et al., under review – a; Ranahan et al., 2023). For this reason, caregivers in this study appreciated the flexibility that came with the virtual format of this training curriculum; however, they did acknowledge that an in-person opportunity would have been more engaging.

Ongoing work needs to determine whether the benefits of virtual opportunities outweigh the costs of minimal community engagement (White, 2019). Overall, participants in this study seemed to appreciate the research process but had concerns about its practicality and applied utility in their daily lives. This work should encourage continued discussion on how researchers and practitioners can work together to improve evidence-based training and practices for caregivers in the foster care system.

Strengths & Limitations

This paper contributes to the literature through the development, implementation, and dissemination of evidence-based caregiver trainings to improve outcomes in the foster care system (Family First Services Act, 2017; NRAP, 2023). Despite high levels of attrition and a small sample size, this pilot study was able to rely more heavily on qualitative data to make claims about the appropriateness and relevance of the virtual TCC for foster and kinship caregivers in the United States. Data from this study provides ongoing support for the use of TCC within the foster care system and offers continued guidance for researchers and practitioners alike to continue to support families in the system.

A small sample size resulting from high rates of attrition serves as one of the leading limitations of this work. According to preliminary power calculations, a sufficient number of participants were recruited to participate in this study; however, as the study progressed, participants ceased participation due to a variety of reasons, including but not limited to work conflicts, technological problems, and simply forgetting to log-on to the training at the appropriate time. Power analyses determined that a sufficient sample size was attained for analyses involving the PSS (Berry & Jones, 1995) and the TCC quiz developed by the research team; however, power was not sufficient for analyses involving the SDQ (Goodman, 1997), PROPS (Greenwald & Rubin, 1999), and APQ (Essau et al., 2006) further emphasizing the need to limit all conclusions drawn from quantitative results associated with those measures. The limited sample also prevented the research team from evaluating any potential differential effects of the curriculum among foster and kinship caregivers, which serves as an important next step in future research.

The research team has several hypotheses regarding design-related factors that may have contributed to high rates of attrition. For example, the research team contacted participants regarding study participation via email, but there were no other 1:1 interactions between a study team member and a potential participant prior to Session 1, unless the participant initiated such an interaction. It may be necessary to schedule a virtual or in-person session with potential

participants to clarify study expectations and procedures before the start of the training (Beal et al., 2024). Additionally, ongoing communication, individualized reminders, and personalized accommodations may need to be considered to support this population of research participants (Beal et al., 2024). Lastly, as described below, a large portion of recruitment efforts took place via social media platforms. Though this method is a common strategy to secure research participation, research in the foster care system specifically identifies the need to secure strong community partnerships for the most impactful recruitment and retention (Hanlon et al., 2021; Cox et al., 2002).

Nonetheless, in response to high rates of attrition, the authors relied on qualitative data to determine participant perceptions of the training as a foster or kinship caregiver in the United States. It is possible, however, that this is a biased sample with the remaining participants being a devoted group of caregivers in the system. Furthermore, there was limited gender, racial, and ethnic representation present in the sample, with majority of participants identifying as White and Female. Therefore, both quantitative and qualitative results in this study should not be considered widely generalizable. Replication of this study is necessary to provide further support for the use of the virtual TCC curriculum in the foster care system.

Conclusion

This pilot implementation of the virtual TCC curriculum offers some support for the use of the trauma-informed training program for foster and kinship caregivers in the foster care system. Though high rates of attrition resulted in a small sample size, results from this study add confidence to existing findings that participation in TCC may contribute to improvements in child-specific outcomes, such as improved externalizing behaviors, and in caregiver-specific outcomes such as parental involvement and confidence implementing trauma-informed caretaking strategies (Smeyne et al., under review - b). More importantly, qualitative data suggests that TCC is appropriate, impactful, and meaningful for foster and kinship caregivers. Foster parents enjoyed having the opportunity to learn evidence-based strategies to provide for the children in their care, while also having the opportunity to connect with experienced trainers and fellow caregivers in the system. Caregivers desire more opportunities to improve evidence-based practice in the foster care system but note the importance of flexible opportunities that translate into applied services to improve the system. Ultimately, this study contributes to the growing literature aimed at improving training and support for caregivers while offering

meaningful suggestions for future training and research practices in the foster care system.

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Declarations

Conflict of interest Julie Cooper is the President of Trauma Free World, the nonprofit organization who created and disseminated the program evaluated in this study. The remaining authors have no other conflicts of interest to disclose.

Ethical Standards All study procedures were reviewed and approved by the University's Institutional Review Board, and all participants were supplied with and completed informed consent documentation prior to engaging in study activities.

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