A Multisite, Randomized Controlled Trial for Children With Sexual Abuse–Related PTSD Symptoms

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ABSTRACT

Objective: To examine the differential efficacy of trauma-focused cognitive-behavioral therapy (TF-CBT) and child-centered therapy for treating posttraumatic stress disorder (PTSD) and related emotional and behavioral problems in children who have suffered sexual abuse. **Method:** Two hundred twenty-nine 8- to 14-year-old children and their primary caretakers were randomly assigned to the above alternative treatments. These children had significant symptoms of PTSD, with 89% meeting full *DSM-IV* PTSD diagnostic criteria. More than 90% of these children had experienced traumatic events in addition to sexual abuse. **Results:** A series analyses of covariance indicated that children assigned to TF-CBT, compared to those assigned to child-centered therapy, demonstrated significantly more improvement with regard to PTSD, depression, behavior problems, shame, and abuse-related attributions. Similarly, parents assigned to TF-CBT showed greater improvement with respect to their own self-reported levels of depression, abuse-specific distress, support of the child, and effective parenting practices. **Conclusions:** This study adds to the growing evidence supporting the efficacy of TF-CBT with children suffering PTSD as a result of sexual abuse and suggests the efficacy of this treatment for children who have experienced multiple traumas. *J. Am. Acad. Child Adolesc. Psychiatry,* 2004;43(4):393–402. **Key Words:** posttraumatic stress disorder, child sexual abuse, trauma-focused cognitive-behavioral therapy, treatment, trauma.

Child sexual abuse (CSA) is associated with numerous negative sequelae during childhood, including depression, anxiety, behavioral problems, sexualized behaviors, and posttraumatic stress disorder (PTSD) (Saywitz et al., 2000). CSA is also correlated with an increased risk for serious problems in adulthood, such as substance use disorders, social anxiety, depression and suicide attempts, and becoming a victim of adult rape (Brent et al., 2002; Nelson et al., 2002). Studies have also provided vital information about disordered psychobiological functioning related to CSA, including the finding that abused children with PTSD symptoms had smaller total brain and corpus callosum volumes and lower IQs than carefully matched controls, and that these differences were correlated with younger age of abuse onset and longer duration of PTSD symptoms (DeBellis et al., 1999). Thus there is strong evidence that CSA, and in particular CSA-related PTSD, places children at increased risk for suffering potentially lifelong difficulties. Identifying treatment interventions that can effectively treat PTSD and other sequelae of such abuse in a timely manner is therefore of critical importance.

There has been a recent increase in the number of empirical studies evaluating treatment outcome for sexually abused children; these have been reviewed in detail elsewhere (Saywitz et al., 2000). The most rigorous studies have included random assignment to well-defined, manualized treatments and have com-

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pared these treatments to distinct comparison treatments or waitlist control conditions. Deblinger et al. (1996, 1999) followed 100 sexually abused children who were randomly assigned to receive one of four conditions: standard community care, trauma-focused cognitive-behavioral therapy (TF-CBT) provided to the child only, TF-CBT provided to the nonoffending parent only, or TF-CBT provided to both the child and parent. This study found that the children who received TF-CBT (either with or without the inclusion of their parent in treatment) experienced significantly greater improvement in PTSD symptoms, whereas children whose parents received TF-CBT (with or without inclusion of the child in treatment) experienced significantly greater improvement in child-reported depression and parent-reported behavioral problems; these differences were maintained at a 2-year follow-up. Deblinger et al. (2001) also evaluated the efficacy of this treatment approach with very young sexually abused children (ages 2–8) in a group format and demonstrated the enhanced benefits of CBT groups compared to supportive group counseling with respect to maternal abuse-specific distress and children's body safety skills.

Cohen and Mannarino (1996a, 1997) randomly assigned 69 sexually abused preschool children to TF-CBT or to nondirective supportive therapy (NST). Children receiving TF-CBT experienced significantly greater improvements in PTSD symptoms, including sexualized behaviors, and internalizing and total behavior problems than children receiving NST. These differences were maintained over the course of a 1-year follow-up. Cohen and Mannarino (1998) also conducted a parallel study for sexually abused children aged 8 to 15 years and found that among 49 treatment completers, children who received TF-CBT experienced significantly greater improvement over time in depression and social competence than children who received NST. At 1-year follow-up, treatment completers in TF-CBT had significantly greater improvement in PTSD and dissociative symptoms. An intent-to-treat analysis indicated superior response in the TF-CBT group from pretreatment to 12-month follow-up in depression, state and trait anxiety, and sexual concerns (Cohen et al., in press). Both of these studies included an individual parent treatment component.

King et al. (2000) randomly assigned 36 sexually abused children and adolescents to individual CBT, family CBT, or a waitlist control condition and found that children in both active treatment conditions improved significantly more than the waitlist condition. Inclusion of family members in treatment showed a differential benefit in decreasing fear at a 3-month follow-up, but not immediately after treatment. Two other studies evaluating trauma-focused treatments among sexually abused children did not demonstrate differential treatment responses with regard to PTSD or other anxiety symptoms (Berliner and Saunders, 1996; Celano et al., 1996).

Randomized controlled trials of treatment models other than TF-CBT have been rare. One study randomly assigned sexually abused children to 30 sessions of individual psychoanalytical psychotherapy or 18 sessions of group psychoeducation (Trowell et al., 2002). Children receiving the individual psychoanalytical therapy experienced significantly greater improvement in PTSD symptoms; however, it is not clear whether this was because of differences in the type of treatment (psychoanalytic versus psychoeducation), the format of treatment (individual versus group), or the length of treatment (30 versus 18 sessions). Another study (Downing et al., 1988) randomly assigned 22 sexually abused children to either psychodynamic therapy or behavioral reinforcement therapy and found that the reinforcement therapy resulted in significantly greater improvements in sleep, enuresis, sexualized behaviors, and general behavior problems than the psychodynamic treatment. Thus there is preliminary evidence that behavioral and psychodynamic therapies may also have some efficacy for improving certain symptoms in sexually abused children. More rigorous randomized trials of these treatments, using standardized assessments of *DSM-IV* disorders, will be helpful in determining the efficacy of these models.

Although treatment research for TF-CBT has grown impressively in the past decade, relatively small sample sizes have called into question the generalizability of the findings and have made it difficult to effectively examine the potential moderating effects of background characteristics. In addition, no study sample to date has documented a sufficiently high rate of other types of traumatic experiences to be considered representative of sexually abused children seen in community settings (Saunders, 2003). None has been simultaneously conducted at two or more sites in order to include children

from inner-city, suburban, and rural settings and to compare findings across sites. The present study was designed to address these shortcomings. To our knowledge it is the first two-site, randomized controlled treatment trial for sexually abused children that includes a sample that is large and diverse enough to be considered representative of symptomatic sexually abused children who present for treatment. The current paper presents the design of the study and initial treatment outcome findings.

METHOD

Subjects

Subjects were 229 consecutively referred children aged 8 to 14 years who had experienced contact sexual abuse that was confirmed by Child Protective Services (CPS), law enforcement, or a professional independent forensic evaluator, who met all study criteria and agreed (along with a custodial adult) to participate in the study. Children were recruited from two sites, one in a large metropolitan area and one in a suburban setting. Both sites are academically affiliated outpatient clinical treatment programs for abused/traumatized children. Referral sources included CPS, police, victim advocacy centers and child advocacy centers, pediatric care providers, mental health care providers, and self-referrals. No recruitment advertisements were placed. The recruitment, assessment, and treatment protocols were identical at both sites and were reviewed and approved by the programs' respective institutional review boards.

For inclusion in the study, children had to meet at least five criteria for sexual abuse–related *DSM-IV*-defined PTSD, including at least one symptom in each of the three PTSD clusters (re-experiencing, avoidance or numbing, and hyperarousal). In addition, children were required to have a parent or other caretaker (including long-term foster parents) who was willing and able to participate in the parental treatment component of the study. Informed child assent and parental consent were required for admission to the study.

Children were excluded if they had an active psychotic disorder or an active substance use disorder that resulted in significant impairment in adaptive functioning, or if the parent or primary caretaker who would be participating in the treatment had such a disorder. In addition, children were excluded if they were not fluent in English and/or had a documented developmental disorder (e.g., autism). Children who were currently taking psychotropic medication had to have been on a stable medication regimen for at least 2 months prior to admission to the study. Children in the study could not be receiving psychotherapy for sexual abuse outside of the study.

Of the original 229 children in the sample, 5(2%) never returned for treatment, 8 (3%) left after attending one session, and 13 (6%) left after attending only two sessions. These 26 (11%) children and their parents were defined as dropouts. Therefore, 203 (88%) of the children attended at least three psychotherapy sessions, and this is the final sample on which the analyses of covariance (ANCOVAs) below are based. All 229 original subjects were included in the intent-to-treat analyses. The following flow sheet accounts for subjects at all stages of the study (see Fig. 1).

Nineteen (9%) of the final sample were currently taking psychotropic medications, and 39 (20%) had previously received counseling for the present sexual abuse episode. According to the Schedule for Affective Disorders and Schizophrenia for School-Age Children-Present and Lifetime Version PTSD section (K-SADS-PL-PTSD), 180 (89%) met the full criteria for current PTSD. These children were described by their parents as having a variety of other psychological and behavioral problems. For example, although the mean pretest *T* score on the Child Behavior Checklist (CBCL) (Achenbach, 1991) of the 203 children was 63.61 (SD 10.87), indicating that the average child had above-normal levels of psychopathology, 71 (35%) children had *T* scores greater than 70, representing severe psychopathology.

The K-SADS-PL-PTSD was used to identify children's exposure to traumatic events other than sexual abuse. For example, 144 (70%) of these children had been confronted with news of the sudden unexpected death or life-threatening illness of a loved one, 118 (58%) had witnessed domestic violence, 53 (26%) were victims of physical abuse, 75 (37%) had witnessed or been involved in a serious accident, 35 (17%) were victims or witnesses of community violence, 28 (14%) had experienced a fire or natural disaster, and 51 (25%) had experienced other PTSD-level traumatic events, such as medical traumas, traumatic custody situations (e.g., being kidnapped by noncustodial parent), school violence not included in the K-SADS definition of community violence, and terrorist attacks. These children experienced a mean of 2.66 (SD 1.61) traumatic events in addition to sexual abuse.

Among the 203 children, there were 14 sibling pairs; therefore, there were 189 caretakers from whom we collected pretreatment data. Sibling pairs were assigned to the same treatment, as it was essential for parents to receive only one parent treatment model. Sibling pairs were evenly distributed between the two treatment models. Parents completed only one Beck Depression Inventory II (BDI) (Beck et al., 1996) at each evaluation point, even if they had more than one child in the study. Demographic information about participating children and parents is summarized in Table 1.

Procedures

Upon referral to either participating center, an extensive initial phone screen was conducted and the possibility of participating in the study was discussed with parents of children who appeared to meet the study criteria. Those who agreed were scheduled for an initial assessment, which was conducted by independent evaluators at each site. Independent evaluators from the two sites were trained together in the administration and scoring of the semistructured assessment instruments. Training was provided by the first and third authors, who had been trained to criteria in the administration of the K-SADS at Western Psychiatric Institute and Clinic. Acceptable interrater agreement was established between interviewers at the two sites. At the initial assessment, children and parents completed the assessment instruments described below, and those who qualified for admission to the study read and signed informed assent/consent forms. They were then assigned to a study therapist, who was informed by one of the investigators as to the type of treatment that would be offered. The independent evaluator was blind to the treatment condition, and informants were told that they would be paid $25 for the initial evaluation and $50 for each follow-up assessment.

Outcome Measures

The following instruments were administered by the independent evaluators before and after treatment to the children to measure psychiatric symptomatology: K-SADS-PL (Kaufman et al.,

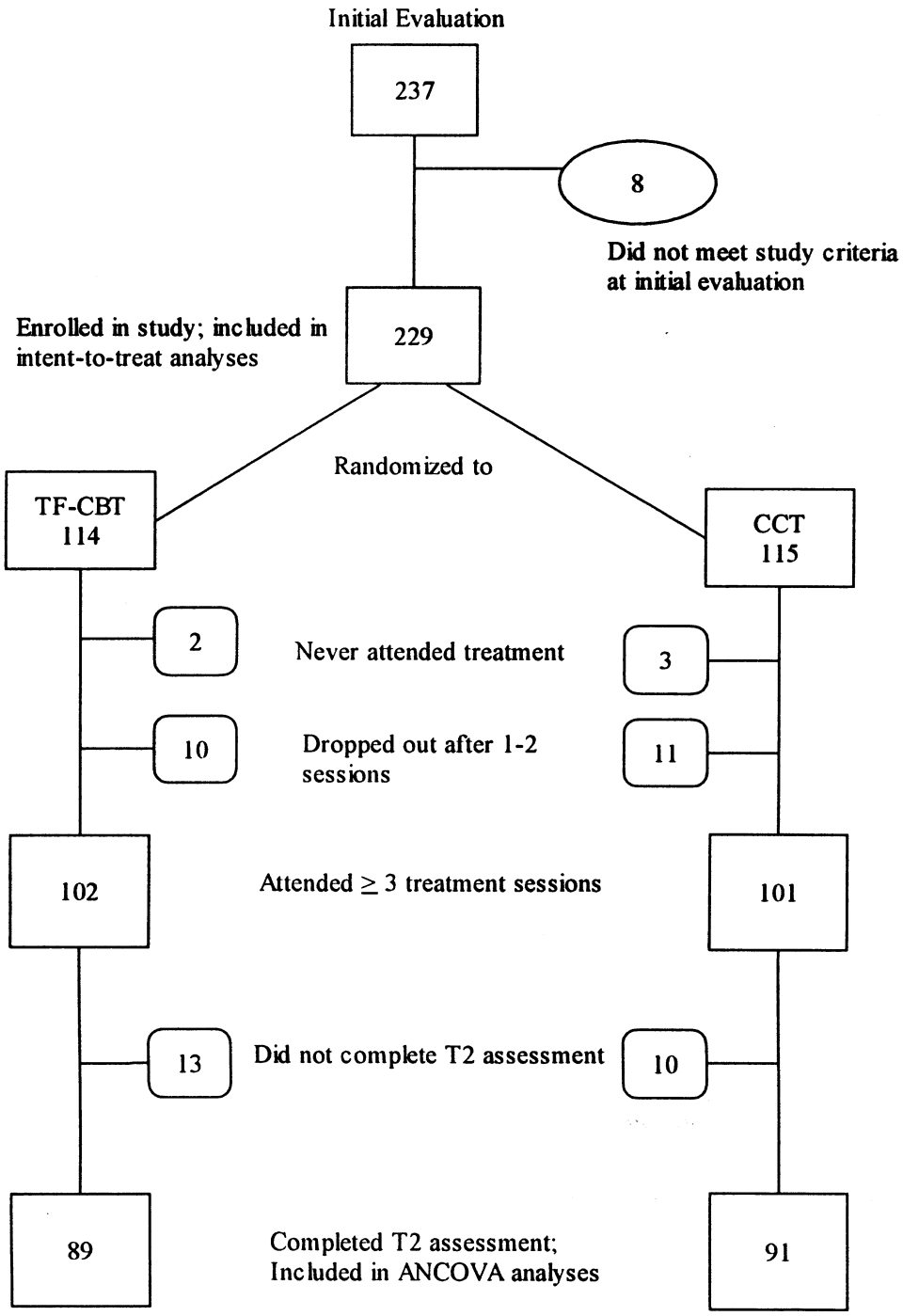

Fig. 1 Flow chart. TF-CBT = trauma-focused cognitive-behavioral therapy; CCT = child-centered therapy; ANCOVA = analysis of covariance.

1996), a semistructured interview administered independently to child and parent to assess the presence of *DSM-IV* psychiatric disorders (for this study, the PTSD, Psychosis, and Substance Use Disorders sections were used); Children's Depression Inventory (CDI) (Kovacs, 1985), a well-established self-report instrument for depressive symptoms in children; State-Trait Anxiety Inventory for Children (STAIC) (Spielberger, 1973), a widely used self-report measure of both present (state) and trait anxiety symptoms; and Children's Attributions and Perceptions Scale (CAPS) (Mannarino et al., 1994), a self-report measure of children's stigmatization, interpersonal trust, self-blame for negative events, and perceived credibility.

The following instruments were administered before and after treatment to the parents: K-SADS-PL (described above); CBCL (Achenbach, 1991), which includes four broad-band scales and

TABLE 1
Demographics of Child Sample (N = 203) and Participating Parents (N = 189)

Demographic Variables	Results
Gender, *n* (%)	
Female	160 (79)
Male	43 (21)
Age	
Range	8 yr, 0 mo–14 yr, 11 mo
Mean	10.76 yr
Ethnicity (self-described), *n* (%)	
White	122 (60)
African American	56 (28)
Hispanic American	9 (4)
Biracial	14 (7)
Other	2 (1)
Identity of perpetrator, *n* (%)	
Stepparent	46 (23)
Biological/adoptive parent	15 (7)
Other adult relative	33 (16.3)
Other adult nonrelative	42 (20.7)
Stranger	5 (2.5)
Sibling	13 (6.4)
Older peer (relative)	13 (6.4)
Older peer (nonrelative)	25 (12.3)
Multiple perpetrators	10 (5)
Most intrusive type of sexual abuse, *n* (%)	
Sexual touching over clothes	6 (2.9)
Nongenital touching under clothes	9 (4.4)
Digital penetration	45 (22)
Simulated intercourse	21 (10.3)
Oral-genital abuse	41 (20.1)
Penile penetration	76 (37.4)
Other	8 (3.9)
How perpetrator engaged child, *n* (%)	
Playful coaxing	22 (10.8)
Bribes	8 (3.9)
Command	40 (19.7)
Verbal threats	38 (18.7)
Physical threats	10 (4.9)
Physical force	74 (36.5)
Mean (SD) age at first sexual abuse episode, yr	8.90 (2.59)
Mean (SD) age of most recent abuse, yr	9.81 (2.33)
Median no. of abuse episodes (range)	4 (1–1,000)
Mean (SD) months since last abuse	12.25 (19.4)
Identity of participating parent, *n* (%)	
Biological mother	148 (78)
Adoptive mother	5 (3)
Stepmother	3 (2)
Foster mother	7 (4)
Grandmother	9 (5)
Other female relative	7 (4)
Biological father	8 (4)
Stepfather	1 (1)
Grandfather	1 (1)
Mean (SD) age of participating parent, yr	37.07 (7.79)
Marital status of participating parent, *n* (%)	
Currently married	77 (41)
Divorced or never married	112 (59)
Employment status, *n* (%)	
Full-time	98 (52)
Part-time or unemployed	91 (48)
Family income, *n* (%)	
<$25,000 per year	99 (52)
>$25,000 per year	90 (48)
Participating parent currently taking psychotropic medication, *n* (%)	30 (16)
Participating parent with drug alcohol abuse, *n* (%)	46 (24)
Participating parent received treatment for personal sexual abuse, *n* (%)	15/121 respondents (8%)

—*Continued*

Continued

nine narrow-band scales to assess child behavior problems (for the purposes of this study, only the broad-band scales of social competence, internalizing, externalizing, and total behavior problems were analyzed); Child Sexual Behavior Inventory (CSBI) (Friedrich et al., 1992), a parent report instrument for normative as well as inappropriate sexual behaviors; BDI (Beck et al., 1996), a parent self-report measure of depression; the Parent's Emotional Reaction Questionnaire (PERQ) (Mannarino and Cohen, 1996), a parent self-report measure for emotional distress related to the child's sexual abuse experience; the Parental Support Questionnaire (PSQ) (Mannarino and Cohen, 1996), a self-report measure of parental support of the sexually abused child and attributions about responsibility for the abuse; and the Parenting Practices Questionnaire (PPQ) (Strayhorn and Weidman, 1998), a parent self-report instrument of parenting practices modified for use with this population (Stauffer and Deblinger, 1996). Three items from the original PPQ were modified from questions about general parenting practices to questions about interactions with children specific to sexual abuse. This revised version of the PPQ had an α coefficient of .72. All of these instruments have established acceptable psychometric properties and have been used in previous treatment studies of sexually abused children.

Treatment

Subjects were randomly assigned to either TF-CBT or child-centered therapy (CCT). Both treatments were manualized (Cohen and Mannarino, 1996b; Deblinger and Heflin, 1996). Study therapists at both sites were trained together over a 3-day period. Therapists were diverse in terms of their professional training (i.e., psychologists and social workers) and theoretical backgrounds (i.e., cognitive-behavioral, psychodynamic, and play therapy). Three therapists had extensive experience in both TF-CBT and CCT; one had extensive experience in primarily providing CCT and one in primarily providing TF-CBT; two therapists had relatively little

experience in either modality. All therapists learned both treatment modalities and provided both treatments throughout the study. This design was used both to maintain the blindness of independent evaluators (who typically knew which therapist was treating each family) and to eliminate the potential bias of a particularly effective therapist skewing treatment response in favor of one treatment over the other. Therapists had intensive weekly supervision in each treatment model. Additionally, twice-monthly cross-site phone supervision for each treatment modality was provided. Fidelity to the assigned treatment modality was monitored through supervisors listening to all treatment audiotapes, and through independent random rating of 25% of all audiotapes. Therapist fidelity for both treatments exceeded 95%.

The treatment models used in this study were selected because they each had strong theoretical bases for treating sexually abused children, were widely used in community settings, and were sufficiently distinct from one another. Each treatment was provided in 12 weekly individual sessions to parent and child. One therapist treated each child–parent dyad. Treatment sessions lasted 90 minutes, with 45 minutes for each individual session. In three of the TF-CBT sessions, a joint parent–child session lasting approximately 30 minutes was provided; for these sessions, the individual child and parent sessions were reduced to 30 minutes.

Child-Centered Therapy

CCT is a child/parent-centered treatment model focused on establishing a trusting therapeutic relationship that is self-affirming, empowering, and validating for the parent and child. This model is consistent with those widely used in rape crisis centers and other community settings to treat sexually abused children. It is based on the empirically supported premise that these children and their parents develop difficulties because they have experienced a violation of trust and disempowerment (Barker-Collo and Read, 2003; Finkelhor, 1987). CCT aims to reverse these difficulties by establishing an empowering trusting relationship and by encouraging children and parents to direct the content and structure of their own treatment, thereby allowing them to choose when, how, and whether to address aspects of the child's sexual abuse rather than the therapist deciding this. Therapists provided active listening, reflection, accurate empathy, encouragement to talk about feelings, and belief in the child's and parent's ability to develop positive coping strategies for abuse-related difficulties. Therapists offered limited interpretations when clinically appropriate and addressed behavioral difficulties by encouraging the parent and child to formulate their own personal strategies for behavioral change, rather than providing prescriptive advice in this regard. Although sessions were generally client-directed, written psychoeducational information about child sexual abuse was provided and children specifically were prompted to share their feelings about the sexual abuse during two therapy sessions if they did not do so spontaneously.

Trauma-Focused Cognitive-Behavioral Therapy

The TF-CBT treatment model is informed by effective interventions for adult PTSD and for non-PTSD child anxiety disorders, and by cognitive and learning theories about the development of PTSD in children. It includes several components that are presented in a logical sequence, with each module of treatment building on skills and progress gained from previous sessions.

Specific elements of the TF-CBT model include skills in expressing feelings; training in coping skills; recognizing the relationships between thoughts, feelings, and behaviors; gradual exposure (also referred to as creating the child's trauma narrative); cognitive processing of the abuse experience(s); joint child–parent sessions, psychoeducation about child sexual abuse and body safety; and parent management skills.

As sessions proceeded, children were encouraged to confront increasingly detailed and distressing abuse-related reminders and memories. Children created narratives of their sexual abuse experiences, typically by writing and illustrating a book, which was shared with parents in their parallel sessions. The three joint parent–child sessions were used to optimize comfortable communication, to provide education about personal safety and healthy sexuality, and to allow the child and parent to share and discuss the child's trauma narrative together.

RESULTS

There were no significant differences between treatment completers and treatment dropouts on any demographic or psychosocial background characteristics of the children or parents. These demographic/psychosocial variables were also not significantly related to the likelihood of completing the posttreatment assessments. The two sites did not significantly differ on any of these background variables as well. Accordingly, the data from the two sites were pooled for analytical purposes, focusing on participants who completed three or more sessions and participated in the posttest evaluations.

The mean number of TF-CBT sessions provided was 10.47 (SD 2.89), while the mean number of CCT sessions provided was 10.75 (SD 2.44) ($t_{201} = 0.75$, $p =$ NS, $d = 0.10$). These differences were not statistically significant. One hundred forty-nine (73%) of the children completed all 12 therapy sessions. Comparisons of the two treatment conditions are summarized in Table 2.

There was a main effect for time as children and parents in both treatments improved significantly from the pretreatment to posttreatment assessment on all measures except the PSQ. Consequently, ANCOVAs were next performed to determine whether the adjusted mean scores of the scales for both treatments were comparable. The standardized effect size for the adjusted mean difference between the TF-CBT and the CCT groups for each scale was calculated by dividing the mean difference by the square root of the ANCOVAs within mean square error for the adjusted posttest score (Smithson, 2002). After controlling for the pretest score, the adjusted posttest scores of all three K-SADS-PTSD subscales (re-experiencing, avoidance, and hyperarousal), the CBCL total scale, the CDI, the CAPS

Credibility subscale, the CAPS Interpersonal Trust subscale, the Shame Questionnaire, the BDI, and the PERQ of the children and parents who were treated with TF-CBT were significantly lower than the adjusted posttest scores of those who were treated with CCT. Furthermore, the adjusted posttest mean scores of the PPQ and the PSQ were significantly higher than the adjusted mean score of those who were treated with CCT. These differences all reflect outcomes demonstrating the superiority of TF-CBT to CCT treatment. Table 2 indicates that all of these latter, significant adjusted-mean differences reflected medium to large effect sizes (Cohen, 1992).

A series of additional ANCOVAs were then conducted entering site, gender, ethnicity, age, and number of treatment sessions as main effects, and their interactions (product variables) with type of treatment to ascertain whether any of these characteristics might moderate differential responses to treatment. Intent-to-treat (endpoint) analyses were also performed in which pretest scores were used to replace missing posttest scores. In addition, SAS Multiple Imputation and Multiple Imputation Analysis (SAS Institute, 2001) procedures were used to estimate the sample's missing posttest scale scores. All of the ANCOVAS for the scales based on the endpoint and multiple imputation analyses to estimate missing posttest data displayed similar patterns of results to those previously described for the ANCOVAS summarized in Table 2. Furthermore, none of the ANCOVAs testing for the moderating effects of site, gender, race, ethnicity, age, and number of sessions yielded any significant main effects for these potential moderating variables and these variables' possible interactions with type of treatment for any of the measures.

To estimate the clinical significance of treatment in reducing the prevalence of PTSD symptoms, a χ^2 test for independence was used to compare the numbers of children who were diagnosed with PTSD at posttest in the TF-CBT and the CCT groups. Of the 89 children treated with TF-CBT for whom complete K-SADS data were available, 19 (21%) were diagnosed with PTSD at posttest. Forty-two (46%) of the 91 children who were treated with CCT were diagnosed with PTSD at posttest. These differences were statistically significant, χ^2_{Yates} (1, $N = 180$) = 11.28, $p < .001$, $\varphi = 0.26$. At pretest, the percentages of these 180 children who had been diagnosed with PTSD had been comparable for both the TF-CBT ($N = 75$, 84%) and the CCT ($N = 83$, 91%) groups, χ^2_{Yates} (1, $N = 180$) = 1.42, p = NS, $\varphi = 0.11$.

DISCUSSION

This study is the first two-site controlled trial comparing alternative treatments designed for children with PTSD symptoms as a result of CSA. The findings demonstrated a consistent pattern of results across completer, endpoint, and multiple imputation analyses. Children who received TF-CBT exhibited significantly greater improvements than those who received CCT on measures of PTSD, depression, and total behavior problems. Findings documented clinically as well as statistically significant benefits of receiving TF-CBT, as more than twice as many CCT as TF-CBT children continued to meet full PTSD *DSM-IV* criteria at posttreatment.

This study was designed to not only replicate but also to extend earlier investigations. Previous studies have documented poorer outcomes in children who experience dysfunctional abuse attributions, higher levels of shame, and distressed and/or unsupportive parental responses. These variables will be examined in future analyses as potential mediators of treatment outcome. However, in this investigation, they were conceptualized as important direct targets of treatment as well. In this regard, findings showed that TF-CBT led to significantly greater improvements in children with respect to interpersonal trust, perceived credibility, and shame. Similarly, parents assigned to TF-CBT as opposed to CCT reported significantly greater improvements with respect to their own levels of depression, abuse-related distress, parental support, and parenting practices. Thus this study not only replicated previous findings concerning PTSD, depression, and behavioral symptom outcomes but also revealed the enhanced benefits of TF-CBT with respect to these other crucial aspects of children's cognitive and affective responses as well as parental functioning.

Compared to previous studies, the subject sample here was considerably larger; participants were recruited from geographically distinct regions; a larger number of therapists with diverse discipline and theoretical backgrounds were involved; a multiply traumatized population was included; and greater gender

TABLE 2
Treatment Outcome Measures

Scale	*N*	Pretest Mean	Pretest SD	Posttest Mean	Posttest SD	M_{adj}	MM_{diff}	MS	*F*	*df*	*d*
Child											
K-SADS Reexperiencing											
TF-CBT	89	3.98	1.31	1.53	1.39	1.55	0.75	2.38	10.68**	177	0.49
CCT	91	4.08	1.30	2.32	1.81	2.30					
K-SADS Avoidance											
TF-CBT	89	4.13	1.33	1.81	1.36	1.83	1.04	2.18	21.90***	177	0.70
CCT	91	4.35	1.13	2.89	1.62	2.87					
K-SADS Hypervigilance											
TF-CBT	89	3.67	1.21	1.69	1.28	1.69	0.54	1.83	7.22**	177	0.40
CCT	91	3.68	1.26	2.23	1.59	2.23					
CBCL Competence											
TF-CBT	87	15.84	3.59	16.60	3.53	16.47	−0.02	7.02	0	173	−0.01
CCT	89	15.45	3.60	16.33	3.43	16.45					
CBCL Internalizing											
TF-CBT	88	13.97	9.24	8.02	7.21	8.85	1.76	40.37	3.36	176	0.28
CCT	91	17.04	9.88	11.41	8.87	10.61					
CBCL Externalizing											
TF-CBT	88	15.59	10.47	11.10	8.52	11.65	1.64	40.58	2.94	176	0.26
CCT	91	17.18	9.88	13.82	10.22	13.29					
CBCL Total											
TF-CBT	88	48.48	27.90	31.45	21.75	33.30	5.71	301.55	4.78*	176	0.33
CCT	91	54.29	28.03	40.79	27.09	39.01					
CDI											
TF-CBT	92	9.92	7.50	5.70	5.47	6.34	1.80	36.36	4.04*	180	0.30
CCT	91	12.11	8.59	8.79	9.37	8.14					
STAIC Trait											
TF-CBT	92	37.27	6.83	30.78	7.20	31.30	1.86	44.80	3.39	180	0.28
CCT	91	39.10	7.96	33.69	8.57	33.16					
STAIC State											
TF-CBT	92	30.51	6.84	26.22	5.10	26.42	1.13	26.92	2.17	180	0.22
CCT	91	31.48	8.32	27.76	6.94	27.55					
CAPS Feeling Different											
TF-CBT	92	9.28	3.01	8.55	2.96	8.97	−0.03	7.60	0.01	180	−0.01
CCT	91	10.81	3.42	9.36	3.57	8.94					
CAPS Negative Events											
TF-CBT	92	7.82	3.05	6.46	2.46	6.63	0.43	5.35	1.57	180	0.19
CCT	91	8.58	2.91	7.24	2.89	7.06					
CAPS Credibility											
TF-CBT	92	12.46	3.14	10.37	3.38	10.65	1.22	12.58	5.16*	180	0.34
CCT	91	13.82	3.98	12.15	4.26	11.87					
CAPS Trust											
TF-CBT	92	12.45	3.97	9.86	3.81	10.01	1.22	12.59	5.34*	180	0.34
CCT	91	13.13	3.97	11.38	4.11	11.23					
CSBI											
TF-CBT	88	10.38	9.02	6.26	6.02	6.58	1.31	36.49	2.08	176	0.22
CCT	91	11.42	10.99	8.20	10.45	7.89					
Shame											
TF-CBT	91	2.84	2.28	0.87	1.35	0.90	0.67	2.09	9.52**	178	0.46
CCT	90	3.03	2.18	1.60	1.87	1.57					

—Continued

TABLE 2
Continued

Scale	*N*	Pretest Mean	Pretest SD	Posttest Mean	Posttest SD	M_{adj}	MM_{diff}	MS	*F*	*df*	*d*
Parent											
BDI-II											
TF-CBT	83	17.34	11.30	6.83	8.73	6.59	2.90	58.67	5.93*	163	0.38
CCT	83	16.10	11.10	9.25	8.82	9.49					
PERQ											
TF-CBT	88	51.36	12.50	30.76	11.29	30.24	8.24	103.43	29.24***	176	0.81
CCT	91	49.49	11.44	37.98	12.84	38.48					
PPQ											
TF-CBT	82	135.60	15.20	144.38	15.55	144.67	–5.77	101.03	13.82***	165	–0.57
CCT	86	136.44	15.80	139.19	13.61	138.90					
PSQ											
TF-CBT	88	88.38	6.52	90.28	6.50	90.52	–2.81	37.02	9.53**	176	–0.46
CCT	91	89.12	6.56	87.95	8.09	87.81					

Note: M_{adj} = adjusted means; M_{diff} = adjusted mean differences; MS = within mean squares; *d* = effect sizes for adjusted mean differences; TF-CBT = trauma-focused cognitive-behavioral therapy; CCT = child-centered therapy; K-SADS = Schedule for Affective Disorders and Schizophrenia for School-Age Children: CBCL = Child Behavior Checklist; CDI = Children's Depression Inventory; STAIC = Spielberger State-Trait Anxiety Inventory for Children; CAPS = Children's Attributions and Perceptions Scale; CSBI = Child Sexual Behavior Inventory; Shame = Shame Questionnaire; BDI-II = Beck Depression Inventory-II; PERQ = Parent Emotional Reaction Questionnaire; PPQ = Parent Practices Questionnaire; PSQ = Parent Support Questionnaire.

* $p < .05$; ** $p < .01$; *** $p < .001$.

diversity was represented in the treatment cohort. This larger, more diverse sample allowed analyses of these factors as potential moderators of treatment. The positive treatment response to TF-CBT among these multiply traumatized children suggests that there may be more commonality than differences among children who develop PTSD (Saunders, 2003) and that similar treatment interventions may be effective for children traumatized by different types of traumatic events.

Limitations

One limitation of this study is the lack of a no-treatment control group. We chose not to include such a group because of ethical concerns as well as previous studies that have demonstrated little to no symptom improvement in sexually abused children during wait-list periods (King et al., 2000; Stauffer and Deblinger, 1996). This study also did not elucidate which specific TF-CBT components underlie its superior effectiveness. Dismantling studies may help to determine whether the exposure-based interventions included in this TF-CBT approach are critical to the resolution of PTSD and/or shame in this population of children. Another limitation is that although the population was diverse in many ways, relatively few Hispanic and no Asian families were included in this study. Although this largely is reflective of the ethnic population of the geographic areas involved in the study, it will be important to evaluate the generalizability of findings to families of other ethnicities.

Clinical Implications

This study empirically supports the effectiveness of a short-term TF-CBT approach for multiply traumatized sexually abused children with PTSD and related difficulties. Given the mounting research documenting the severe and long-lasting risks associated with CSA, it is critical that we provide sexually abused children with the most effective treatment as early as possible. This imperative is underscored by recent research reporting a relationship between early sexual abuse and the potential negative psychobiological impact of chronic PTSD on the developing brain (DeBellis et al., 1999). In addition to the potentially devastating effect of chronic PTSD, researchers have noted that shame and dysfunctional abuse attributions are also associated with poorer psychosocial outcomes in children who have suffered sexual abuse (Feiring et al., 2002; Mannarino and Cohen, 1996) and are predictors of negative outcomes in adulthood (Barker-Collo and Read,

2003). The TF-CBT approach evaluated here not only appears to effectively treat PTSD, but also is superior to CCT in reducing abuse-related attributions and shame. It is also effective in reducing parallel depression and parental distress about the child's sexual abuse, and in enhancing parental support of the child and positive parenting practices. This study thus adds support for the use of TF-CBT in treating multiply traumatized sexually abused children and adolescents.

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