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Trauma-Focused Cognitive Behavioral Therapy for Youth: Effectiveness in a Community Setting

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Abstract

Objective—The current investigation examined the effectiveness of Trauma-Focused Cognitive Behavioral Therapy (TF-CBT) in treating child traumatic stress when implemented in community settings on a state-wide level.

Method—Seventy-two youths (ages 7–16 years) with a history of documented trauma (sexual or physical abuse, traumatic loss, domestic or community violence) and symptoms of Posttraumatic Stress Disorder (PTSD) received an average of 10 sessions delivered in a state-contracted mental health agency. PTSD symptoms and internalizing and externalizing behavior problems were assessed at pre-treatment and then at 3-, 6-, 9-, and 12-months after intake.

Results—Piecewise hierarchical linear modeling revealed that symptoms of PTSD, as well as internalizing and externalizing problems, decreased significantly over the six months after intake (pretreatment, 3-month, 6-month assessments), and these gains were maintained over the next 6 months (6, 9, and 12 month assessments). Symptoms of externalizing symptoms increased somewhat during the follow-up period, but this change was not statistically significant.

Conclusions—These findings suggest that TF-CBT can be implemented effectively in community settings. Treatment outcomes were similar to those reported in efficacy trials of TF-CBT delivered in specialty clinic settings. Improvements in PTSD symptoms and internalizing and externalizing problems were maintained up to one year after treatment began, although the changes in externalizing symptoms were the least stable.

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Keywords

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Trauma-Focused Cognitive Behavioral Therapy (TF-CBT; Cohen, Mannarino, & Deblinger, 2006) is a structured, 12–16 session outpatient intervention originally developed to treat Posttraumatic Stress Disorder (PTSD) and related emotional and behavioral difficulties in youths with a history of child sexual abuse. In the past decade, the model has been further developed to treat children affected by traumatic loss, domestic violence, and exposure to widespread disaster (Cohen, Deblinger, Mannarino, & Steer, 2004; Cohen & Mannarino, 1996, 1997, 1998b; Cohen, Mannarino, & Deblinger, 2006; Cohen, Mannarino, & Knudsen, 2005; Deblinger, Mannarino, Cohen, Runyon, & Steer, 2010; Deblinger, Mannarino, Cohen, & Steer, 2006; Deblinger, McCleer, & Henry, 1990; Deblinger, Stauffer, & Steer, 2001; Deblinger, Steer, & Lippmann, 1999).

TF-CBT's eight components, summarized by the acronym PRACTICE, are delivered in 90-minute weekly sessions that are split evenly between children and their parents. Child and parent sessions are initially scheduled separately, with increasing time devoted to conjoint work as the treatment progresses. During phase 1 of treatment, children receive psychoeducation (P) about trauma and traumatic stress, as well as skills training for relaxation (R), affective expression and regulation (A), and cognitive coping (C). Parent sessions, held in tandem during this phase, teach caregivers how to rehearse newly acquired knowledge and skills at home and use parenting techniques to reduce behavioral problems caused or aggravated by PTSD. In phase 2 of treatment, children develop and process detailed narrative accounts of their traumas (T); therapists share these accounts with parents in order to process their stress reactions and promote understanding of children's feelings and perceptions. This second phase may use in-vivo exposures (I) for reducing stress reactions to trauma reminders. This phase usually ends with a conjoint meeting (C), where children are encouraged to share their narratives openly with parents, while parents are encouraged to show understanding, encourage openness, and deliver needed praise and nurturance. The third and final phase of treatment encourages children and their parents to work together to enhance (E) wellbeing and safety skills to prevent or manage future trauma.

Over 22 scientific investigations have established TF-CBT's efficacy for reducing many symptoms related to child trauma in children and adolescents (Cohen et al., 2004; Cohen & Mannarino, 1996, 1997, 1998b; Cohen et al., 2005; Deblinger et al., 2010; Deblinger et al., 2006; Deblinger et al., 1990; Deblinger et al., 2001; Deblinger et al., 1999). Randomized controlled trials (RCTs) have demonstrated that TF-CBT is more effective than child-centered or non-directive supportive therapies at reducing PTSD symptoms. Medium to large effect sizes are reported at posttreatment, and improvements are maintained for up to two years (Deblinger et al., 2006; Deblinger et al., 1999).

Results pertaining to internalizing symptoms (i.e., depression and anxiety) in school-aged children have varied somewhat by informant. Findings from child reports suggest that internalizing symptoms decrease significantly after TF-CBT, relative to child-centered and

non-directive supportive therapies, with medium to large effect sizes. These improvements are maintained up to two years post-treatment (Cohen et al., 2004; Cohen & Mannarino, 1998a; Cohen, Mannarino, & Staron, 2006; Deblinger et al., 1999). Results based on parent report, however, have been less consistent. Cohen, Mannarino, and Staron (2006) reported a significant decrease in parent-reported child internalizing symptoms with medium to large effect sizes. A large multisite RCT ($N = 203$ treatment completers) revealed small differential effect sizes that favored TF-CBT over child-centered therapy (Cohen et al., 2004; Deblinger et al., 2006); but a smaller RCT ($N = 49$ treatment completers) found no discernible effect or advantage of TF-CBT relative to nondirective, supportive therapy (Cohen & Mannarino, 1998a; Cohen et al., 2005).

TF-CBT's effect on parent-reported externalizing behaviors is less conclusive and has triggered increased focus on bolstering the parenting component of treatment. In one of the first randomized trials, TF-CBT outperformed a community-based control group and showed significant reductions (medium effect size) in externalizing behavior problems in school-age youth (Deblinger et al., 1999). However, another RCT did not demonstrate significant reductions in externalizing behavior problems in either TF-CBT or non-directive, supportive therapy (Cohen & Mannarino, 1998a; Cohen et al., 2005). These early results drew the attention of the treatment developers, who then monitored changes in parenting practices in subsequent studies. Two studies suggest there may be a critical link between TF-CBT's 'parenting skills' component and children's behavioral outcomes (Deblinger et al., 2010; Deblinger et al., 1999). However, in the first multisite RCT comparing TF-CBT and child-centered therapy, Cohen and colleagues (2004) reported improved parenting practices in both groups, but no particular advantage for TF-CBT. Rather, during the 12-month follow-up period, externalizing symptoms decreased significantly only in the child-centered treatment condition (Deblinger et al., 2010; Deblinger et al., 1999). This unexpected result may have been due to the availability of treatment for all child participants with elevated behavioral problems during the follow-up period.

To date, most outcome studies of TF-CBT have focused on *efficacy* rather than *effectiveness* research. Schoenwald and Hoagwood (2001) distinguish efficacy and effectiveness research as discrete phases of an iterative process of treatment development and service delivery. Efficacy research (phase 1) rigorously tests the causal relationship between a specified treatment and outcome and creates training materials. Effectiveness research (phase 2) trains clinicians in non-specialty community clinics, establishes necessary and sufficient conditions for delivery, and compares the effect sizes of efficacy and effectiveness results. *Dissemination* research subsequently evaluates strategies for promoting and delivering 'street-ready' treatments.

To date, there have been a limited number of TF-CBT effectiveness studies, and dissemination research is just beginning (Cohen & Mannarino, 2008; Ebert, Amaya-Jackson, Markiewicz, Kisiel, & Fairbank, 2012). An early RCT effectiveness study assigned children in Australia to one of two TF-CBT conditions (i.e., child only or family) or to a wait list control condition (King et al., 2000). Relative to controls, TF-CBT groups showed greater reductions in PTSD, fear, and anxiety, as well as more improvement in overall functioning. This study, however, did not replicate the benefits of TF-CBT's parenting component for

addressing behavior problems (Deblinger et al., 2010; Deblinger et al., 1999). Cohen, Mannarino and Iyengar (2011) recently conducted an RCT comparing TF-CBT and child-centered therapy. Therapists were residential workers at a local women's shelter, and the number of sessions was tailored to fit the shelter's average length of stay. The intent-to-treat analyses ($N = 124$) replicated earlier findings that TF-CBT was more effective for reducing PTSD symptoms and other anxiety symptoms; but researchers also observed that improvement was modest compared to that reported in previous efficacy trials. In addition, TF-CBT did not reduce children's self-reported depression or parent-reported general mental health problems. It is also important to note that the dropout rate was high (39.5%) and that post-treatment data were estimated for more than a third of the sample. Finally, several other TF-CBT effectiveness trials have been completed, with preliminary findings presented but not yet published: preliminary findings with children in foster care (Dorsey, Cox, Conover, & Berliner, 2010; Lyons, Weiner, & Scheider, 2006) and several cross-cultural studies (Cinamon, Zorzella, Thornback, Konanur, & Muller, 2011; Dorsey, Murray, Balusubramanian, & Skavenski, 2011; Murray et al., manuscript submitted).

The present effectiveness study was conducted to examine whether TF-CBT could be transported to a state-contracted community mental health agency and used by clinicians with little prior TF-CBT experience (Grasso, Webb, Cohen, & Berman, 2012). The sample consisted of youths receiving public mental health services, who had trauma histories that were more diverse than in most previous clinical trials. A third of the sample was referred by juvenile justice and crisis services, which allowed us to examine TF-CBT's effect on a broad range of externalizing as well as internalizing problems.

Method

Participants

Inclusion criteria for the current study were based on those used in the first multi-site efficacy trial of TF-CBT (Cohen et al., 2004) and were slightly modified to fit the realities of a service-driven agency for underserved and underinsured populations. Most notably, we broadened the participant age-range and types of trauma that could be addressed in treatment. Researchers substituted a brief 10-minute PTSD screen (Pynoos, Rodriguez, Steinberg, Stuber, & Frederick, 1998) for the Kiddie Schedule for Affective Disorders and Schizophrenia - Present and Lifetime Version (K-SADS-PL; Kaufman & Schweder, 2004) to fit agency time constraints. Most participants were also administered the K-SADS-PL interview by the research team, which confirmed that participants met partial to full criteria for PTSD.

The protocol was preapproved by the study's review board (Western Institutional Review Board, www.wirb.com). Study referrals were initially screened by phone for eligibility. Children were excluded if caregivers reported that the child had an intellectual disability or untreated psychosis or substance abuse, required frequent hospitalizations or a higher level of care, or had a sibling already in the study. Youths were between the ages of 7 and 16, English-speaking, and qualified for publicly-funded treatment. They also had to have a legal guardian who was English-speaking and willing to authorize treatment, provide transportation, and co-participate in treatment and a year-long follow-up. Youth qualifying

by phone were subsequently administered the UCLA PTSD Reaction Index for DSM-IV-Abbreviated (UPID-A; Pynoos et al., 1998) at their residence. Those scoring 17 or more on the UPID-A or endorsing 3 of 9 PTSD symptoms based on an independently verified (e.g., through child welfare) trauma were included in the study. Before PTSD screening and again just before treatment, legal guardians (and children) were asked to give their signed informed consent (or assent) to participate in research. Guardians were reminded that choosing not to participate would not affect the child's guaranteed access to services.

Figure 1 shows that 241 school-age youths were referred to the study from July 1, 2006 to March 31, 2010. Most referrals were from child welfare, child advocacy centers, juvenile justice, court advocates, and the state crisis service. Fewer referrals came from families, state clinics, and other community agencies. About a quarter of referrals (23%) were excluded during the phone screen for reasons that typically necessitate referral outside of the outpatient community setting (e.g. symptoms were too severe for outpatient care, families did not qualify for public assistance) or that affected their ability to participate in research (e.g. planning to move out of the State during the study period, inability to complete assessments at the four time points). At the intake meeting, another 40% screened negative for PTSD ($n=66$), had caregivers who were disinterested in treatment ($n=23$), or were waiting for an available therapist ($n=7$). On the basis of the phone screen, 90 families were scheduled for an intake, 11 repeatedly failed to show for intake, and 7 attended the intake but not treatment. The remaining 72 began treatment and were included in the intent-to-treat sample. Of those 72 participants, 70 (97%) received at least 3 sessions of TF-CBT and completed the 3- and 6-month symptom assessments, and 66 (92%) completed the 9- and 12-month assessments.

The 72 youth were mostly female (64%), racially diverse (46% White, 40% African-American, 10% Hispanic/Latino, and 4% Biracial), and from all three counties in Delaware (New Castle County: 37%; Kent: 28%; Sussex: 35%). Ages ranged from 7–16 years ($M=12.4$; $SD=2.8$). Nearly a third (32%) of the sample was in foster care. Children reported an average of 3.1 types of trauma -- including sexual abuse (38%), physical abuse (53%), domestic violence (51%), traumatic loss of a loved one (50%), and community violence (experienced: 42%; witnessed: 45%). Fifty-four percent met criteria for partial PTSD (i.e., met criteria for two of the three symptom clusters: re-experiencing, avoidance or hyperarousal), and 46% met full criteria for PTSD according to the UCLA PTSD Reaction Index.

Most of the non-offending caregiver participants were female (92%), with a mean age of 43 ($SD=11.0$), 13.3 years of education ($SD=2.4$) and a median annual household income of \$37,085. Half were biological parents (50%), 17% were relative caregivers, and 33% were non-relative foster parents.

Measurement and assessment schedule

The **UCLA PTSD Reaction Index for DSM-IV** (UPID; Pynoos et al., 1998) was used to assess changes in DSM-IV PTSD symptoms. The UPID's three sections include 48 items that can be administered as a questionnaire or structured interview to children ages 7–18. The UPID inventories 13 types of trauma, assesses objective and subjective aspects of the

most bothersome trauma, and includes questions about the frequency of re-experiencing, avoidance, and hyperarousal symptoms. Test-retest reliability is 0.84 (Steinberg, Brymer, Decker, & Pynoos, 2004), and the UPID shows good convergent validity (0.70 in comparison to the K-SADS, epidemiologic version), sensitivity (0.93), and specificity (0.87) in diagnosing PTSD (Steinberg et al., 2004). The full version was used to measure symptom level and change during and after treatment. An abbreviated version (only 23 items) was used for initial screening. Alpha levels for UPID measures taken from this sample at intake, 3-, 6-, 9-, and 12-month assessments ranged from 0.81–0.91.

The parent version of the **Child Behavior Checklist 6–18** (CBCL; Achenbach, 2001) is a 113-item parent self-report measure used to assess for changes in children's emotional and behavioral problems. Items score on a 3-point Likert scale (0–2) and combine into a total score, nine narrow-band scales, and two broad-band scales: CBCL-Internalizing (withdrawn, anxious/depressed, somatic complaints) and CBCL-Externalizing (delinquent, aggressive) problem scales. The CBCL is a widely-used measure with demonstrated reliability (range 0.84–0.98) and content and criterion validity to measure mental health problems of children ages 6–18 years (Achenbach, 2001). Raw subscale scores for CBCL-Internalizing and CBCL-Externalizing were used in all analyses. Only scores by the same informant over time were used. Ratings by a different informant at any time point were excluded. Alphas at pretreatment and follow-up assessments for this sample ranged from 0.87–0.90 for CBCL Internalizing scale, and 0.91–0.95 for the Externalizing scale. The UPID and the CBCL were administered to families at baseline and every three months over the course of one year.

Therapist training and treatment adherence

Therapists and training—Twelve clinicians delivered TF-CBT to 72 study participants. Therapists had to have a professional degree and be licensed or supervised by a licensed practitioner. Nine qualifying therapists had master's degrees in counseling, psychology or social work; three held doctorates in counseling or clinical psychology. One therapist had significant experience with TF-CBT, two had some experience with exposure therapies for child anxiety disorders, and the remaining nine had no prior experience with TF-CBT or exposure therapy. All 12 volunteered to participate in the effectiveness study. With help from the TF-CBT developers, study coordinators extended the content of TF-CBT training to address a broad spectrum of trauma types. A TF-CBT developer (fifth author) trained a core group of five clinicians, who received two days of didactic training, weekly phone consultations, and expert review of at least one case. These core clinicians then trained and supervised the next cohort of therapists with the same process of didactic training, weekly phone consultations, and tape review.

Treatment adherence—Four coders were trained to use a 10-item adherence checklist developed by Dr. Esther Deblinger, co-author of the original TF-CBT treatment manual (Cohen, Mannarino, & Deblinger, 2006). Coders were trained to criterion by Dr. Deblinger and her research team, using two sets of five sessions each to test agreement to criterion ratings. After training, coders achieved good-to-excellent inter-rater agreement (dichotomous ratings of present or absent) on all categories (median kappa = 0.92, range = 0.89–1.00). Adherence ratings were conducted by coding sessions from each of the 72

youths who received treatment. For each participant, one to two sessions were sampled from the introductory education/skill-building phase of treatment (sessions 1–4); two to three sessions from the narrative phase (sessions 5–10); and another one to two from the final phase of treatment (sessions 11–end of treatment). Conjoint sessions were not coded. Consistent with the TF-CBT manual, 100% of the sessions sampled during the introductory phase of treatment (i.e. PRAC) focused on psychoeducation, affective expression and modulation skills, or the connection between thoughts, feelings, and behaviors. These components were continued throughout the course of treatment but occurred less frequently in the narrative phase sessions (46%) and in the final sessions (47%). Discussions and processing of the child's trauma occurred primarily in the narrative phase (86% of the sessions) and continued in the final phase (59%). By contrast, only 20% of the sessions in the first phase of treatment included a trauma focus. Enhancing safety occurred throughout treatment but was more concentrated in the final sessions (14% of sessions in Phase 1, 16% in Phase 2, and 30% in Phase 3). These adherence ratings suggest that therapists delivered the TF-CBT components in the correct sequence and with appropriate flexibility to address individual therapeutic needs.

Treatment setting and service delivery

The TF-CBT effectiveness study was hosted by a Delaware-based community mental health agency that contracted with the Delaware Division of Prevention and Behavioral Health Services. Most of its clinicians were contracted on a fee-for-service basis. Twelve participated in the TF-CBT effectiveness study. Six were temporarily subsidized to work exclusively with child PTSD cases under a grant from the Substance Abuse and Mental Health Services Administration (No. SM57145). The remaining six were masters level interns in a clinical psychology doctoral program. Sessions were 60–90 minutes long and delivered weekly. The mean treatment dose was 9.79 sessions ($SD=4.97$) for children and 8.13 ($SD=5.22$) for caregivers. Only 9 of 72 (12.5%) youths discontinued therapy before session three or did not receive the trauma narrative phase of treatment, which is comparable to the rate of dropout for TF-CBT's first multisite efficacy trial (11.4%; Cohen et al., 2004).

Results

Symptom change on the UPID and CBCL was analyzed across the course of therapy and then over the follow-up period. Data were analyzed with piecewise latent growth curve modeling using Mplus software (Muthen & Muthen, 2007). The first piece modeled change over the 0, 3-, and 6-month time points (capturing the point by which all participants had completed treatment), and the second piece modeled change over the 6-, 9-, and 12-month time points (capturing the follow-up period). When indicating better fit, quadratic and linear components were estimated in one or both pieces. Both fixed effects (reflecting average change across individuals over each of these two pieces of time) and random effects (reflecting individual differences in change) were examined.

General guidelines suggest that upper level (individual) sample size is usually the most restrictive aspect of a longitudinal multilevel design (Maas & Hox, 2005), with upper level sample sizes of less than 50 units leading to biased upper level standard errors. Because key

hypotheses in this study focus on specific polynomial trends in variables over the course of therapy and follow-up assessments, Monte Carlo-based data simulation were used to determine more exact estimates of power for testing parameter estimates from growth curve models (Muthen & Muthen, 2007). Using estimates of parameter effects from pilot data and a sample size of 72, Monte Carlo simulation analysis suggest that power is greater than .90 on for all three measures of outcome.

Figures 2 and 3 depict symptom change over time in UPID and CBCL scales, respectively. Participants showed a significant curvilinear (concave-down) decrease in PTSD symptoms (UPID) over the first 6-months after intake (0-, 3-, 6-months) that decreased linearly per month. The rate of linear decrease was most rapid in the first three months and lessened by the 6 month assessment, *linear slope* = -4.67 , *SE*=1.00, $p < .001$ and *quadratic slope* = 0.38 , *SE*=.15, $p=0.01$ (see Figure 2). These gains were maintained through the follow-up (6-, 9-, 12-months), and PTSD symptoms continued to decrease significantly over this period, *linear slope*= -0.51 , *SE* = .21, $p < .02$. This piecewise growth model, consisting of linear and quadratic change in the first piece and linear change in the second piece, demonstrated good fit to these data, $\chi^2(6) = 3.77$, $p=.71$. An analysis of the change in mean scores from pre-treatment to the 6-month assessment revealed that the effect size was large (Cohen's $d = .92$). At baseline, 54% of the sample scored in the clinical range (≥ 38) on the UPID, and only 18% were in the clinical range at 3 months, 12% at 6 months, 14% at 9 months, and 9% at 12 months. These data suggest that there was clinically significant change by the end of treatment that was sustained over the follow-up period.

Participants also showed a significant reduction in internalizing symptoms (CBCL-Internalizing) over the first six months after intake (0-, 3-, 6-months) that decreased linearly per month, *slope* = -0.80 , *SE* = 0.15, $p < .001$, and these gains were maintained over the follow-up period (6-, 9-, 12-months), *linear slope* = 0.09, *SE* = .27, $p = .19$ (see Figure 3). This piecewise growth model for internalizing symptoms, consisting of linear change in both pieces, demonstrated acceptable fit to these data, $\chi^2(6) = 13.23$, $p=.04$. The effect size over the treatment period was medium to large ($d=.67$). At baseline, 46% of the sample scored in the clinical range (T score ≥ 65) on the CBCL Internalizing scale, and these gains were maintained over the follow-up period (36% in the clinical range at 3 months, 20% at 6 months, 18% at 9 months, and 20% at 12 months). Thus, internalizing symptoms decreased significantly over the course of treatment and were well-maintained.

Participants showed a significant reduction in CBCL externalizing symptoms over the first six months after intake (0-, 3-, 6-months). Symptoms decreased significantly in a concave-down pattern over the first piece, *linear slope* = -1.79 , *SE* = 0.61, $p < .005$ and *quadratic slope* = 0.17, *SE* = .08, $p=.03$. Overall, these gains were maintained over the follow-up period, *linear slope* = 1.10, *SE* = 0.69, $p = .11$, however, there was a nonsignificant but notable increase in symptoms at the 9- month assessment, *quadratic slope* = -0.12 , *SE* = .10, $p=.23$. This piecewise growth model for externalizing symptoms, consisting of both linear and quadratic change in both pieces, demonstrated acceptable fit to these data, $\chi^2(4) = 10.51$, $p=.03$. The effect size over the treatment period was less strong (small to medium effect; $d = .39$) than for change in PTSD and internalizing symptoms. At baseline, 52% of

the sample scored in the clinical range (T-score = 65) on the CBCL Externalizing scale, 34% at 3 months, 30% at 6 months, 41% at 9 months, and 38% at 12 months.

Discussion

Study results suggest that TF-CBT can be transported to community mental health clinics and that clinicians, who for the most part had little experience with TF-CBT and exposure therapy, can be trained to effectively treat traumatized, school-aged children. These findings are consistent with clinical trials on the effectiveness of cognitive behavioral treatments for adult anxiety disorders, including PTSD (Gillespie, Duffy, Hackmann, & Clark, 2002; Lincoln et al., 2003; Wade, Treat, & Stuart, 1998). The effect sizes over the treatment period in this study are comparable to those in previous efficacy trials of TF-CBT with school-aged (slightly younger) children, who experienced only sexual abuse (Cohen et al., 2004; Deblinger et al., 2006). Our findings are strikingly similar to effect sizes reported in a TF-CBT efficacy trial involving 39 children with traumatic grief (Cohen, Mannarino, & Staron, 2006). Thus, in contrast to results from meta-analytic studies reporting lower effect sizes for efficacious treatments being delivered in community settings (Kolko, Hoagwood, & Springgate, 2010; Weisz, Jensen-Doss, & Hawley, 2006), our findings suggest that therapists can maintain treatment fidelity and that TF-CBT may retain potency when delivered in these settings.

Contrary to findings from some TF-CBT efficacy trials with school-aged youths (Cohen et al., 2005; Deblinger et al., 1999), externalizing problems tended to rebound somewhat over the 6-month follow-up phase. This increase was not statistically significant, but the overall effect size of change in externalizing problems was small and not particularly stable. The relatively weak impact of TF-CBT on externalizing symptoms in this study may be due to sample differences, such as the inclusion of teenagers with substance abuse and active recruitment from state juvenile justice and crisis systems. In addition, parents with substance use problems were not excluded from this study, and they may not have adequately absorbed and implemented the parenting principles that are so important in treating externalizing symptoms (Cohen, Berliner, & Mannarino, 2010). Adverse events were not assessed during or after treatment, but it is also possible that children with externalizing symptoms encountered more difficult life circumstances, which might have lessened the impact of treatment. Therapists delivering TF-CBT for the first time might also inadvertently marginalize behavior management in favor of elements that are more clearly central to treating the primary PTSD diagnosis, such as the narrative. Prior research and clinical experience suggest that the impact of TF-CBT on behavioral outcomes could be enhanced by focusing more on parenting skills, extending treatment length, providing follow up booster sessions, providing more parental, community, or institutional support, or referring for adjunctive therapies (Cohen & Mannarino, 1998a; Deblinger, Mannarino, Cohen, Runyon, & Steer, 2011; Deblinger et al., 1999; King et al., 2000).

Strengths of this study include statewide delivery of TF-CBT, relatively few exclusion criteria, and a sample with a wide range of traumatic experiences. Inclusion and exclusion criteria were intentionally relaxed to examine the generalizability of treatment effects. The majority of children screened for this study were excluded for reasons that would normally

prevent admission to publically funded outpatient treatment for PTSD (i.e., screening negative for PTSD, presenting with symptoms too severe for outpatient treatment, not qualifying for public assistance, and having caregivers disengaged from screening or intake). Only 34 of the referrals (14.0% of the 241) were excluded for reasons specific to study participation (i.e., sibling already enrolled, family not willing or able to be reinterviewed, planning to move out of State, study therapists not available because of full caseloads). Thus, this sample largely reflects children typically admitted to outpatient treatment for PTSD in Delaware's public mental health system. This study also replicated the use of the UPID-A (Pynoos et al., 1998), a 10-minute initial PTSD screening procedure that is efficient and feasible for general practice.

Other strengths include the composition of the therapist group, independent fidelity checks, low dropout rates, and high compliance with follow-up assessments. Most cases were treated by master's level, community therapists with relatively little prior TF-CBT experience. The composition of the therapist group is significant in light of one meta-analysis showing a tendency toward higher effect sizes when doctoral students rather than community therapists delivered evidence-based treatments (Curtis, Ronan, & Borduin, 2004). Independent adherence checks based on review of recorded sessions confirmed that trained clinicians delivered treatment content in its intended order, although the extent of competence was not assessed. Finally, this study followed participants beyond the end of treatment and achieved higher follow-up compliance rates than those reported by prior efficacy studies (Cohen et al., 2005; Deblinger et al., 2006; Deblinger et al., 1999).

A significant limitation is that a control group was not included in the study design. Because TF-CBT has been compared to treatment as usual and supportive therapy in numerous RCTs (Cohen, Mannarino, & Deblinger, 2006), this study began by examining effectiveness with statewide distribution of TF-CBT and a focus on the active treatment. However, this design does not allow for direct comparisons of our effect sizes with those from RCTs. The absence of a control group also limits the ability to make causal inferences from the data. In addition, families were not precluded from enrolling children in concurrent treatment for problems unrelated to trauma. Thus, without a control group, the study cannot isolate the effects of TF-CBT from those of other treatments being received. Another limitation relates to the parameters used to select treatment participants and therapists. Inclusion criteria were relaxed, but not eliminated. Thus, results only generalize to children over the age of 6 in outpatient treatment. Therapists in this study volunteered to learn and use TF-CBT, and outcomes may not generalize to those mandated to use TF-CBT.

This study used a combination of face-to-face training, tape review, and ongoing consultation to train and implement TF-CBT. Although therapists in this study received less didactic training and consultation than therapists in the first multi-site efficacy study (Cohen et al., 2004), they received more than what is typically the case in community mental health centers. Some researchers might label the training received as "clinically unrepresentative" (Shadish, Navarro, Matt, & Phillips, 2000). However, several state systems around the country have chosen to use ongoing consultation as a preferred dissemination approach for TF-CBT (Cohen & Mannarino, 2008). While they acknowledge the cost of this training approach, these systems have also recognized the need for ongoing practice-reinforcing

strategies (Cook, Schnurr, & Foa, 2004) to help shape delivery, prepare for challenging cases, and maintain treatment fidelity. So far, there are too few TF-CBT effectiveness studies to begin evaluating the relationship of training type or dose to effect size. However, one meta-analysis of evidence-based treatments for adult anxiety disorders did find that effect sizes across multiple effectiveness studies were smaller when implementation occurred without training, training manuals, or fidelity monitoring (Stewart & Chambless, 2009).

TF-CBT's track record has earned it a place on the National Registry of Evidence-Based Practices and Programs (nrepp.samhsa.gov), and the National Child Traumatic Stress Network (NCTSN: www.nctsn.org) has resourced and motivated broad dissemination of the treatment model. Less has been done to report on TF-CBT's performance in non-specialty community mental health settings (Cohen & Mannarino, 2008; Ebert et al., 2012). The present study tracked changes in self- and parent-reported symptoms during an effectiveness trial of TF-CBT with 72 children in a state-contracted mental health clinic in Delaware. The results are promising and largely replicate the success of past efficacy trials. Further replications are now indicated to test the reliability of these findings, identify predictors of early dropout and treatment outcomes, and uncover factors to enhance TF-CBT's effect on externalizing symptoms over time.

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Figure 1.
Flowchart of participant progress through phases of the Delaware Effectiveness Study

Figure 2.

Average scores reported by children on the UCLA PTSD RI across treatment and follow-up assessments

Figure 3.
Average scores reported by caregivers on the CBCL-Internalizing and CBCL-Externalizing scales across treatment and follow-up assessments