



Systematic Review on the Application of Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) for Preschool-Aged Children

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Abstract

Trauma-focused cognitive behavioral therapy (TF-CBT) is one of the most widely studied and disseminated treatments for posttraumatic stress disorder (PTSD) and other comorbid conditions, and has been identified as a “*level one*” or “*well-established*” intervention for school-aged children and adolescents. The present systematic review examined the literature on the application of TF-CBT within a preschool-aged population (i.e., children ages three to six), as well as the developmental literature that could increase the efficacy of TF-CBT for preschool-aged children. Information on the use of TF-CBT with preschool-aged children was extracted from randomized controlled trials, case studies, meta-analyses, and other forms of empirical evidence, as part of the evidence-based practice in psychology framework. In comparison to research with school-aged children and adolescents, fewer studies have directly assessed the efficacy of TF-CBT for preschool-aged children who have been exposed to trauma. Given the few studies published to date and difference in treatment protocols for TF-CBT used with preschool-age children, TF-CBT appears to meet criteria as a “*level two*” or “*probably efficacious*” intervention for preschool-aged children specifically. According to the available literature, language and cognitive abilities, family context, culture, and clinician expertise are considered as potential variables to address when contemplating the use of TF-CBT for preschool-aged children with symptoms of post-traumatic stress.

Keywords Trauma · Intervention · Preschool-age children · Evidence-based therapy · TF-CBT · Systematic review

Introduction

Recent estimates suggest that approximately one quarter of children have experienced at least one traumatic event by the time they reach preschool-age (i.e., ages three to six), including events such as traffic accidents, physical assault, serious injuries, hospitalizations, and witnessing domestic violence (Briggs-Gowan et al. 2010; Finkelhor et al. 2015). Further, compared to other age groups, preschool-aged children also have the highest prevalence of maltreatment, including physical and sexual abuse and neglect (U.S. Department of Health & Human Services 2018). As a result, trauma exposure and the resulting psychological sequelae are commonly seen by clinicians across service settings (Finkelhor et al. 2013; Turner et al. 2010). Correspondingly

and regardless of diagnostic criteria (e.g., *DSM-IV*, *DSM-5*, *ICD-11*), prevalence rates of posttraumatic stress disorder (PTSD) have been estimated to be as high as 13 to 20% among preschool-aged children with known exposure to trauma (Scheeringa et al. 2011a; Vasileva et al. 2018). If partial or lower threshold diagnostic criteria are used, as many as 60% of preschool-aged children with known trauma will experience functional impairment in at least one domain (Vasileva et al. 2018).

Evidence Base for TF-CBT

For school-aged children and adolescents, trauma-focused cognitive behavioral therapeutic interventions (TF-CBT) have been widely studied and disseminated for the treatment of PTSD, posttraumatic stress, and other comorbid conditions (Cary and McMillen 2012; Cohen et al. 2017; de Arellano et al. 2014; Kowalik et al. 2011; Njoroge and Yang 2012). Generally speaking, TF-CBT approaches are intended to improve emotional and cognitive regulation, help parents and children make meaning of trauma experiences,

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help children master trauma reminders and avoidance, and enhance children's personal safety (Cary and McMillen 2012; Cohen et al. 2017). Although built primarily around a cognitive-behavioral model, TF-CBT models incorporate aspects of several theoretical models, including attachment and family therapy perspectives. Depending on the specific protocol used, therapy sessions may include child, parent, and parent-child components (e.g., Cohen et al. 2017; King et al. 2000). Consistent with a general CBT model, the primary mechanisms of action for TF-CBT are thought to include decreased impact of cognitive distortions on affective and behavioral responses, desensitization to overgeneralized trauma cues and memories, enhanced coping skills and self-efficacy, and improved effectiveness of social support, including improving parental attunement to a child's needs.¹

TF-CBT approaches have been identified as empirically supported treatments (EST) for PTSD and other comorbid symptoms among school-aged children and adolescents (de Arellano et al. 2014; Silverman and Hinshaw 2008). Multiple reviews and meta-analyses indicate that TF-CBT is more efficacious than other forms of therapy and/or waitlist control groups for several symptoms experienced by youth exposed to trauma (e.g., Fraser et al. 2013; Morina et al. 2016; Silverman et al. 2008). For example, Cary and McMillen (2012) reported that TF-CBT is more effective at addressing PTSD symptoms, depressive symptoms, and behavioral problems post-treatment than attention-control placebo, standard community care, and waitlist control conditions. Further, Cary and McMillen reported that PTSD symptoms were significantly lower among children and youth receiving TF-CBT at a 12-month follow-up assessment. This was the case across the different versions of TF-CBT, including both the C-TF-CBT version and other TF-CBT approaches that shared several similar components to that of C-TF-CBT (Cary and McMillen 2012).

Working from the five-level system suggested by Southam-Gerow and Prinstein (2014) for the evaluation of child and adolescent treatments, the published evidence suggests that TF-CBT meets criteria for a “*level one*” or

“*well-established*” treatment for school-aged children and adolescent youth with PTSD and other trauma-related symptoms. A “*level one*” or “*well-established*” treatment indicates that there have been at least two independent research projects with school age and adolescent youth demonstrating that TF-CBT is superior to another active treatment, already well-established treatment, or psychological/pill placebo. Further, it must also be the case that the independent research projects meet five methodological standards, which include using a randomized controlled design and treatment manual equivalent, as well as including an appropriate population, outcome measure, and data analysis technique (Southam-Gerow and Prinstein 2014). In contrast to the first level, a “*level two*” or “*probably efficacious*” treatment has demonstrated superiority to another active/well-established treatment or psychological/pill placebo in only one study or shown superiority in two different research projects to a waitlist control group. As with the first level, “*level two*” treatment studies must also meet all five methodological criteria. Moving down from there, “*level three*” to “*level five*” status varies on how many research projects have demonstrated superiority to a waitlist control group and whether the research projects meet the methods criteria (please see Table 1, p. 2 in Southam-Gerow and Prinstein [2014] for more information). Examples of psychological treatment approaches and their level of support using this criteria across a range of psychological, behavioral, emotional, and cognitive issues can be obtained through the *Effective Child Therapy* website (<https://effectivechildtherapy.org>).

Considerations for the Use of TF-CBT with Preschool-Aged Children

Although TF-CBT is frequently lauded as an intervention appropriate for children between the ages of 3 and 18 (e.g., Kliethermes et al. 2017), the literature base for the application of this treatment approach in preschool-aged children is less clear (Njoroge and Yang 2012; Morina et al. 2016). There are a number of reasons to suppose that treatment outcomes for preschool-aged children should differ from outcomes among older children and adolescents. Importantly, findings from the developmental literature suggest notable differences in trauma reactions for pre-school age youth, as compared to school-age youth and older (De Young et al. 2011; Scheeringa et al. 2012). Like their older counterparts, preschoolers who have been exposed to trauma demonstrate a wide range of emotional and behavior concerns (Norman et al. 2012; Wilson et al. 2012), and exposure to traumatic events has been associated with difficulties in functioning across several domains, including cognitive ability (e.g., Enlow et al. 2012), social functioning (e.g., Campbell et al. 2016), and academic skills (e.g., Gomez and Yoshikawa 2017). However, as compared to older children and

¹ A number of trauma-focused cognitive behavioral treatment protocols for children and adolescents exist; collectively, these are sometimes referred to as trauma-focused CBT (TF-CBT) despite the use of similar but distinct protocols (e.g., Morina et al. 2016; Silverman et al. 2008). Other reviews (e.g., Schneider et al. 2013) restrict the definition of TF-CBT to only the protocol developed by Cohen et al. (2006, 2017). The current review takes a similar approach to that of Morina et al. and Silverman et al. in referring to all CBT protocols with a focus on traumatic experiences as “TF-CBT.” Given these differences in the definition of TF-CBT in the literature, the current review will identify Cohen et al.'s specific TF-CBT approach as “C-TF-CBT” to help avoid confusion among the various treatment protocols.

adolescents, preschool-aged children may be more likely to demonstrate separation anxiety, develop new trauma-unrelated fears, or lose previously acquired developmental skills (Scheeringa et al. 2012). Further, given the limited range of coping skills and substantial developmental changes that preschool-aged children experience, they may be more at risk for demonstrating negative outcomes following trauma exposure (De Young et al. 2011). The promulgation of new diagnostic guidelines for PTSD in preschool-aged children published in the *DSM-5* (American Psychiatric Association 2013) underscores such developmental differences in the presentation and, perhaps, response to treatment among this age group.

It may also be the case that preschool-aged children do not have the necessary cognitive skills or language abilities to properly participate in and understand traditional cognitive-behavioral components of therapy (Grave and Blissett 2004; Kazdin and Weisz 1998; Cohen et al. 2017). For example, Pons et al. (2004) examined the development of emotional understanding across childhood and found that the majority of children in their sample did not begin to master components of emotional understanding until after age five. The timing of mastery in emotional understanding may contribute to preschoolers' inability to properly convey their emotions about a traumatic experience (Gigengack et al. 2015; Scheeringa et al. 1995). Furthermore, some have suggested that preschool-aged children may lack the meta-cognitive skills necessary for the proper evaluation of their own cognitions and cognitive distortions (Cohen and Mannarino 2000), which could interfere with an ability to modify thoughts about a traumatic experience (Gigenack et al. 2015).

Current Study

TF-CBT is a commonly considered approach to treat post-traumatic stress and PTSD and to manage the effects of trauma exposure for school-aged children and adolescents. The high prevalence rates of PTSD and traumatic exposure in preschool-aged populations warrants an examination of how TF-CBT is utilized within this age group. Currently, the efficacy and application of TF-CBT within pre-school populations remain unclear, due to the developmental level of this age group's trauma response and necessary cognitive and language ability to properly participate in TF-CBT. In response to these difficulties, an examination of the current literature is needed to determine efficacy of TF-CBT for preschool-aged children who present with posttraumatic stress symptoms. Thus, the primary aim of the current investigation is to systematically summarize the literature addressing the efficacy/effectiveness of TF-CBT for preschool-aged children. We also examine the literature for developmental

and contextual variables that may moderate the efficacy of TF-CBT for preschool-aged children.

Methods

Study Selection

The Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines (www.prismastatement.org) were used in conducting a comprehensive search of the available literature of the use of TF-CBT in a preschool population. Databases included in the search were PsycINFO, ERIC, PubMed, ProQuest Dissertations & Theses Global, and Google Scholar. The following search terms were used for each database: (1) Treatment related terms: "TF-CBT" or "trauma focused" or "intervention" or "treatment" or "therapy" or "RCT" or "trial" or "psychotherapy" or "counseling" (2) Trauma exposure terms: "trauma" or "adversity" or "maltreatment" or "abuse" or "accident" or "violent*" and (3) Preschool age terms: "preschool" or "young child*" when searching databases that did not permit for age filters. When available, database filters were applied to select only articles that (a) involved populations of youth under 18 years of age and (b) those articles published in English. Finally, forward and backward searches were conducted among the identified articles and review articles, and meta-analyses on TF-CBT were examined for relevant citations and articles citing these review articles.

A two-step process was used for examining the article retrieved from each database, which was carried out by the first and third authors of this study. In Step One, a title and abstract review of all returned articles from each database was conducted to identify relevant articles. If a reviewer was not clear about whether the article should be kept, the article was retained. Step Two involved a full text review of the documents retrained from Step One by both of the reviewers to determine if the article met inclusion criteria. Due to the nature of this review, the strict criteria for inclusion during Step Two (e.g., sample needed to include preschool-aged children, statistical analyses examining age), and the consensus approach to study inclusion during Step Two, reliability was not calculated. If there were questions regarding study inclusion, coders would discuss and reach a consensus.

In addition to individual articles, meta-analyses and systematic reviews were also searched for as part of the search process for individual studies. These review articles were examined for potential information on the application of TF-CBT in preschool-aged children. This included qualitative information on suggestions of the application of TF-CBT for preschool-aged children, as well as quantitative information from data analyses, such as moderator analyses on age or sub-group analyses with preschool-aged children.

Inclusion Criteria

Two primary inclusion criteria were used in the current review for individual studies: (1) the study examined a form of TF-CBT, and (2) the study included children of 3 to 6 years of age. If a study was identified that included both children younger and older than seven, the study was retained only if it provided specific information on the influences of children's age (e.g., examined age as a moderator in the analyses, sub-group analysis of children younger than seven). Only this set of inclusion criteria was used in an attempt to be comprehensive in examining the use of TF-CBT with preschool-aged children. For example, there was no inclusion criteria set on the study design during the initial search to allow for inclusion of RCTs, case studies, or other types of empirical studies.

Results

A summary of the literature review process is shown in Fig. 1. The search produced 8016 publications, of which 415 were duplicates. After removing the duplicates, 7601 abstracts were examined by two reviewers. In Step 1, 7487 articles were removed from the sample as they (1) were focused on medical trauma, (2) were not empirical studies or reviews, (3) did not use a preschool youth sample, or (4) did not examine therapy or trauma-focused therapy. For Step 2, the remaining 114 articles were re-examined for a more detailed evaluation, where it was identified that 20 articles were not empirical studies, 8 articles did not include a preschool-aged children sample or did not examine preschool-age children's functioning specifically, and 75 articles did not examine therapy or trauma-focused therapy. Of note, there were articles excluded in Step 2 that were RCTs using TF-CBT with preschool-aged children in the study sample, which did not include analyses (e.g., age as a moderator) or scores on the preschool-aged children specifically, such as de Roos et al. (2011), King et al. (2000) and Schottelkorb et al. (2012). Thus, these articles were excluded.

The final sample resulted in 11 articles that examined a form of TF-CBT in a preschool-aged population where information could be exacted on this specific population in relation to the treatment approach. Detailed information on each of these 11 studies can be found in Table 1. For the between-study designs with preschool-aged children only, all study samples included less than 70 preschool-aged children, and tended to have a fairly equal representation of males and females. Most of these studies had a majority of the study sample that identified as White, with the exception of Scheeringa et al. (2011b). A variety of assessments were administered to measure children's responses to treatment. These most commonly included self- and parent-report

instruments designed to assess PTSD symptoms or diagnosis, internalizing concerns, and externalizing concerns. The section below describes the findings each of these 11 studies, separated by study design.

Individual Study Findings

Between Group Designs

Several independent research groups have examined TF-CBT specifically among preschool-aged children using between group designs. The treatment models used for each of these research groups are presented in Table 1. Cohen and colleagues examined early forms of TF-CBT in preschool-aged children (i.e., Cohen and Mannarino 1996, 1998). This form of TF-CBT is often termed *Cognitive Behavioral Therapy for Sexually Abused Preschoolers* (CBT-SAP; Cohen and Mannarino 1993, 1996). Cohen and Mannarino (1996, 1998) reported in their initial findings and follow-up studies that CBT-SAP was associated with more effective reductions in children's symptomology, as compared to non-directive supportive treatment. For example, Cohen and Mannarino (1996) reported that the children who received CBT-SAP had significantly lower reports of internalizing concerns and behavioral problems, as compared to the non-directive supportive treatment group, as well as significant reductions in emotional and behavioral concerns across the outcomes of interest from pre- to post-treatment for the CBT-SAP group. However, it is worth noting that these earlier versions of TF-CBT were missing important cognitive-behavioral treatment components that are typically included in more current versions (e.g., the use of a trauma narrative) and the approach was focused specifically on sexual abuse victims (Cary and McMillen 2012; Cohen and Mannarino 1996; Cohen et al. 2017) (Table 2).

Deblinger et al. (2001) examined the efficacy and psychotherapy gains of cognitive behavioral and supportive group therapy for children (ages two through eight), who experienced sexual abuse and their non-offending mothers. Here, the goal of treatment for children was to develop skills in abuse response, coping with and communicating their feelings, and identifying inappropriate and appropriate touching. Therapists in the cognitive behavioral group used an interactive behavioral therapy format that included role plays, rehearsal, parent-child activities, and Stauffer and Deblinger's (1999) interactive workbook. This was in contrast to the supportive group format, in which a more didactic approach was used through stories, pictures, and activity pages. The parent cognitive behavioral group aimed to provide the mothers skills for parent-child communication and behavioral management, coping with their own emotions, and supporting their children. The authors noted that the parent cognitive-behavioral group

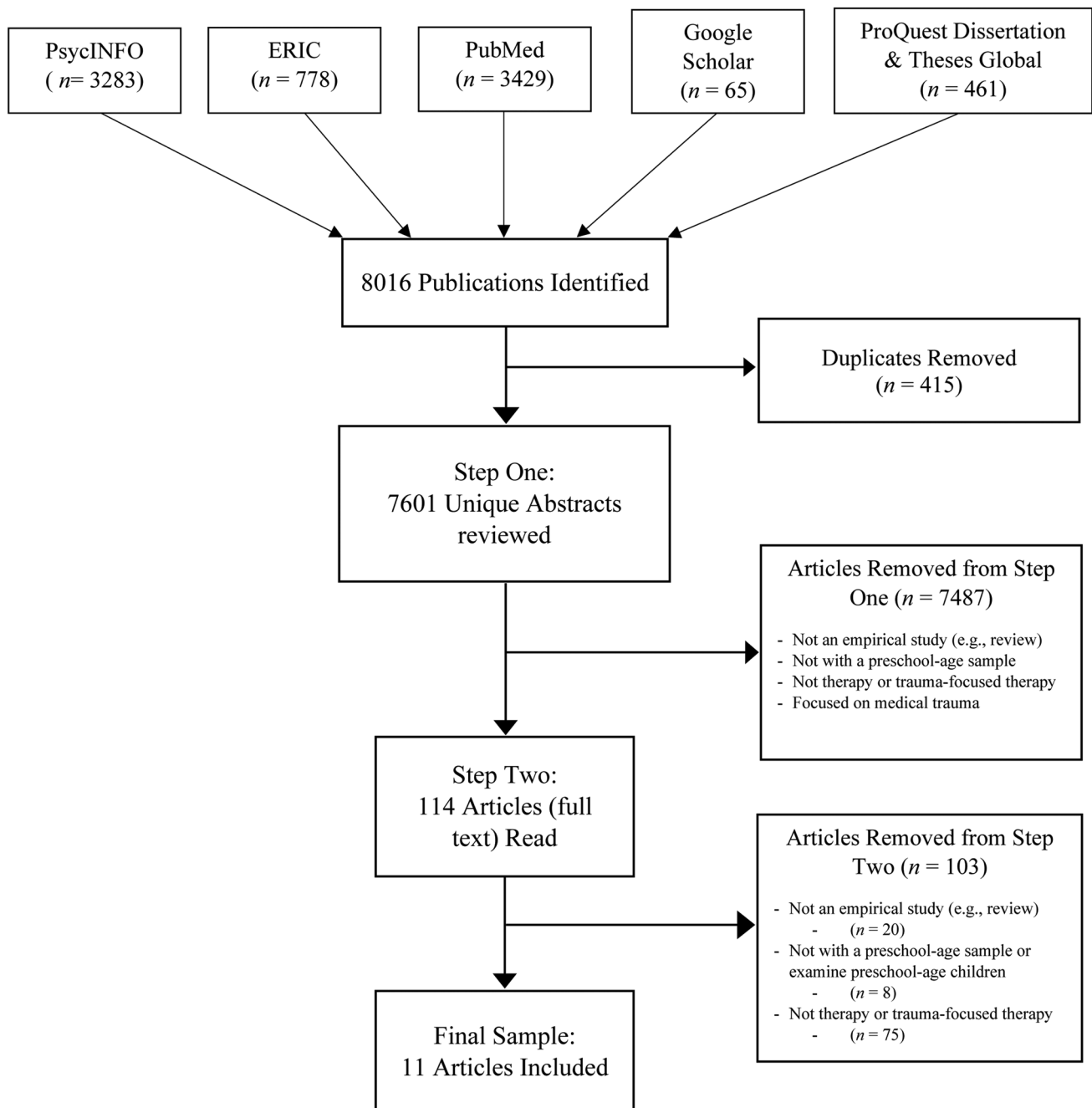


Fig. 1 Results from systematic review

modeled Deblinger and Heflin's (1996) individual therapy approach. The supportive group and cognitive behavioral group for both youth and mothers were shown to be beneficial in terms of observed changes in children's symptom scores. However, the authors noted that the effect sizes of changes for the cognitive-behavioral groups were larger than those of the supportive group (Deblinger et al. 2001). Children in both groups demonstrated a significant decrease in PTSD symptoms overtime; given this, authors

posited that structured gradual exposure may not be a key therapeutic ingredient for young children with mild symptoms (Deblinger et al. 2001). Moreover, parents and children in both groups demonstrated sustained clinical improvement at the three-month follow up. The only significant *group by time* interaction was that children in the cognitive-behavioral group showed greater advancement in their knowledge of body safety compared to youth in the supportive group format (Deblinger et al. 2001).

Table 1 Descriptive information of studies using TF-CBT with preschool-aged children

Study citation (year)	Type of study design	Sample size and age	Demographics (sex/ethnicity)	Assessments of children progress	Primary findings
Cohen and Mannarino (1996)	Between-groups (CBT-SAP vs. NST)	N=67 M=4.7 R=2.1–7.1	S: 58% Female R/E: 54% White, 42% Black, 4% Other	Parent report: Sexual behaviors, social competence, internalizing concerns, externalizing concerns, and general behavior concerns Child report: Affective symptoms	- The treatment group using CBT-SAP demonstrated greater reductions in internalizing concerns, sexual behaviors, and one of the general behavioral problems measures, compared to the NST group
Dalgleish et al. (2015)	Between-groups (TF-CBT-YC vs. TAU)	NA	NA	Parent report: PTSD diagnosis, PTSD symptoms, emotional distress, and emotional functioning	NA- Study currently ongoing and results have not been published
Deblinger et al. (2001)	Between-groups (Group-CBT vs. Group NST)	N=67 M=5.6 R=2–8	S: 61% Female R/E: 64% White, 21% Black, 2% Hispanic, 14% Other	Parent report: PTSD symptoms, sexual behaviors, and general psychosocial concern Child report: Response to abusive situations	- The group supportive and group CBT approaches for both youth and mothers were shown to be beneficial - Effect sizes were greater for group CBT participants in comparison to those who received supportive treatment - Clinical improvements were sustained in the three-month follow up for mothers and youth in both the CBT and supportive groups
Scheeringa et al. (2011b)	Between-groups (PPT vs. waitlist)	N=64 M=5.3 R=3–6	S: 33.8% Female R/E: 59.5% Black, 35.1% White, 5.4% Other	Parent report: Diagnosis and symptoms of PTSD, MDD, SAD, ODD, and ADHD	- The treatment group was superior to waitlist group for PTSD symptoms - There was no significant difference between treatment group for depressive symptoms, separation anxiety, oppositional defiant disorder, and attention deficit/hyperactivity disorder
Salloum et al. (2016)	Between-groups (SC-TF-CBT vs. TF-CBT)	N=53 M=5.0 R=3–7	S: 49.1% Female R/E: 64.2% White, 26.4% Black, 7.5% Mixed, 1.9% American Indian or Alaska Native	Parent report: internalizing concerns, externalizing concerns, diagnosis of PTSD Child report: Posttraumatic stress symptoms Research report: Global symptom severity	- The SC-TF-CBT group demonstrated comparable rates of change to TF-CBT for post-traumatic stress symptoms, internalizing and externalizing concerns - No children in the SC-TF-CBT and TF-CBT treatment groups met criteria for PTSD at study completion

Table 1 (continued)

Study citation (year)	Type of study design	Sample size and age	Demographics (sex/ethnicity)	Assessments of children progress	Primary findings
Hébert and Daignault (2015)	Within-groups	<i>N</i> = 25 <i>M</i> = 5.7 <i>R</i> = 3–6	G: 60% Female	Parent report: PTSD symptoms, internalizing concerns, externalizing concerns, dissociation symptoms	- There were significant decreases across all symptoms pre-treatment compared to post-treatment, except for PTSD avoidance. No differences in symptoms were observed between post- and follow up assessment - Age was examined as a potential covariate (both independently and as an interaction) using mixed-model analyses of covariance with all outcomes of interest, and age was not significant. Correlations between age and PTSD symptom gain scores were all in the small or lower range
Deblinger et al. (2011)	Age-as-moderator (Between-groups)	<i>N</i> = 179 <i>M</i> = 7.7 <i>R</i> = 4–11	S: 61% Female R/E: 65% White, 14% Black, 7% Hispanic, 14% Other	Parent report: PTSD diagnosis, internalizing concerns, sexual behaviors Child report: PTSD diagnosis, depression, fear, anxiety, shame, response to abusive situations	- Age was examined as a potential covariate (both independently and as an interaction) using mixed-model analyses of covariance with all outcomes of interest, and age was not significant. Correlations between age and PTSD symptom gain scores were all in the small or lower range
Kane et al. (2016)	Age-as-moderator (Between-groups)	<i>N</i> = 257 <i>M</i> = 13.7 <i>R</i> = 5–18	S: 49.8% Female R/E: 100% Zambian	Child report: PTSD symptoms, functional impairment	- Results from a mixed effects regression models found that age was not a significant moderator of PTSD symptoms or functional impairment
Puff and Renk (2015)	Case study	<i>N</i> = 1 <i>M</i> = 5	S: Male R/E: White and Middle Eastern descent	Parent Report: All narrow-band and DSM-oriented scales of the CBCL	- There were improvements (i.e., lower <i>T</i> -score values) across several of the scales (e.g., aggressive behaviors, attention problems) post-treatment compared to pre-treatment. There were also several scales where symptom <i>T</i> -scores were higher (e.g., somatic complaints, anxious/depressed)
Scheeringa et al. (2007)	Case study	<i>N</i> = 2 Ages: 4.5, 3.6	S: 100% Male	Parent report: Diagnosis and symptoms of PTSD	- For both children, there was a decrease in child PTSD symptom severity from session 2 to session 12

Table 1 (continued)

Study citation (year)	Type of study design	Sample size and age	Demographics (sex/ethnicity)	Assessments of children progress	Primary findings
Lenz and Hollenbaugh (2015)	Meta-analysis	$N = 1860$ $M = 10.9$	S: 59% Female overall	Meta-analysis variables of interest: PTSD symptoms, depression symptoms	- The authors reported that studies with higher average ages tended to report larger treatment effect sizes for studies comparing TF-CBT to both waitlist and alternative treatments - Meta-regression results indicated that studies with older children tended to report larger effect sizes compared to studies with younger children
Miller-Graff et al. (2016)	Meta-analysis	NP	S: 65.1% Female on average	Meta-analysis variables of interest: PTSD symptoms	

Studies are organized by study design

M = mean age, N = final sample size, R = sex, R/E = race/ethnicity, $PTSD$ = posttraumatic stress disorder, MDD = major depressive disorder, SAD = Social anxiety disorder, ODD = Oppositional defiant disorder, $ADHD$ = attention-deficit/hyperactivity disorder, NST = non-supportive treatment, NP = not provided, SA = sexual abuse, TAU = treatment as usual, CBT = cognitive behavioral therapy, $TF-CBT$ = trauma-focused cognitive behavioral therapy, $CBT-SAP$ = CBT for sexually abused preschoolers, PPT = preschool PTSD treatment, $SC-TF-CBT$ = stepped care TF-CBT, $TF-CBT-YC$ = TF-CBT for young children

Scheeringa et al. (2011b) conducted a randomized clinical trial (RCT) to examine the efficacy and feasibility of a modified version of TF-CBT in comparison to a waitlist control condition among three- to six-year-old children exposed to trauma including injury, domestic violence, and natural disaster. In this study, the authors reported that changes were made to the Cohen and Mannarino (1996) and March et al. (1998) version of TF-CBT to account for developmental level of these children. This included changes such as using drawings and age appropriate examples to provide psychoeducation, modifying the structure of exposures, and including more parent modules and activities (e.g., parental management of problematic behaviors). The authors termed their treatment approach the *Preschool PTSD Treatment* (PPT; Scheeringa et al. 2010). Results indicated that the modified version of TF-CBT was superior to the waitlist control condition for reducing PTSD symptoms, even when controlling for ethnicity and type of traumatic event. Indeed, the pre-post effect size for the treatment group was $d = 1.48$, indicating a large within-group effect. In comparison, the effect size for waitlist control group was $d = 0.16$. There was no significant *time by group* interaction for other clinical outcomes (e.g., depressive symptoms, separation anxiety, oppositional defiant disorder, and attention deficit/hyperactivity disorder), perhaps suggesting very specific efficacy for PTSD symptoms in this sample.

Salloum et al. (2014a, b) evaluated the efficacy of *Stepped Care TF-CBT* (SC-TF-CBT), an alternative version of TF-CBT that starts with a less intensive (i.e., fewer sessions) and more parent-driven treatment format, while working toward more intensive treatment (i.e., standard TF-CBT) as needed. This design attempts to address concerns about the generalizability and feasibility of TF-CBT with preschool-aged children, as well as provide a more individualized approach (Salloum et al. 2014b). In this model, treatment-related content is delivered at home by the parent, with face-to-face sessions delivered by a therapist as the need arises. Data provided from one pilot study (Salloum et al. 2014a) and one clinical trial comparing SC-TF-CBT and “standard” TF-CBT (Salloum et al. 2016) suggest that SC-TF-CBT may be as effective as standard TF-CBT for reducing symptoms of PTSD in preschool-aged children. Salloum et al. (2016) reported comparable rates of change for both TF-CBT and SC-TF-CBT across the domains of interest (i.e., posttraumatic stress symptoms, internalizing and externalizing concerns). Further, Salloum et al. (2016) reported that none of the children in either treatment group (SC-TF-CBT or TF-CBT) met criteria of PTSD at the end of the study, compared to pre-treatment diagnostic rates of 48.6% (SC-TF-CBT group) and 33.3% (TF-CBT group).

Table 2 TF-CBT models from between group studies with preschool-aged children

RCT study citation (year)	Reference model	Characteristics of the TF-CBT model
Cohen et al. (2006, 2017)	C-TF-CBT	<i>Focus:</i> Treatment tailored to any type of trauma exposure in youth. <i>Participation:</i> Both individual portions of the sessions for the child and parent, as well as joint child-parent portions. <i>Components:</i> The primary components of this model include: (a) trauma psychoeducation, (b) parenting skills, (c) relaxation or coping skills, (d) affective or emotion regulation skills, (e) cognitive processing skills, (f) creating and working through a trauma narrative, (g) exposure to trauma reminders, and (h) enhancing safety
Treatment studies with preschool-aged children		
RCT study citation (year)	TF-CBT model	Unique characteristics of the preschool TF-CBT model (with C-TF-CBT as a reference)
Cohen and Mannarino (1996)	CBT for sexually abused preschoolers (CBT-SAP)	<i>Focus</i> Several aspects of the treatment were tailored specifically to address concerns associated with sexual abuse (e.g., managing sexual behaviors, psychoeducation on legal issues surrounding sexual abuse). <i>Components:</i> The model did not include a trauma narrative or exposure component
Deblinger et al. (2001)	Group CBT for young children who have been sexually abused and their non-offending mothers	<i>Focus</i> Several aspects of the treatment were tailored specifically to addressing concerns associated with sexual abuse. <i>Participation:</i> A group format, as opposed to individual, was used with both children and their parents. <i>Components:</i> The child group CBT used role plays, rehearsal, parent–child activities, and an interactive workbook to teach the skills. Parent group CBT modeled an individual therapy approach and provided skills for parent–child communication, emotion coping, and supporting their children
Scheeringa et al. (2011b)	Preschool PTSD treatment (PPT)	<i>Components</i> Developmental modifications were made to the C-TF-CBT and March et al. models, including more concrete examples and cartoon drawing for psychoeducation, excluding positive self-talk, fewer hierarchy items, additional module for parents to manage oppositional defiant behavior, and additional motivation and compliance sections for parents within sessions
Salloum et al. (2016)	Stepped care TF-CBT (SC-TF-CBT)	<i>Participation</i> Used a stepped-care model where the first part of treatment (6 weeks) was led primarily by parents in the child's home, with the addition of some in-office visits, phone support, and online/text resources. If children needed more treatment beyond Step One, children then moved to Step 2 where they receive up to nine in-office C-TF-CBT sessions

Given the use of C-TF-CBT (Cohen et al. 2006, 2017) in the development of the other TF-CBT models for preschool-aged children and its wide dissemination within the literature, C-TF-CBT was used as a reference group when identifying the unique aspects of the other models examined with preschool-aged children. However, C-TF-CBT has not been directly examined in a population of preschool-aged children, with the exception of being the comparison group in the Salloum et al. (2016) study. Differences that were noted between the C-TF-CBT model and the preschool-aged specific models are identified and listed in each row

Within Group Designs

Hébert and Daignault (2015) reported on a pilot study implementing a form of TF-CBT (citing the Cohen and Mannarino (1996), CBT-SAP studies) with preschool-aged children (ages 3–6) exposed to sexual abuse. No specific modifications to the C-TF-CBT model were mentioned in the article. The authors examined changes in PTSD symptoms and behavioral concerns in the sample post-treatment

and at a six-month follow up, but the authors did not have a comparison or control group. According to the reported findings, children who received their version of TF-CBT experienced significant reductions in internalizing concerns ($d=0.89$), externalizing concerns ($d=0.83$), dissociative symptoms ($d=1.07$), and total posttraumatic stress symptoms ($d=0.94$) from pre- to post-treatment. There were no significant differences for any of the examined

outcomes when comparing post-treatment scores and scores obtained at the six-month follow up.

Case Studies

Two case studies were identified in which the children were of preschool-aged and the treatment implemented was a form of TF-CBT (Puff and Renk 2015; Scheeringa et al. 2007). Both case studies used a modified version of TF-CBT specifically for young children, citing the use of the PPT model (Scheeringa et al. 2010). According to the authors' description, developmentally guided modifications included more emphasis on parent involvement and less emphasis on cognitive/meta-cognitive activities. Some improvements in the children's functioning were noted across both case study reports. For instance, Puff and Renk (2015) reported some improvements based on symptom scores from reports completed by the child's parents in areas such as externalizing concerns and posttraumatic stress symptoms. However, symptom scores tended to fluctuate both during and at post-treatment evaluations, and parents reported some higher symptom scores post treatment (e.g., somatic complaints). Further, Scheeringa et al. (2007) reported that both children in their study demonstrated reductions in total posttraumatic stress symptoms from pre- to post-treatment.

Ongoing Studies

In addition to the between-groups, within-group, and case studies described above, Dalgleish et al. (2015) are developing a modified TF-CBT protocol (TF-CBT-YC) for use in children as young as three. Consistent with current models of TF-CBT, elements of treatment for young children include parent education, recognition of feelings, coping skills, graduated imaginal exposure, development of a trauma narrative, cognitive techniques for trauma-related beliefs, and safety planning. At the time of this writing, data from the planned RCT comparing TF-CBT-YC to treatment as usual (TAU) have not been published, but manuscripts with the findings from these trials are currently in progress (T. Dalgleish, personal communication, December, 2019).

Age as Moderator Studies

Several studies were identified that included preschool-aged children in their study sample and examined age or other related factors in their data analyses. Deblinger et al. (2011) conducted a dismantling study to examine the utility of a trauma narrative in TF-CBT among children exposed to sexual abuse, with children ranging from four and eleven years of age. Prior to the analyses, the authors used a mixed-model analyses of covariance (ANCOVA) to examine potential age differences between children older and younger than seven.

The authors stated that there were no significant main effects or interaction effects with age, and the correlations between age (both as a continuous and dichotomous variable) and gain scores for the primary outcomes were in the low range. Based on these findings, age was not included as a covariate in the final analyses and no specific outcomes were presented on preschool-aged children. In a follow-up study to Murray et al. (2015), Kane et al. (2016) examined potential moderators (e.g. school status, age, parental treatment involvement, and sex) of TF-CBT effectiveness in a sample of children ages 5 to 18 from Zambia. The authors reported that the effectiveness of TF-CBT for both PTSD symptoms and functioning outcomes (e.g., difficulties completing daily activities and tasks) was not moderated by age. While it is not possible to interpret the effectiveness of TF-CBT with preschool-aged children specifically in these studies, the analyses of group differences according to age provide some evidence to suggest TF-CBT was similarly effective across the age range of the sample.

Meta-analysis or Review Study Findings

Beyond the individual or empirical studies examined, several systematic reviews and meta-analyses have examined age as a moderator of the efficacy of TF-CBT in samples that included some preschool-aged children. For example, Lenz and Hollenbaugh (2015) conducted a meta-analysis of studies specifically comparing TF-CBT to "no-treatment" control conditions and active treatment conditions, which included four studies that had children as young as five. They reported that age was positively associated with treatment effects for PTSD, indicating that older children experienced larger treatment effects. For depressive symptoms, however, age did not serve as a moderator for TF-CBT vs. waitlist or TF-CBT vs. alternate treatment comparisons.

Such findings are consistent with a more general meta-analysis conducted by Miller-Graff and Campion (2016), which examined age as a moderator in a meta-analytic regression model of a range of treatments for posttraumatic stress (including TF-CBT) among youth exposed to violence. With three studies including youth younger than six, Miller-Graff and Campion reported that age was significantly and positively associated with effect size, suggesting that older youth derived more benefit from treatment than younger youth. These meta-analytic findings, however, should be considered in light of the fact that some studies included in the analyses used the earlier versions of TF-CBT with missing treatment components (Cary and McMillen 2012; Cohen et al. 2017). Additionally, these meta-analyses included only a few studies with youth younger than six years of age, suggesting that estimates of treatment effectiveness for younger ages may be limited.

Discussion

TF-CBT is one of the most widely studied and disseminated treatments for youth with trauma exposure (Cohen et al. 2017; Morina et al. 2016; Schneider et al. 2013). TF-CBT appears to meet criteria as a “*level one*” or “*well-established*” (Southam-Gerow and Prinstein 2014) treatment for use with school age and adolescent youth (Cary and McMillen 2012), since it has demonstrated superiority when compared against control and comparison treatment approaches across more than two RCTs. The published version of C-TF-CBT, as well as other studies examining various versions of TF-CBT state that it can be utilized for children as young as three (e.g., Cohen et al. 2017). However, the efficacy and effectiveness of this treatment with preschool-aged children is unclear. Thus, the current systematic review sought to examine the literature base on the application of TF-CBT specifically in preschool-aged children.

Based on the findings from this comprehensive systematic review, the available evidence suggests that TF-CBT is a “*level two*” or “*probably efficacious*” treatment for preschool-aged children with PTSD symptoms (*cf* Southam-Gerow and Prinstein 2014). One of the primary criteria for “*level one*” or “*well-established*” treatments is that it demonstrates superiority to a pill, psychological placebo, or other active treatment in two or more studies where an equivalent treatment manual is used. Consistent with this criterion, several RCTs were identified that used various forms of TF-CBT with pre-school only samples, and these RCTs demonstrated that TF-CBT was superior to a control group or as effective as an already well-established treatment (e.g., Scheeringa et al. 2011b; Salloum et al. 2016). However, the versions of TF-CBT implemented in these studies were not similar or comparable enough to the each other’s version to meet the criterion of having two or more RCTs with a similar treatment manual. Notably, if the RCTs identified from the search had used similar enough treatment forms of TF-CBT and still demonstrated superiority or similar effectiveness to an established TF-CBT treatment approach, TF-CBT may have met “*level one*” criteria for use with preschool-aged children. Additional research will be necessary to confirm and expand on the current available findings on the application of TF-CBT with preschool-aged children.

Information on the potential application of TF-CBT with preschool-aged children was also found in empirical studies that examined age as a moderating factor for the effectiveness of the treatment approach. Results from these studies suggested that children across all ages in the sample, including those children below age seven, may benefit equally from TF-CBT (e.g., Deblinger et al. 2011;

Kane et al. 2016). However, these findings were in contrast to meta-analytic findings on age as a moderator. According to the available meta-analyses on TF-CBT use in children where the study samples include children younger than seven, older children tended to benefit more from TF-CBT based on results from meta-regression analyses with age as a moderator (e.g., Lenz and Hollenbaugh 2015; Miller-Graff and Campion 2016). However, the findings from both individual studies and meta-analyses examining age as a moderator should be interpreted cautiously since the sample size of children younger than seven was often smaller or unclear in its exact number, compared to children older than seven.

Taken together, although TF-CBT may not meet criteria for a “*level one*” or “*well-established*” treatment for *preschool-aged children specifically*, the current review does not suggest that clinicians should avoid using TF-CBT with this age group. Rather, data from studies of TF-CBT delivered to preschool-aged children, as well as those studies with school-aged children (i.e., the “best available research;” American Psychological Association Presidential Task Force 2006, p. 273), suggests that TF-CBT is likely “the best” choice for preschool-age children with some modifications. Furthermore, these conclusions are partially supported by findings from treatment studies which contain some children below age seven showing that TF-CBT effectiveness does not appear to be influenced by the child’s age. What follows is a discussion of the modifications that one might make to ensure that TF-CBT delivered to preschool-aged children is as beneficial as possible based on published available literature. These modifications are consistent with a “flexibility within fidelity” (Kendall and Beidas 2007, p. 16) approach to evidence-based service provision.

Recommendations for Evidence-Based Application of TF-CBT

The literature suggests a number of important considerations for the evidence-based application of TF-CBT among preschool-aged children. Despite marketing or commentaries suggesting TF-CBT’s applicability across the age spectrum (e.g., Kliethermes et al. 2017), clinicians should not necessarily assume that TF-CBT will be a suitable treatment for their preschool-aged clients “out of the box.” Thus, clinicians should carefully consider what types of empirically supported modifications may be necessary.

Cognitive and Language Abilities

As one might expect, modifications to a standard TF-CBT treatment protocol may be necessary to match a preschool-aged client’s cognitive and language abilities. Only one of the eleven identified studies, the case study by Puff and Renk

(2015), assessed for communication, language, and intellectual abilities. However, the authors did not report whether these assessments were used specifically in treatment planning for the use of TF-CBT or used only to rule-out autism spectrum disorder. Scheeringa et al. (2011b) reported that most children were able to understand and properly complete the majority of their treatment protocol, as determined by treatment fidelity measures completed by the therapist and an independent rater. However, some TF-CBT treatment tasks were more difficult for the youngest children in the sample, including recognizing and understanding emotional states, completing homework, participating in psychoeducation, and completing exposure exercises. Because of these difficulties, Scheeringa et al. (2011b) suggested that additional scaffolding may be important for maximal treatment effectiveness.

Researchers working to modify TF-CBT for a younger population appear to be implementing such techniques. For example, Salloum et al. (2014b) provided a description of a case example of SC-TF-CBT where a parent helped a preschool-aged child with components of TF-CBT by writing down information for the child and creating drawings about a traumatic event (i.e., as opposed to writing about them). More generally, the use of age-appropriate stories to introduce and explain treatment components has also been shown to be helpful in modifying CBT for anxiety disorders in preschool-aged children (e.g., Hirshfeld-Becker et al. 2010). Similarly, supplementary behavioral modification skills can be delivered to parents (i.e., skills from parent training such as selective attention, active ignoring, and reward system implementation) to increase children's willingness and motivation to engage in homework and exposures, or to encourage the practice and use of self-regulation techniques.

Additionally, in line with some of the TF-CBT models used with preschool-aged children, clinicians may find it helpful to utilize therapeutic play techniques in TF-CBT to modify the administration of the TF-CBT treatment approach to fit the language and cognitive skills of preschool-aged children. Such techniques can be used throughout the treatment process (Cavett and Drewes 2012; Drewes and Cavett 2012). For example, children can use art projects or acting activities as means of communicating aspects of their relationship with a parent or to increase implementation of coping skills (Drewes and Cavett 2012). These play activities can also be beneficial in engaging parental interaction with their child during treatment and generalizability of treatment skills (Drewes and Cavett 2012). However, caution is warranted when attempting to use such play techniques, and play should only be used to *flexibly* administer TF-CBT components in a way that maintains the structure of the treatment, as opposed to changing the component of TF-CBT to fit a play model. Indeed, there is evidence suggesting that improper use of play or unstructured techniques that do not

align with the TF-CBT model can be counter-productive for some. For example, Allen and Hoskowitz (2017) found that clinicians' use of structured TF-CBT techniques for children ages 3 to 12 yielded improvements in emotional and behavioral symptoms. In contrast, the use of play or experiential techniques was not associated with treatment outcomes and for some outcome variables in the study (e.g., dissociation, anxiety), play/experiential techniques were associated with higher post-treatment scores.

Overall, suggestions on the use of more behavioral techniques in comparison to cognitive techniques when working with preschool-aged children on trauma-related concerns is in line with other approaches in the field of psychotherapy for similar concerns (e.g., anxiety). For example, in a recent meta-analysis on CBT for childhood anxiety disorders, Whiteside et al. (2020) found that exposure was associated with greater treatment effects than cognitive strategies and relaxation techniques. Moreover, the meta-regression analyses indicated that treatments that included relaxation techniques were less effective than those that did not include relaxation techniques, and that there appeared to be no added benefit of including cognitive strategies when using behavioral techniques in CBT (Whiteside et al. 2020). Further, in related research, Lebowitz et al. (2020) reported that it may be possible to provide treatment to address children's anxiety without working directly with a child, but instead working through parents using behavioral approaches. Lebowitz et al. (2020) compared their *Supportive Parenting for Anxious Childhood Emotions* (SPACE) program, a strictly behavioral approach for addressing parental accommodation of anxiety with a standard CBT protocol that included both behavioral and cognitive techniques and found non-inferiority.

Taken together, the findings on the behavioral approaches in comparison to cognitive approaches, both from the TF-CBT literature and treatment literature at large, suggest that using mostly behavioral approaches with preschool-aged children may provide greater treatment effectiveness. Further, the use of non-behavioral strategies may be counter-productive not only because these strategies may send mixed messages to a child and their family but also because these non-behavioral strategies "take away" sessions that could be devoted to behavioral approaches (Whiteside et al. 2020). It is important to note that when considering when and how to modify treatment for a preschool-age child, clinicians should determine whether they believe their expertise and experience with both TF-CBT and preschool-aged children would be suitable to make effective modifications. If not, it may be necessary to refer out or use an alternative approach other than TF-CBT. In a meta-analysis on the influence of therapeutic relationship variables for treatment outcomes among youth, Karver et al. (2006) reported a moderate effect size of $r=0.40$ for the association between therapist's direct influence skills (which reflected the therapists' ability to present

information in an understandable manner) and youths' treatment outcomes. Evidence such as this suggests that it may be especially important to consider one's ability to scaffold TF-CBT to match the cognitive abilities of preschool-aged children.

Family Context

Clinicians are also encouraged to consider how family context (e.g., parents' willingness to participate, parents' understanding of treatment and its components, and parents' mental health) might influence treatment outcomes. In comparison to older youth, parent factors may play a more significant role in the effectiveness of TF-CBT among preschool-age children. For example, Yasinski et al. (2016) found that caregivers' avoidance (e.g., trying to avoid working on problems or emotions) during sessions was associated with increases in internalizing and externalizing concerns for school age and adolescent youth receiving C-TF-CBT. Similarly, Nixon et al. (2012) found that maternal pre-treatment levels of depression and unhelpful maternal trauma beliefs moderated treatment outcomes in an RCT of TF-CBT with school-aged children and adolescents. Youths with mothers who reported higher depression and unhelpful trauma beliefs had higher PTSD severity post-treatment and 6-month follow ups (Nixon et al. 2012). Such findings are generally consistent with findings of studies evaluating the effectiveness of modified TF-CBT among younger populations (e.g., SC-TF-CBT; Salloum et al. 2014b, 2015). This also relates to findings from the general psychotherapy literature for children with similar concerns (e.g., anxiety) on the potential benefit of including more parental components as part of treatment (e.g., Lebowitz et al. 2020). Overall, the evidence consistently indicates that active and engaged parental involvement is necessary for optimal preschooler outcomes.

To help address these concerns, clinicians are encouraged to consider spending time at the beginning of treatment to assess caregivers' mental health, their ability to engage in treatment, and their expectations and beliefs about treatment. There are also free mental health screeners available to help with this task, such as those provided through the Patient-Reported Outcomes Measurement Information System (NIH PROMIS, 2013) and Patient Health Questionnaire Screeners (<https://www.phqscreener.com/select-screener/>), and measures of trauma beliefs such as the Post-Traumatic Cognitions Inventory (PTCI; Foa et al. 1999). Measures such as these can be used to contextualize the child's treatment and trauma experience within the larger family system and thus facilitate optimal treatment planning. Such screening may be particularly important when the parent has been directly involved in the traumatic event (e.g., Morgan-Mullane 2018), or when

a foster parent is the caregiver who will be participating in therapy with the preschooler (Dorsey et al. 2014).

Given that the literature on TF-CBT suggests that treatment may not be as effective without a caregiver's full ability to participate (e.g., Yasinski et al. 2016), clinicians may wish to talk directly and have ongoing conversations about caregivers seeking their own assessment and/or treatment if indicated by these screening measures or other assessment methods conducted by the clinician. Referral for individual treatment and/or assessment may be especially warranted in situations where caregivers report significant mental health concerns (e.g., substance abuse, schizophrenia) and/or trauma history (Cohen et al. 2017). However, there is research indicating that caregiver involvement in TF-CBT, even with a preschool-aged child, has been associated with lower parental mental health concerns (e.g., depression, anxiety) post-treatment compared to pre-treatment (Cohen et al. 2017). Considering the importance of caregiver involvement in TF-CBT for preschool-aged children, clinicians may need to contemplate the possibility of suspending conjoint child-caregiver treatment components until a parent is able to be sufficiently involved. This may not be feasible or beneficial for all children and may represent a challenging dilemma for the clinician or change the typical structure of the treatment protocol. While there is evidence demonstrating that TF-CBT without caregiver involvement can be effective for school-aged and older children (Cohen et al. 2017), there is no available data on the effectiveness of this treatment approach without caregiver involvement when working with preschool-aged children.

Culture/Race/Ethnicity

While it is outside the scope of this review to fully articulate recommendations for the cross-cultural implementation of TF-CBT with preschool-aged children, there is empirical evidence supporting the use of the technique among various cultural groups. Of the 11 studies included in the review demonstrating the efficacy of TF-CBT among preschool-aged children, many studies included a portion of youth who were from underrepresented groups, with percentages ranging from 35 to 100%. In their evaluation of TF-CBT delivered to a diverse sample of preschool-aged children and their parents, Scheeringa et al. (2011b) reported significant post-treatment improvements in PTSD symptoms regardless of ethnicity and type of trauma. However, they noted that Black participants discontinued treatment more frequently than White participants. This is in line with the larger literature on TF-CBT and psychotherapy in general, which suggests that race/ethnicity may be not directly associated with treatment outcomes (e.g., Huey and Polo 2008), but may still influence treatment indirectly through variables such as access, engagement, and acceptability (e.g., Weiner et al.

2009). Further, in the case study published by Puff and Renk (2015) that demonstrated some reductions in symptomology, the child involved in the case study was a White and Middle Eastern male who had lived overseas before moving to USA. However, with the exception of these two studies, no other studies working specifically with preschool-aged children examined how treatment may have been influenced by race/ethnicity or other cultural factors.

Other studies have examined the efficacy of TF-CBT for school-aged children and adolescents among a range of cultural or ethnic groups, including those in the Democratic Republic of the Congo (McMullen et al. 2013), Norway (Jensen et al. 2014), Zambia (Murray et al. 2015), indigenous groups in Alaska (Bigfoot and Schmidt 2010), Germany (Goldbeck et al. 2016), Jordan (Damra et al. 2014), and Latinx/Hispanic cultures in America (Stewart et al. 2017a). Several of these studies adapted treatment for the population of interest. For example, Bigfoot and Schmidt (2010) created specialized worksheets for Alaska Native youth to demonstrate how their cultures' healing practices fit within the TF-CBT framework. However, even in the non-adapted versions, TF-CBT was still shown to be an effective treatment for reducing symptoms of posttraumatic stress as well as other internalizing and externalizing problems (e.g., Goldbeck et al. 2016; Murray et al. 2015). Such results support the assertion that non-culturally adapted TF-CBT may be suitable for culturally diverse preschool-aged children, provided that modifications are implemented to ensure accessibility and acceptability to the client population of interest (see Chu et al. 2016; Huey and Polo 2008, 2017). It is also important to consider intersectionality, as preschool-aged children may have multiple intersecting identities (e.g., race, ethnicity, immigration status, socio-economic status) that influence their interactions with external environments. As such, Rosenthal (2016) encourages incorporating intersectionality in clinical practice to address clients' diverse experiences and promote empowerment and well-being. Thus, when delivering TF-CBT, clinicians should consider how individual identities, community, and societal structures intersect to impact client functioning.

Limitations

The current review findings and conclusions should be considered in light of its limitations. As a result of the number of studies and available evidence specifically examining the use of TF-CBT among preschool-aged children, the current study was unable to provide an accurate quantitative summary of the effectiveness of TF-CBT within this population through the use of certain techniques such as meta-analysis. With more studies, future reviews may be able to conduct quantitative analyses (e.g., meta-analysis) to provide a more clear indication on the effectiveness of TF-CBT, as well as

potentially identify moderating factors associated with treatment effectiveness (e.g., parental involvement, child's language development). Moreover, the current study was limited to evidence from articles published in English. However, there were several studies identified that were conducted overseas in non-English speaking populations, where English versions of the manuscript were available.

Conclusions and Recommendations for Future Research

TF-CBT is one of the most widely studied and disseminated treatments for youth with trauma exposure (Cohen et al. 2017; Morina et al. 2016; Schneider et al. 2013). Although TF-CBT meets criteria as a "*level one*" or "*well-established*" treatment for school age and adolescent youth (as demonstrated by several well-designed RCTs showing TF-CBT to be superior to both other active treatments and waitlist/control groups; Cary and McMillen 2012), the efficacy and effectiveness of this treatment with preschool-aged children has not been fully evaluated. Evidence from studies with different versions of TF-CBT (e.g., Salloum et al. 2015; Scheeringa et al. 2011b) suggest that TF-CBT may be effective for preschool-aged children, and may, in fact, be the most effective treatment approach available for preschool-aged children exposed to trauma. Nevertheless, clinicians seeking to use TF-CBT with preschool-aged children should consider ways to match the demands of the intervention to their preschool-aged patient's cognitive and language abilities and in the context of parental or caregiver factors that may influence treatment. Because of the expertise required in delivering TF-CBT flexibly and with fidelity, clinicians should carefully assess whether their training allows them to adequately meet this goal.

In examining the current state of the empirical evidence for the use of TF-CBT among preschool-aged children, there is a growing need for more research in this area, especially given the high prevalence of trauma exposure among children of this age. Additional RCTs comparing currently available TF-CBT protocols with adapted forms of TF-CBT for younger children may help identify parameters for the effective implementation of this treatment within the preschool-aged population. For example, research is needed to provide guidance on whether and how to use a trauma narrative with children who have more limited language or cognitive abilities (Deblinger et al. 2011). This need also extends to ensuring that emerging evidence on changes to TF-CBT at large also includes research on preschool-aged children specifically. For example, there is a growing evidence based on the successful use of remote or telehealth options for the delivery of TF-CBT among school age and adolescent youth (Stewart et al. 2017b; Stewart et al. 2020).

Although there is some evidence supporting to the use of remote or telehealth services for similar mental health concerns among preschool-aged children and the parents (e.g., anxiety; Morgan et al. 2017), the research on this type of service delivery has yet to examine the efficacy of TF-CBT delivered in this manner among children younger than seven. As data from ongoing clinical trials becomes available (e.g., Dalglish et al. 2015), stronger recommendations for implementing TF-CBT among preschool populations may emerge, which may also lead to additional RCTs of TF-CBT with preschoolers.

Beyond conducting additional RCTs among preschoolers, research should examine a broader range of factors that may influence treatment efficacy and effectiveness, as problems could arise when research evidence only includes waitlist treatments, specially chosen populations, or specific treatment outcomes (e.g., Ingram et al. 2000). One option could be to conduct practical clinical trials (PCTs) that compare TF-CBT to other promising treatment approaches that are used among preschool-aged children or that examine a wide variety of outcomes that may be associated with treatment success (Tunis et al. 2003). PCTs may provide more directly useful information for clinical practice. Further, investigations of TF-CBT training practices and competency assessment may facilitate dissemination of this treatment approach to clinicians who work with preschool-aged children. For example, this might include examining whether online trainings may be an effective method to teach clinicians how to work with preschool-aged children (e.g., TF-CBT online training, <https://tfcbt2.musc.edu/>; Medical University of South Carolina 2017). As future research examines the effectiveness of TF-CBT with preschool-aged children, clinicians should remember to stay up to date on this research and determine how they can extract relevant information to inform their evidence-based practice.

Compliance with Ethical Standards

Conflict of interest No potential conflict of interest was reported by the authors.

Ethical Approval This study used data from published studies and no data was collected from individual participants.

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