

Cognitive-Behavioral Treatment for Posttraumatic Stress Disorder in Children and Adolescents

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- Treatment

Rates of exposure to violence and traumatic events for children and adolescents are exceedingly high. In a nationally representative sample of children and adolescents in the United States, 60.4% reported exposure in the past year, with lifetime rates nearly a half to one-third higher, depending on exposure type.¹ Many children and adolescents experience repeated exposure or multiple types of events over their lifetime.^{1,2} Rates of trauma exposure for youth in war-involved or high-conflict countries are even higher.³⁻⁵ The range of potentially traumatic events includes exposure to domestic violence, child abuse and neglect, and community violence, and experiencing the violent death of a loved one, among others.

A significant number of children and adolescents exposed to traumatic events develop posttraumatic stress (PTS) symptoms, posttraumatic stress disorder (PTSD), and other common trauma-related sequelae, including depressive disorders, anxiety disorders, and externalizing behavioral disorders. Rates of PTSD among children and adolescents vary, depending on the study population of focus (eg, traumatized sample vs community sample) and particular type of trauma examined (eg, sexual abuse and extreme interpersonal trauma are associated with higher rates of PTSD). According to

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recent studies, however, even subclinical symptoms of PTSD place children at risk for other psychiatric disorders.² Therefore, children and adolescents must receive effective treatment for PTS, PTSD, and co-occurring conditions.⁶

Treatments are available that show effectiveness for child and adolescent PTSD, most of which are cognitive-behavioral therapies (CBT).^{7,8} In a meta-analysis examining an array of treatment approaches for treating child and adolescent PTSD, Wetherington and colleagues⁸ reviewed CBT, play therapy, art therapy, psychodynamic therapy, and pharmacologic therapy. The results were robust for CBT, whereas insufficient evidence was found for the other approaches. Silverman and colleagues⁹ provide further evidence for CBT approaches. Their review of psychosocial treatments for trauma exposure that have evidence for improving child and adolescent outcomes (eg, post-traumatic stress, depressive symptoms, anxiety symptoms, and externalizing behavior problems) showed that the only two that met the *well-established* and *probably efficacious* criteria^{10,11} were CBT approaches, namely trauma-focused cognitive-behavioral therapy (TF-CBT) and cognitive behavioral intervention for trauma in schools (CBITS).

The available CBT approaches for PTSD have several common elements, many of which are also prevalent in most CBT treatments for other internalizing disorders (eg, other anxiety, depression).^{12,13} These elements include (1) psychoeducation about PTSD, anxiety, and the prevalence and impact of trauma; (2) relaxation and affective modulation skills for managing physiologic and emotional stress; (3) exposure or gradual desensitization to memories of the traumatic event and to innocuous reminders of the traumatic event; and (4) cognitive restructuring of inaccurate or maladaptive/unhelpful cognitions. In a study identifying core components in the treatment of anxiety disorders, Chorpita and colleagues¹⁴ showed that exposure seems to be the only “universal” component. Exposure is explicitly included in the two trauma-specific CBT approaches with the most evidence (ie, TF-CBT, CBITS), but is not always an explicit component of some of the promising practices described in this article.

In addition to these common clinical elements, CBT treatment approaches to PTSD also include common structural or delivery components, including agenda setting, modeling and coached practice of new skills in session, and assignment of weekly practice of skills in real-world settings (eg, home, school), to occur in between sessions. Additional aspects of trauma-specific CBT include use of assessment measures to guide treatment, ongoing use of feedback, and progressive building on mastered skills. As in all CBT approaches, the therapist takes an active and directive role in session. In trauma-specific CBT, this role is particularly important, given that avoidance is one of the primary symptom areas of PTSD.

This article provides a detailed overview of two CBT approaches with the strongest evidence of effectiveness: TF-CBT¹⁵ and CBITS.¹⁶ In addition to reviewing these two approaches, a section on promising practices reviews several promising CBT approaches that contain many of the common elements listed earlier. Most of these approaches are currently under investigation and merit attention, but currently have comparatively less evidence of effectiveness.

Several investigators have reviewed psychosocial treatments for PTSD and trauma exposure.^{7-9,17,18} This article provides an update to these reviews, focusing specifically on CBT approaches and highlighting selected promising practices. Moreover, evidence from the included promising practices both bolsters the evidence for CBT approaches to treating PTSD in children and adolescents in general and shows the versatility and potential of CBT in varied settings and with diverse youth and families. In addition, many of the promising practices show that trauma-specific CBT approaches can be combined with other CBT interventions for treating PTSD and co-occurring disorders.

TF-CBT

Evidence

Among the CBT approaches for trauma exposure, PTSD and co-occurring sequelae, TF-CBT has the most evidence of effectiveness^{15,19,20} (<http://tfcbt.musc.edu>). Six published randomized controlled trials support its effectiveness in reducing PTS symptoms and PTSD, depressive symptoms, shame, and trauma-related and general behavior problems compared with non-CBT interventions (eg, supportive or client-centered therapies, waitlist control, usual care).^{21–26} All randomized controlled trials except one²⁵ involved individual TF-CBT delivery. An additional small randomized controlled trial comparing TF-CBT alone with TF-CBT plus sertraline²⁷ showed little perceived benefit of added pharmacologic intervention.

Results from two additional randomized controlled trials are forthcoming, one of which focuses specifically on youth exposed to domestic violence²⁸ and one that examines variation in the number of sessions and aspects of gradual exposure.²⁹ Follow-up studies provide evidence of sustained benefit at 6 months, 1 year, and 2 years posttreatment.^{30–33} Trials have focused predominantly on school-aged and preschool aged youth who have been sexually abused or multiply traumatized.

In the most recently published multisite randomized controlled trial involving 229 children ages 8 to 14 years, all youth were sexually abused, with 90% of these youth experiencing a mean of 3.7 different types of traumatic events, including sexual abuse.^{21,34} Children who received TF-CBT were half as likely as those in the client-centered comparison condition to meet full *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition (DSM-IV)* PTSD criteria at the end of treatment. Children in the TF-CBT condition also had significantly lower levels of depression and behavior problems, higher levels of interpersonal trust and perceived credibility, and lower levels of shame. Parents of children who received TF-CBT also experienced improvement in depressive symptoms, parenting ability, and their own abuse-related distress.

In addition to these randomized controlled trials, the evidence for TF-CBT is supplemented by several quasi-experimental^{35–37} and open trials.^{19,34,38,39} Two open trials have focused specifically on childhood traumatic grief.^{15,19,21,34} One open trial provides additional evidence for group delivery of TF-CBT with sexually abused youth.³⁹

Model Description

The TF-CBT model includes nine components, described using the acronym PRACTICE. The PRACTICE components include *psychoeducation*, *parenting skills*, *relaxation skills*, *affective modulation skills*, *cognitive coping skills*, *trauma narrative and processing*, *in vivo exposure*, *conjoint child–parent sessions*, and *enhancing safety*. TF-CBT is typically delivered in 12 to 20 sessions and is appropriate for children and adolescents ages 3 to 18 years.^{15,19} In TF-CBT, the clinician works with both the child and the child's nonoffending caregiver, usually a biological parent. In the beginning of treatment, the sessions typically involve meeting individually with the child and the parent. The PRACTICE skills are taught to both, with the exception of parenting, which is only taught to the parent. The goal of each component is to help the child and the parent achieve mastery over avoidance of trauma-related thoughts, feelings, reminders, and memories. The components are ordered in such a way that each component builds on the previous component, and therefore the components are typically provided in the PRACTICE order, with early PRAC skill-building components being delivered first.

A crucial part of providing TF-CBT involves the inclusion of exposure, or gradual exposure, to feared stimuli. Exposure has been identified as one of the common

elements in CBT approaches for treating PTSD and other anxiety disorders. In the area of trauma, feared stimuli may include memories and physical reminders of the trauma (eg, sights, sounds, people, smells, other cues that serve as trauma reminders). Gradual exposure is integrated into all of the PRACTICE components, because it is a critical part of achieving mastery over avoidance. In each PRACTICE component, gradual exposure involves incrementally increasing the duration at which the child and the parent face feelings, thoughts, reminders, and memories of the child's traumatic experiences. The child can then habituate to the physical and psychological arousal that accompanies reminders of traumatic events so that avoidance and other symptoms are decreased. In addition to being included in all PRACTICE components, the trauma narrative portion of TF-CBT involves helping the child gradually develop a narrative of the traumatic experiences that can be reviewed during subsequent sessions. During the trauma narrative component, which occurs over several sessions (eg, three to four), the child describes details of what happened before, during, and after the traumatic events, and shares thoughts, feelings, and physiologic reactions.

When the traumatic event involves death and loss, grief-specific components are available (CTGweb: <http://ctg.musc.edu>), including grief-specific psychoeducation and guidance with grieving the loss, resolving ambivalent feelings, redefining the relationship (from interaction to memory), and committing to present relationships. Each of these components builds systematically on the PRACTICE skills and can be tailored to meet the unique circumstances of children and adolescents.

Implementation Considerations

Several recent efforts show success in delivering TF-CBT to special populations of youth, including those in foster care, residential settings, and international settings. Evidence of effectiveness with youth in foster care is accumulating, including from the Weiner and colleagues³⁷ study in Illinois and an ongoing National Institute for Mental Health (NIMH)-funded, randomized, effectiveness trial of TF-CBT in Washington State, focused on foster parent involvement and engagement (MH079910, PI: Dorsey, S).

Providing evidence for effectiveness in community-based settings, clinicians in many of the quasi-experimental and open trials of TF-CBT were masters-level clinicians employed in community mental health settings, and included youth who presented at mental health centers for treatment.³⁵⁻³⁷ Ongoing research is evaluating TF-CBT in a range of settings with varying implementation conditions.⁴⁰ Among these, several statewide implementation projects include relatively rigorous evaluation plans (eg, Project BEST in South Carolina, www.musc.edu/projectbest; North Carolina Child Treatment Program in North Carolina, <http://www.cfar.unc.edu/>). Two NIMH-funded open trials of TF-CBT are currently underway in low-resource countries, one focused on HIV-infected children and adolescents who were sexually abused (from Zambia) and one focused on orphaned children and adolescents, many of whom were orphaned as a result of the AIDS epidemic and have traumatic grief symptoms (from Tanzania).

Cultural Considerations

In the United States, applications of TF-CBT have been developed for Latino⁴¹ and Native American families.⁴² These applications maintain all of the TF-CBT components but include culturally specific aspects of each (eg, cuento therapy involving story-telling for Latino families) to better engage families and ensure that the treatment is as culturally relevant as possible. In addition to these specific applications, all TF-CBT trainings, resources, and materials (eg, TF-CBTWeb, <http://tfcbt.musc.edu>)^{15,19}

specify the need for providing the model components with fidelity, but in a manner that is flexible and engaging with regard to family and child background, ethnicity, and culture. Internationally, TF-CBT is currently being implemented in a range of settings in Zambia, Tanzania, China, Japan, Norway, Cambodia, Indonesia, Germany, the Netherlands, and other countries.

CBITS

Evidence

Current evidence for CBITS consists of one randomized controlled trial,¹⁶ one quasi-experimental trial,⁴³ and one field trial.³⁶ In the randomized controlled trial with sixth and seventh grade students ($N = 126$), Stein and colleagues¹⁶ compared CBITS with a waitlist control group. The intervention included 10 weekly 45- to 60-minute group sessions, one to three individual sessions focused on imaginal exposure to the traumatic events, two to four optional sessions with parents, and one teacher education session. After the 10-week CBITS intervention, the intervention group reported significantly lower PTSD symptoms than did the waitlist control group, with 86% of students in the CBITS condition reporting lower PTSD symptom scores than would have been expected without treatment. In addition, the CBITS group reported lower depression scores, with 67% of students reporting lower depression scores than would have been expected without treatment. For both PTSD and depression scores, differences between the groups disappeared after the waitlist delayed-intervention group received CBITS. Furthermore, 78% of parents whose children received CBITS reported reduced psychosocial problems post-treatment; however, teachers did not report a significant reduction in classroom behavioral problems. The improvements in PTSD and depression symptoms, and parent-reported behavioral problems, were sustained at 6-month follow-up.

In their quasi-experimental study, Kataoka and colleagues⁴³ evaluated CBITS, with Spanish-speaking, recent immigrant students ($N = 113$), also using a waitlist comparison condition. Students recently immigrated (ie, within the past 3 years) from Mexico (57%), El Salvador (18%), Guatemala (11%), and other Latin American countries (13%).⁴³ Bilingual clinicians conducted eight weekly 45- to 60-minute group sessions, one to three individual sessions with students, two to four optional sessions with parents, and one teacher education session. Specific emphasis was placed on culturally competent implementation. For example, support was provided for immigration-related loss and separation during parent sessions. Students in the CBITS condition with baseline PTSD symptoms in the clinical range showed a significant reduction in both PTSD and depression symptoms compared with those in the waitlist condition.

In the field trial for Project Fleur-de-Lis,³⁶ children who screened positive for PTSD symptoms 15 months after Hurricane Katrina were randomized to either a school-based group intervention (CBITS) or an individual intervention (TF-CBT) delivered at a mental health clinic. Overall, children in both intervention groups showed reductions in PTSD symptoms, although several children continued to have elevated symptoms posttreatment. CBITS seemed to be more accessible, however, with considerably more children beginning (98%) and completing (91%) treatment than in the TF-CBT condition, in which treatment was provided in a mental health clinic (23% and 15%, respectively).

Model Description

CBITS was originally designed for trauma-impacted, recently immigrated students from Latino, Korean, Armenian, and Russian backgrounds, to be delivered in

inner-city school mental health clinics.¹⁶ The developers used a participatory research framework that involved providers and family members in model design. CBITS targets youth between 10 and 15 years of age, and originally focused on exposure to community violence but also has been found effective for youth with a range of trauma histories. Although developed for the school setting, CBITS has also been implemented in other settings (eg, community mental health clinics).

CBITS, in a manner similar to TF-CBT, includes the common elements for trauma-specific CBT interventions for PTSD. CBITS incorporates psychoeducation, relaxation training, cognitive coping skills, gradual exposure to trauma memories through trauma narrative, in vivo exposure, affective modulation skills, cognitive restructuring, and social problem solving.¹⁶ CBITS is delivered in a group setting (six to eight children per group), and typically includes 10 weekly sessions that are approximately 1 hour in length. In addition to the group sessions, one to three individual sessions focus on imaginal exposure to the traumatic event that occur before the gradual exposure exercises. CBITS also includes two parent education sessions in which parents learn about the effects of trauma on youth and the skills the youth are learning in treatment. Lastly, CBITS includes one teacher education session in which teachers learn about the effects of trauma on youth and the ways trauma-related symptoms may present in the classroom.¹⁶

An adaptation of CBITS, *support for students exposed to trauma* (SSET), was developed for delivery by school personnel.⁴⁴ The adaptation involved using a lesson plan format, eliminating individual break-out sessions and parent sessions, and using a more curricular format for imaginal exposure. A randomized trial of SSET ($N = 76$) showed reductions in PTSD and depressive symptoms, particularly for youth with high levels of symptoms pretreatment.^{44,45} Compared with CBITS effects, smaller reductions in symptoms were seen with SSET.

Implementation Considerations

CBITS has the goal of increasing intervention “reach”⁴⁶ through addressing common barriers to treatment such as stigma and access through providing treatment in the school setting. CBITS has been implemented in various communities in the United States (eg, immigrant, urban ethnic minority, low socioeconomic status, middle class) and internationally (ie, Australia, Japan; for more information, see www.nctsn.org⁴⁷; *Treatments that Work*). CBITS has been specifically adapted for the Latino immigrant faith community⁴⁸ and to be delivered by nonclinical school staff (ie, SSET).^{44,45}

TRAUMA AND GRIEF COMPONENT THERAPY

Evidence

Trauma and grief component therapy (TGCT) is a CBT-based treatment for youth (12–20 years of age) who have been exposed to trauma or are traumatically bereaved. TGCT has been primarily provided in schools, although it can be delivered in community mental health or other service settings. Evidence for TGCT comes from one randomized controlled trial,^{49,50} two quasi-experimental studies,^{35,51} and two open trials.^{52,53} Three of these studies were conducted in a low-resource, international setting, namely Bosnia.

In the randomized controlled trial,⁴⁹ 127 war-exposed Bosnian youth (13–19 years of age) in 10 secondary schools were randomized to receive only a classroom-based psychoeducation and skills intervention (modules one and four of TGCT) or the classroom-based intervention and the 17-session group TGCT intervention. Both groups had significant reductions in PTSD symptoms at the end of treatment

and at a 4-month follow-up. For youth who experienced at least one bereavement, a subgroup of those enrolled in both conditions, only those in the TGCT group had reductions in grief symptoms (at end of treatment, grief symptoms were not assessed at the 4-month follow-up). A significant decrease in depressive symptoms was seen in both groups at the 4-month follow-up, but only for the TGCT group at the end of treatment. Improvements in PTSD and depression were greater for those in the TGCT group than for those in the classroom-based intervention.

In the most recent quasi-experimental study, the Child and Adolescent Treatment Services (CATS)³⁵ project, which provided trauma-treatment services to children and adolescents in New York City post-9/11, more than half of the youth who received TGCT showed reduced PTSD symptoms at the end of treatment, with an even greater percentage showing improvement at 4-month follow up. In a quasi-experimental study of TGCT in Armenia (N = 64),⁵¹ receipt of TGCT was associated with reduced PTSD symptoms and stabilization of depressive symptoms, compared with youth who did not receive TGCT (and for whom depressive symptoms worsened). In the open trial conducted in the United States (N = 26),⁵³ youth who received TGCT had decreased symptoms of PTSD and traumatic grief, if traumatically bereaved. In an open trial conducted in Bosnia (N = 55),⁵² similar outcomes were seen for PTSD and traumatic grief, in addition to decreased depressive symptoms. However, nearly half of the 55 youth (n = 27) received only the first two of four modules (ie, did not receive the third grief-specific module; see later discussion), yet evidenced similar reductions in PTSD and traumatic grief.

Model Description

TGCT is typically group-based and includes approximately 10 to 24 sessions corresponding with four modules. The goal of the first module is to reduce acute distress and build group cohesion. Module one includes common CBT elements of psychoeducation, relaxation, and other skills for dealing with distress. Module two involves gradual exposure and cognitive processing. Module three involves providing grief-specific components (eg, psychoeducation about grief, adaptive remembering of the deceased). In the fourth module, the focus is on moving forward, and includes problem-solving of current difficulties, additional restructuring of maladaptive cognitions (eg, core beliefs), and taking steps toward restoring normal developmental progression.

Implementation Considerations

TGCT has been delivered in the United States in diverse populations and in a low-resource setting, and has been delivered by “real-world” providers, both in the domestic and international studies, indicating feasibility in community-based settings with community providers. In addition, two of the studies^{49,52} showed improvement in PTSD symptoms despite groups receiving only part of TGCT, suggesting further research is warranted regarding the potential benefit of more limited duration or complexity of interventions for traumatized youth.

PROMISING PRACTICES

Several promising practices in CBT for treating PTSD are available and merit review. Many of these treatments are being evaluated and, as research continues to accumulate, may supplement the menu of options and understanding of how to effectively treat children and adolescents with PTSD. Many of these practices combine common elements of CBT approaches to treating trauma with other CBT interventions, or

aspects of other interventions, to explicitly address system-related issues or common comorbid conditions (eg, substance use, emotion dysregulation, depression). The developers of many of these practices have received additional resources and support as part of the congressionally mandated National Child Traumatic Stress Network (NCTSN; www.nctsn.org) that is administered through the Substance Abuse Mental Health Services Administration (SAMHSA). The NCTSN is a science-to-practice collaborative of more than 50 currently funded centers that combines resources from hospitals, universities, community-based organizations, schools, child welfare organizations, and other entities committed to increasing access to and raising the standard of care for children, adolescents, and their families affected by trauma. Therefore, the NCTSN has been a major catalyst for the development, implementation, and dissemination of various evidence-based and promising practices. The next section reviews a few of these promising practices. Many specifically target youth with chronic trauma exposure and high levels of emotional dysregulation.

Trauma Systems Therapy

Inspired by Bronfenbrenner's⁵⁴ socio-ecological model, trauma systems therapy (TST) is a systems-oriented, CBT-informed treatment for trauma-exposed youth that focuses on both PTSD and other trauma-related symptoms, and on explicitly attempting to remediate factors in the social environment that perpetuate symptoms.⁵⁵ Evidence to support the efficacy of TST comes from an open trial of 110 youth, aged 5 to 20 years.^{55,56} Participants showed significant improvements in PTSD symptoms and family and school-related problems over a 3-month follow-up period.

TST uses a multidisciplinary team to implement an array of interventions, within multiple systems, that target two key dimensions: (1) enhancing individuals' ability to regulate emotions and cope with considerable adversity, and (2) promoting change in the social environment (eg, increasing safety in the home, obtaining adequate housing) to decrease ongoing stress and threats that the child experiences. TST includes five phases (surviving, stabilizing, enduring, understanding, and transcending), which include many of the common CBT elements (eg, affective modulation, cognitive restructuring) and interventions in the broader systems designed to stabilize the child, family, or distressed and threatening social environments. For example, TST may include legal advocacy, case management, care coordination, and psychopharmacological interventions. TST uses structured assessments to determine which phase of treatment is indicated. This phase-based treatment is particularly useful for families who encounter a range of barriers to treatment engagement, multiple traumas, and a host of social environment issues.

Combined Parent–Child Cognitive-Behavioral Approach for Children and Families At-Risk for Child Physical Abuse

Combined parent–child (CPC)-CBT is a multifamily group intervention designed for families at risk for, or who have committed, child physical abuse. Compared with Kolko's^{57,58} Alternatives for Families model (AF-CBT), an existing evidence-based practice (EBP) for physically abusive families, CPC-CBT specifically includes child PTSD as one of its primary treatment targets. Evidence for CPC-CBT comes from one randomized controlled trial and one small open trial. Runyon and colleagues⁵⁹ conducted a small randomized controlled trial comparing CPC-CBT with parent-only CBT among 44 parents and their 60 children (aged 7–13 years). Children and families who participated in the CPC-CBT showed significant improvements in PTS symptoms, and parents showed greater improvements in positive parenting practices. The parent-only CBT treatment group, however, showed greater reductions in the use

of corporal punishment. In an open trial of CPC-CBT involving 12 families and their 21 children (aged 4–14 years) that preceded the randomized controlled trial, child PTS symptoms improved and child- and parent-reported physically abusive behavior decreased.⁶⁰ Improvements were also seen in parenting consistency and parental anger toward the children.

CPC-CBT specifically targets PTSD, depression, abuse-related attributions, and externalizing behavioral problems in children and adolescents with a history of harsh physical discipline or coercive parenting strategies. CPC-CBT includes a treatment protocol for children and families at risk for child physical abuse that is built on TF-CBT, motivational interviewing, ancillary support services (eg, babysitting, transportation), case management, and relationship enhancement skills that specifically target family violence (eg, domestic violence). Parents and children attend 16 weeks of 2-hour sessions. Parent and child interventions are conducted concurrently for the first 75 minutes of the session by two group therapists in each group. The second 45 minutes involves the integrated joint parent–child sessions.

Structured Psychotherapy for Adolescents Responding to Chronic Stress

Structured Psychotherapy for Adolescents Responding to Chronic Stress (SPARCS) is a 16-session group intervention designed specifically to address the needs of chronically traumatized adolescents aged 12 to 19 years, living in or returning to chaotic environments and who may also be experiencing PTSD and problems in several domains of functioning (eg, interpersonal problems, affect regulation and impulsivity, self-perception⁶¹). Evidence for SPARCS comes from a recent quasi-experimental trial implemented with 33 culturally diverse 13 to 21 year olds who had experienced a moderate or severe discrete traumatic experience.³⁷ Most participants were female (63.6%) and of ethnic minority (67% African American, 12% Latino, 21% White). In this study, SPARCS was found to be effective in improving traumatic stress symptoms, life domain functioning, and risk behaviors, but only for African American participants, perhaps because of insufficient sample size of the other two racial groups.

Given that chronic trauma exposure disrupts the progression of many basic developmental tasks, the overarching goals of SPARCS include helping youth deal with more complex forms of PTSD through coping more effectively with trauma and related sequelae; enhancing self-efficacy; connecting with others and establishing supportive relationships; cultivating awareness; and creating meaning. The theoretical basis for SPARCS is predominantly CBT and includes many of the common elements (eg, psychoeducation, relaxation and affective modulation, cognitive processing). SPARCS also includes modules and interventions from Dialectical Behavior Therapy for Adolescents (eg, mindfulness),⁶² Trauma Affect Regulation Guide for Education and Therapy-Adolescents (TARGET-A), and TGCT. Although SPARCS does not include a formal exposure component, participants may discuss and process traumatic experiences in the group with the guidance of the group facilitator.

Trauma-Focused Coping (Multimodality Trauma Treatment)

Delivered in schools and considered a precursor to CBITS, trauma-focused coping (TFC) is a group-based CBT approach for children and adolescents exposed to single-incident traumatic stressors (eg, disaster, exposure to violence, murder, suicide, fire, accidents⁶³). Evidence to support the effectiveness of TFC comes from a single-case, cross-setting design involving 17 participants⁶⁴ and a small clinic-based open trial involving seven youth.⁶³ In the March and colleagues⁶⁴ study, students who received TFC reported reduced PTSD symptoms at the end of treatment and at follow-up, and improved depression, anxiety, and anger. Youth with complex

trauma presentations participated in the clinic-based open trial,⁶³ which included both individual ($n = 4$) and group ($n = 3$) provision of TFC. Youth had reduced PTSD symptoms posttreatment, but reductions were less robust than those found in the study by March and colleagues.⁶⁴

TFC targets PTSD and collateral symptoms of depression, anxiety, anger, and external locus of control. It was designed as a peer-mediating and skill-building group intervention for youth in late elementary through middle school. TFC includes 14 to 18 group sessions delivered during one class period each week. An individual pullout session is done mid-protocol to introduce narrative exposure in a controlled way.

Risk Reduction Through Family Therapy

Risk Reduction Through Family Therapy (RRFT) is a family-focused, integrated treatment that combines TF-CBT, multisystemic therapy,⁶⁵ and other approaches to reduce risky behavior (eg, substance use, sexual risk behavior) and trauma-related symptoms among sexually assaulted youth.⁶⁶ The seven primary targets of RRFT include psychoeducation, coping, family communication, substance abuse, PTSD, healthy dating and sexual decision making, and revictimization risk reduction. In general, sessions are 60 to 90 minutes once a week with phone check-ins as needed, and the number of sessions depends on the youth's symptom level. A small open trial of RRFT ($N = 10$) with adolescent women (aged 14–17 years) showed reductions in PTSD and depression symptoms, reductions in substance use, slight improvements in family conflict and cohesion, and improvements in ecological functioning (eg, spending time with prosocial peers, engaging in positive family activities, attending school/work). Treatment gains were maintained at 6-month follow-up.

TARGET-A

TARGET-A is an intervention for youth between ages 12 and 19 years who have experienced interpersonal trauma (eg, maltreatment), an array of chronic trauma (eg, domestic violence, community violence), and other stressors. TARGET-A uses some CBT skills (eg, affective modulation skills, cognitive processing) in addition to other interventions. TARGET-A is usually delivered in 12 approximately 50-minute individual sessions. TARGET-A includes sequential skill-development modules designed to help adolescents in manage and prevent current PTSD symptoms.^{67,68} As in SPARCS, youth may choose to talk about past traumatic events (a part of gradual exposure, one of the common elements of trauma-specific CBT), but gradual exposure is not a core component of TARGET-A. The set of seven TARGET-A skills (ie, Focusing on the present moment, Recognizing stress triggers, identifying primary Emotions, Evaluating primary thoughts, Defining primary goals, identifying positive Options, and Making an ethical and spiritual contribution (FREEDOM) skills) was specifically designed to address complex presentations of PTSD and to focus on, and be delivered to, delinquent and juvenile justice-involved youth. Findings are forthcoming from a recently completed randomized controlled trial focused on girls (ages 13–17 years; $N = 59$) involved in delinquency.⁶⁵ (Ford JD, Steinberg KL, Hawke J, et al, unpublished manuscript, 2010). Evidence for TARGET-A also comes from a randomized controlled trial ($N = 213$) of TARGET with substance-using adults in an outpatient setting.^{69,70} TARGET was more effective in improving sobriety and PTSD-related outcomes, but differences in effectiveness varied by ethnicity of the participants.

CULTURAL CONSIDERATIONS

In the area of child and adolescent PTSD treatment, as in other areas, the relevance of EBPs, many of which were CBT approaches, to culturally diverse populations has

been the subject of much debate. This controversy is largely because of the disproportionate use of European American, middle-class families in early treatment studies. Moreover, many questioned the validity of the use of EBPs given the absence of data supporting use with ethnically diverse populations. However, because of the relatively recent development of many of these treatments, studies of trauma-specific CBT have included diverse samples in the randomized controlled trials, quasi-experimental studies, and open trials (TF-CBT, CPC-CBT, TGCT) were developed specifically to target multicultural/multilingual populations (CBITS, TST, TARGET-A, SPARCS), and have cultural-specific applications (TF-CBT).

In addition, a growing number of studies have shown that EBPs for many disorders, including PTSD, may be more efficacious than usual care for ethnic minority youth,^{71–73} and that EBPs and cultural competence and sensitivity may be more complementary than disparate.⁷⁴ Despite these advances, many questions remain regarding treatment effects and outcomes with ethnically diverse youth, both for PTSD and other disorders. Do culturally specific applications, for example, enhance treatment outcomes for ethnically diverse youth? Have these treatments been tested with diverse populations within the community-based settings in which they are typically provided? As a result of these and other questions, the field is beginning to increase its focus on the impact of cultural influences on client engagement, the therapeutic relationship, symptom expression, and improvement. In the area of trauma-specific CBT approaches, researchers and treatment developers are examining culturally specific aspects of common elements such as cognitive processing and exposure, and highlighting ways in which culture may be a source of mastery, strength, and resilience.⁴¹ The field is advancing and researchers in the area of PTSD treatment are at the forefront, given that the role of culture in the treatment of trauma and traumatic stress is crucial. Specifically, culture often plays a role in treatment-seeking behavior, preferences about treatment, engagement in treatment, and beliefs about why traumatic experiences happened and what is necessary for recovery and improvement.⁷⁵

SUMMARY AND FUTURE DIRECTIONS

Trauma-specific CBT interventions for treating child and adolescent PTSD are available, and research both on existing and relatively new CBT approaches to treating PTSD continues to accumulate. CBT treatments for PTSD include individual and group approaches; interventions included in this review showed improvements in PTSD symptoms with treatment, and many of these gains were sustained over time (ie, TF-CBT, CBITS, TGCT). Most studies of CBT approaches to treating trauma also showed improvements in other commonly co-occurring difficulties (eg, depression, anxiety, behavior problems). These improvements are likely partly because of the differential developmental manifestations of PTSD and the overlap in common elements across CBT treatments that also address these co-occurring difficulties. Future directions for the field include continuing to conduct research on promising practices and their ability to remediate PTSD; examining issues related to cultural applicability and responsiveness; ensuring effective implementation and dissemination (eg, treatment reach); and sustaining treatment gains over time. Additional next steps may also include the examination of the core elements of treatments and their relevance to workforce development as increasingly more clinicians begin to embrace evidence-based treatments.

REFERENCES

1. Finkelhor D, Turner H, Omrod R, et al. Violence, abuse, and crime exposure in a national sample of children and youth. *Pediatrics* 2009;124:1–13.

2. Copeland WE, Keeler G, Angold A, et al. Traumatic events and posttraumatic stress in childhood. *Arch Gen Psychiatry* 2007;64:577–84.
3. Derluyn I, Broekaert E, Schuyten G, et al. Post-traumatic stress in former Ugandan child soldiers. *Lancet* 2004;363:861–3.
4. DeRosa R, Habib M, Pelcovitz D, et al. *Structured Psychotherapy for Adolescents Responding to Chronic Stress (SPARCS): a trauma-focused guide for groups*. Manhasset (NY): North Shore University Hospital; 2006.
5. DeRosa R, Pelcovitz D. Treating traumatized adolescent mothers: a structured approach. In: Webb N, editor. *Working with traumatized youth in child welfare*. New York: Guilford Press; 2006. p. 219–45.
6. American Academy of Child and Adolescent Psychiatry. Practice parameter for the assessment and treatment of children and adolescent with posttraumatic stress disorder. *J Am Acad Child Adolesc Psychiatry* 2010;49:414–30.
7. Chaffin M, Friedrich B. Evidence-based treatments in child abuse and neglect. *Child Youth Serv Rev* 2004;26(11):1097–113.
8. Wetherington HR, Hahn RA, Fuqua-Whitley DS, et al. The effectiveness of interventions to reduce psychological harm from traumatic events among children and adolescents. *Am J Prev Med* 2008;35(3):287–313.
9. Silverman WK, Ortiz CD, Viswesvaran C, et al. Evidence-based psychosocial treatments for children and adolescents exposed to traumatic events. *J Clin Child Adolesc Psychol* 2008;37(1):156–83.
10. Chambless D, Gillis M. *Cognitive therapy of anxiety disorders. Advances in cognitive-behavioral therapy, vol. 2*. Thousand Oaks (CA): Sage Publications, Inc; 1996. p. 116–44.
11. Chambless D, Hollon S. Defining empirically supported therapies. *J Consult Clin Psychol* 1998;66(1):7–18.
12. Chorpita BF. *Modular cognitive behavioral therapy for childhood anxiety disorders*. New York: Guilford Press; 2006.
13. Chorpita BF, Bernstein A, Daleiden EL. Driving with roadmaps and dashboards: using information resources to structure the decision models in service organizations. *Adm Policy Ment Health* 2008;35(1–2):114–23.
14. Chorpita BF, Daleiden EL, Weisz JR. Modularity in the design and application of therapeutic interventions. *Appl Prev Psychol* 2005;11(3):141–56.
15. Cohen JA, Mannarino AP, Deblinger E. *Treating trauma and traumatic grief in children and adolescents*. New York: Guilford Press; 2006.
16. Stein BD, Jaycox LH, Kataoka SH, et al. A mental health intervention for schoolchildren exposed to violence: a randomized controlled trial. *JAMA* 2003;290:603–11.
17. Feeny N, Foa E, Treadwell K, et al. Posttraumatic stress disorder in youth: a critical review of the cognitive and behavioral treatment outcome literature. *Prof Psychol Res Pract* 2004;35(5):466–76.
18. Taylor TL, Chemtob CM. Efficacy of treatment for child and adolescent traumatic stress. *Arch Pediatr Adolesc Med* 2004;158(8):786–91.
19. Cohen JA, Mannarino AP, Staron VR. A pilot study of modified cognitive-behavioral therapy for childhood traumatic grief (CBT-CTG). *J Am Acad Child Adolesc Psychiatry* 2006;45:1465–73.
20. Deblinger E, Heflin AH. *Treating sexually abused children and their nonoffending parents: a cognitive behavioral approach*. Thousand Oaks (CA): Sage Publications; 1996.
21. Cohen JA, Deblinger E, Mannarino AP, et al. A multisite, randomized controlled trial for children with sexual abuse-related PTSD symptoms. *J Am Acad Child Adolesc Psychiatry* 2004;43:393–403.

22. Cohen JA, Mannarino AP. A treatment outcome study for sexually abused preschool children: initial findings. *J Am Acad Child Adolesc Psychiatry* 1996;35:42–50.
23. Cohen JA, Mannarino AP. Factors that mediate treatment outcome of sexually abused preschool children: six- and 12-month follow-up. *J Am Acad Child Adolesc Psychiatry* 1998;37:44–51.
24. Deblinger E, Lippmann J, Steer RA. Sexually abused children suffering posttraumatic stress symptoms: initial treatment outcome findings. *Child Maltreat* 1996;1: 310–21.
25. Deblinger E, Stauffer LB, Steer RA. Comparative efficacies of supportive and cognitive behavioral group therapies for young children who have been sexually abused and their nonoffending mothers. *Child Maltreat* 2001;6:332–43.
26. King NJ, Tong BJ, Mullen P, et al. Treating sexually abused children with posttraumatic stress symptoms: a randomized clinical trial. *J Am Acad Child Adolesc Psychiatry* 2000;39:1347–55.
27. Cohen JA, Mannarino AP, Perel JM, et al. A pilot randomized controlled trial of combined Trauma-Focused CBT and sertraline for childhood PTSD symptoms. *J Am Acad Child Adolesc Psychiatry* 2007;46(7):811–9.
28. Cohen JA, Mannarino AP, Iyengar S. Community treatment of PTSD in children exposed to intimate partner violence: a randomized controlled trial. *Arch Pediatr Adolesc Med* 2011;165(1):16–21.
29. Deblinger E, Mannarino AP, Cohen JA, et al. Trauma focused cognitive behavioral therapy for children: impact of the trauma narrative and treatment length. *Depress Anxiety*, in press.
30. Cohen JA, Mannarino AP. A treatment study for sexually abused preschool children: outcome during a one-year follow-up. *J Am Acad Child Adolesc Psychiatry* 1997;36:1228–35.
31. Cohen JA, Mannarino AP, Knudsen K. Treating sexually abused children: 1 year follow-up of a randomized controlled trial. *Child Abuse Negl* 2005;29:135–45.
32. Deblinger E, Mannarino AP, Cohen JA, et al. A follow-up study of a multisite, randomized, controlled trial for children with sexual abuse-related PTSD symptoms. *J Am Acad Child Adolesc Psychiatry* 2006;45:1474–84.
33. Deblinger E, Steer RA, Lippman J. Two year follow-up study of cognitive behavioral therapy for sexually abused children suffering post-traumatic stress symptoms. *Child Abuse Negl* 1999;23:1371–8.
34. Cohen JA, Mannarino AP, Knudsen K. Treating childhood traumatic grief: a pilot study. *J Am Acad Child Adolesc Psychiatry* 2004;43:1225–33.
35. Hoagwood KE, CATS Consortium. Impact of CBT for traumatized children and adolescents affected by the World Trade Center disaster. *J Clin Child Adolesc Psychol*, in press.
36. Jaycox LH, Cohen JA, Mannarino AP, et al. Children's mental health care following Hurricane Katrina: a field trial of trauma-focused psychotherapies. *J Trauma Stress* 2010;23:223–31.
37. Weiner DA, Schneider A, Lyons JS. Evidence-based treatments for trauma among culturally diverse foster care youth: treatment retention and outcomes. *Child Youth Serv Rev* 2009;31:1199–205.
38. Deblinger E, McLeer S, Henry D. Cognitive behavioral treatment for sexually abused children suffering post-traumatic stress: preliminary findings. *J Am Acad Child Adolesc Psychiatry* 1990;29:747–52.
39. Stauffer LB, Deblinger E. Cognitive behavioral groups for nonoffending mothers and their young sexually abused children: a preliminary treatment outcome study. *Child Maltreat* 1996;1(1):65–76.

40. Dorsey S, Cohen J. Trauma-focused cognitive behavioral therapy. In: Clements P, Seedat S, editors. *Mental health issues of child maltreatment*. Saint Louis (MO): GW Medical Publishing, in press.
41. de Arellano MA, Ko SJ, Danielson CK, et al. Trauma-informed interventions: clinical and research evidence and culture-specific information project. Los Angeles (CA); Durham (NC): National Center for Child Traumatic Stress; 2008.
42. BigFoot DS, Braden J. Adapting evidence-based treatments for use with American Indian and Native Alaska children and youth. *Focal Point* 2007;21(1):19–22.
43. Kataoka SH, Stein BD, Jaycox LH, et al. A school-based mental health program for traumatized Latino immigrant children. *J Am Acad Child Adolesc Psychiatry* 2003;42:311–8.
44. Jaycox LH, Langley AK, Dean KL. Support for students exposed to trauma: the SSET program: group leader training manual, lesson plans, and lesson materials and worksheets. Santa Monica (CA): RAND Health; 2009.
45. Jaycox LH, Langley AK, Stein BD, et al. Support for students exposed to trauma: a pilot study. *School Ment Health* 2009;1:49–60.
46. Zatzick D, Koepsell T, Rivara F. Using target population specification, effect size, and reach to estimate and compare the population impact of two PTSD preventive interventions. *Psychiatry* 2009;72(4):346–59.
47. Available at: www.nctsn.org. Accessed January 6, 2011.
48. Kataoka SH, Fuentes S, O'Donoghue VP, et al. A community participatory research partnership: the development of a faith-based intervention for children exposed to violence. *Ethn Dis* 2006;16:89–97.
49. Layne CM, Saltzman WR, Poppleton L, et al. Effectiveness of a school-based group psychotherapy program for war-exposed adolescents: a randomized controlled trial. *J Am Acad Child Adolesc Psychiatry* 2008;47:1048–62.
50. Layne CM, Saltzman WR, Pynoos RS, et al. Trauma and grief component therapy. New York: New York State Office of Mental Health; 2002.
51. Goenjian AK, Karayan I, Pynoos RS, et al. Outcomes of psychotherapy among early adolescents after trauma. *Am J Psychiatry* 1997;154(4):536–42.
52. Layne CM, Pynoos RS, Saltzman WR, et al. Trauma/grief-focused group psychotherapy: school-based postwar intervention with traumatized Bosnian adolescents. *Group Dynam* 2001;5(4):277–90.
53. Saltzman W, Pynoos R, Layne C, et al. Trauma- and grief-focused intervention for adolescents exposed to community violence: results of a school-based screening and group treatment protocol. *Group Dynam* 2001;5(4):291–303.
54. Bronfenbrenner U. Contexts of child rearing: problems and prospects. *Am Psychol* 1979;34:844–50.
55. Saxe GN, Ellis BH, Kaplow J. Collaborative treatment for traumatized children and teens: a trauma systems therapy approach. New York: Guilford Press; 2007.
56. Saxe GN, Ellis BH, Fogler J. Comprehensive care for traumatized children: an open trial examines trauma systems therapy. *Psychiatr Ann* 2005;35(5):443–8.
57. Kolko D. Individual cognitive behavioral treatment and family therapy for physically abused children and their offending parents: a comparison of clinical outcomes. *Child Maltreat* 1996;1(4):322–42.
58. Kolko DJ, Swenson CC. Assessing and treating physically abused children and their families: a cognitive behavioral approach. Thousand Oaks (CA): Sage Publications; 2002.
59. Runyon MK, Deblinger D, Steer R. Comparison of combined parent-child and parent-only cognitive-behavioral treatments for offending parents and children in cases of child physical abuse. *Child Fam Behav Ther* 2010;32:196–218.

60. Runyon MK, Deblinger D, Schroeder CM. Pilot evaluation of outcomes of combined parent-child cognitive-behavioral group therapy for families at-risk for child physical abuse. *Cognit Behav Pract* 2009;16:101–18.
61. DeRosa R, Pelcovitz D. Group treatment for chronically traumatized adolescents: igniting SPARCS of change. *Treating traumatized children: risk, resilience and recovery*. New York: Routledge/Taylor & Francis Group; 2009. p. 225–39.
62. Miller AL, Rathus JH, Linehan MM. *Dialectical behavior therapy with suicidal adolescents*. New York: Guilford Press; 2007.
63. Amaya-Jackson L, Reynolds V, Murray M, et al. Cognitive behavioral treatment for pediatric posttraumatic stress disorder: protocol and application in school and community settings. *Cognit Behav Pract* 2003;10:204–13.
64. March J, Amaya-Jackson L, Murray M, et al. Cognitive behavioral psychotherapy for children and adolescents with post-traumatic stress disorder following a single incident stressor. *J Am Acad Child Adolesc Psychiatry* 1998;37(6):585–93.
65. Henggeler S, Clingempeel W, Brondino M, et al. Four-year follow-up of multisystemic therapy with substance-abusing and substance-dependent juvenile offenders. *J Am Acad Child Adolesc Psychiatry* 2002;41(7):868–74.
66. Danielson CK, McCart MR, de Arellano MA, et al. Risk reduction for substance use and trauma-related psychopathology in adolescent sexual assault victims: findings from an open trial. *Child Maltreat* 2010;15:261–8.
67. Ford JD, Russo E. Trauma-focused, present-centered, emotional self-regulation approach to integrated treatment for posttraumatic stress and addiction: Trauma Adaptive Recovery Group Education and Therapy (TARGET). *Am J Psychother* 2006;60:335–55.
68. Ford JD, Russo E, Mallon S. Integrating post-traumatic stress disorder (PTSD) and substance use disorder treatment. *J Counsel Dev* 2007;85:475–89.
69. Frisman L, Ford J, Lin H, et al. Outcomes of trauma treatment using the TARGET model. *J Groups Addict Recover* 2008;3(3–4):285–303.
70. Ford JD. Trauma, PTSD, and ethnoracial minorities: toward diversity and cultural practices in principles and practices. *Clin Psychol Sci Pract* 2008;15:62–7.
71. Huey SJ, Polo AJ. Evidence-based psychosocial treatments for ethnic minority youth. *J Clin Child Adolesc Psychol* 2008;37:262–301.
72. Jaycox LH. *Cognitive-behavioral intervention for trauma in schools*. Longmont (CO): Sopris West Educational Services; 2003.
73. Miranda J, Guillermo B, Lau A, et al. State of the science on psychosocial interventions for ethnic minorities. *Annu Rev Clin Psychol* 2005;1:113–42.
74. Whaley AL, Davis KE. Cultural competence and evidence-based practice in mental health services: a complementary perspective. *Am Psychol* 2007;62:563–74.
75. Cohen JA, Deblinger E, Mannarino A, et al. The importance of culture in treating abused and neglected children: an empirical review. *Child Maltreat* 2001;6:148–57.