

Treating Childhood Traumatic Grief: A Pilot Study

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ABSTRACT

Objective: To examine the potential efficacy and specific timing of treatment response of individual child and parent trauma-focused cognitive-behavioral therapy for childhood traumatic grief (CTG), a condition in which trauma symptoms impinge on the child's ability to successfully address the normal tasks of grieving. **Method:** Twenty-two children and their primary caretakers received a manual-based 16-week treatment with sequential trauma- and grief-focused interventions. **Results:** Children experienced significant improvements in CTG, posttraumatic stress disorder (PTSD), depressive, anxiety, and behavioral problems, with PTSD symptoms improving only during the trauma-focused treatment components and CTG improving during both trauma- and grief-focused components. Participating parents also experienced significant improvement in PTSD and depressive symptoms. **Conclusions:** The timing of improvements in CTG and PTSD symptoms lends support to providing sequential trauma- and grief-focused interventions and to the concept that CTG is related to but distinct from PTSD. The results also suggest the benefit of individual treatment for CTG and for including parents in the treatment of CTG. Randomized, controlled trials are needed to further test the efficacy of this treatment model. *J Am Acad Child Adolesc Psychiatry*, 2004;43(10):1225-1233. **Key Words:** childhood traumatic grief, posttraumatic stress disorder, trauma- and grief-focused interventions, trauma-focused cognitive-behavioral therapy

Childhood traumatic grief (CTG) has been described as a condition in which children losing loved ones under traumatic circumstances develop trauma symptoms that impinge on their ability to negotiate the normal grieving process (Cohen et al., 2002; Layne et al., 2001a; Nader, 1997). Although typically these deaths are the result of sudden, unexpected horrifying events such as homicides, vehicular accidents, suicide, or drug overdose, they may be from "natural" causes (e.g., heart

attack, stroke) if the child experiences the death as unexpected, shocking, and terrifying.

The trauma symptoms associated with CTG are similar to those seen in posttraumatic stress disorder (PTSD) (Eth and Pynoos, 1985; Nader, 1997; Pynoos, 1992), i.e., persistent intrusive reexperiencing of the traumatic death, avoidance of trauma reminders, and/or physiologic and psychological hyperarousal (American Psychiatric Association, 2000). In addition to these symptoms, children may develop intrusive distressing reexperiencing or avoidance of *loss reminders*, i.e., people, places, or things that remind the child of the deceased loved one (Pynoos, 1992). It is reasonable to wonder whether developing PTSD symptoms after a loved one's death under traumatic circumstances is within the realm of normal child grief reactions. One study found that only 5% of close friends of adolescent suicide completers reported persistent PTSD symptoms (Brent et al., 1993, 1995), whereas a related study found that siblings of suicide completers had no greater incidence of PTSD than nonsuicide exposed controls, despite having prolonged elevations in grief symptoms (Brent et al., 1996). Another study compared suicide bereaved children to nonsuicide bereaved children; all

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these children had experienced the death of a parent (Cerel et al., 1999). Although the suicide bereaved children experienced higher rates of anger, shame, anxiety, and behavior problems, they did not display higher rates of PTSD than the nonsuicide bereaved children. Thus, there is some evidence that persistent PTSD symptoms are not normative among children bereaved through traumatic circumstances.

The defining feature of CTG as we currently conceptualize it is not only the presence of PTSD symptoms but the impingement of these symptoms on children's ability to fully grieve the loss of their loved ones. This impairment in children's ability to positively reminisce and adjust to the loss of their loved one is what distinguishes CTG from PTSD. In this conceptualization, children may develop full-blown PTSD in the absence of CTG or have CTG without meeting the full criteria for a PTSD diagnosis. Other purported characteristics of CTG may also differentiate CTG from PTSD: survivor's guilt, over- or underidentification with the deceased, revenge and rescue fantasies, and excessive guilt or shame about the manner of the deceased's death are all features associated with CTG (Cohen and Mannarino, in press). More research is needed to clarify specific characteristics of CTG and to what degree these are distinct from PTSD.

To understand CTG, it is important to consider how the presence of PTSD symptoms might interrupt or interfere with children's ability to grieve the loss of loved ones. According to the current descriptive literature, the normal grieving process in children involves the following tasks (Wolfelt, 1996; Worden, 1996): accepting the reality of the death, fully experiencing the pain associated with that loss, adjusting to life without the loved one, integrating aspects of the loved one into one's own self-identity, converting the relationship from one of ongoing interactions to one of memory, finding meaning in the loved one's death, and recommitting to new relationships with other adults. To accomplish these tasks, children must be able to tolerate sustained thoughts and memories of the deceased loved one, to remember the totality of that person, to bear the pain of regrets or guilt about the relationship, and to face and tolerate the pain associated with irrevocable loss. Children with CTG are unable to complete these tasks of grieving because even happy thoughts, memories, and reminders of the deceased serve as trauma reminders for these children, leading to intrusive reex-

periencing of the traumatic death and associated hyperarousal. These symptoms, in turn, trigger avoidance of both trauma and loss reminders. It is likely that there is variability among children with CTG with regard to how often and how completely thoughts, memories, and reminders of the deceased automatically segue into traumatic reminders. However, to some extent, all children with CTG get "stuck" on the traumatic nature of the death and have difficulty engaging in and completing the tasks of normal grieving described above.

Based on the above conceptualization of CTG, professionals treating CTG have suggested that it is important to include both trauma-focused and grief-focused treatment components and that the trauma-specific interventions should be provided first (Cohen et al., 2002; Layne et al., 2001a; Nader, 1997; Pynoos, 1992). In this manner, PTSD symptoms can be at least partially resolved, allowing children to better tolerate memories of the deceased and move through the process of grieving the loss of their loved ones. Two open treatment studies using this type of treatment have examined outcome in adolescents with CTG symptoms. Layne et al. (2001a) provided a school-based, group trauma- and grief-focused intervention to 55 15- to 19-year-old Bosnian youths who had lost loved ones in that country's civil war. This treatment included five modules: traumatic experiences, reminders of trauma and loss, bereavement and the interplay of trauma and grief, posttrauma adversity, and developmental progression. Youths who received both the trauma- and grief-focused interventions experienced significant improvement in PTSD, depressive, and CTG symptoms. Youths who received only the trauma-focused treatment modules experienced significant improvement in PTSD and depressive symptoms, which was comparable with the group receiving full treatment, but their improvement of CTG symptoms was less than that of the group receiving all five treatment modules. This finding provided preliminary support for the idea that CTG is distinct from PTSD and also for the view that providing both trauma- and grief-focused interventions was important for more fully resolving CTG symptoms. Saltzman et al. (2001) provided this same school-based group treatment to 26 symptomatic 11- to 14-year-old students exposed to community violence in Los Angeles; however, only seven of these youths had experienced the traumatic loss of a loved one. This study demonstrated significant pre-/posttreatment im-

provement in PTSD as well as improvement in school performance. The seven youths who had CTG also experienced a significant decrease in CTG symptoms.

Two other treatment studies targeted children who had experienced traumatic losses, but neither study included a measure of CTG. Additionally, neither of these studies included exposure techniques to specifically address PTSD symptoms. Salloum and Vincent (2001) conducted an open treatment study for 45 adolescent survivors of homicide victims. This 10-week group treatment included psychoeducation about grief, feeling expression skills, management of anger, coping skills, accessing social support, spirituality, and identifying future goals. Participants experienced a significant decrease in self-reported PTSD symptoms. Pfeffer et al. (2002) randomly assigned 102 children bereaved by the suicide of a parent or sibling to a manual-based group treatment or a no treatment control group. Treatment consisted of 10 sessions, which included psychoeducation about death, suicide and prevention of suicidal urges, problem-solving skills, feeling expression, identification of positive characteristics of the deceased while avoiding identification with suicidality, managing traumatic thoughts, dealing with stigmatization, encouraging new relationships, and enhancing optimism. This study demonstrated that the treatment group experienced significantly greater improvement in depression and anxiety but not PTSD compared with the no treatment control group.

None of these studies included an active parental treatment component because most of the treatments were provided in school settings and all but one (Pfeffer et al., 2002) treated only adolescents. One study found no difference in functioning and psychiatric impairment between surviving parents of children who had lost their other parent to suicide versus nonviolent deaths (Cerel et al., 2000). However, because parental functioning and support have been found to consistently predict traumatized children's outcomes (reviewed in Pine and Cohen, 2002) and in most cases of CTG the parent is also bereaved, we believe that inclusion of a parental treatment component may enhance the treatment response of children with CTG.

All the studies cited treated children with a common type of traumatic loss, i.e., war (Layne et al., 2001a), homicide (Salloum and Vincent 2001; Saltzman et al., 2001), or suicide (Pfeffer et al., 2002). Treatment in all these studies was provided in a group setting. The two

studies that provided exposure interventions did so by creating a group trauma narrative (Layne et al., 2001a; Saltzman et al., 2001). However, in clinical practice, children with CTG more typically have experienced diverse causes of traumatic death, which would make it difficult to write a shared trauma narrative; doing so might increase the risk of vicarious traumatization if children heard horrifying traumatic narratives from their peers. Thus, it is possible that providing individual treatment in which children can create personalized trauma narratives and in which parents can be actively involved might be more feasible for many children with CTG.

The current pilot study examined the clinical response to parallel individual child and parent trauma-focused cognitive-behavioral therapy for CTG (CBT-CTG), a 16-session treatment model that sequentially addresses trauma and grief symptoms. We hypothesized that this treatment would result in significant decreases in CTG, PTSD, depressive, anxiety, and behavioral symptoms. We also hypothesized that children's adaptive functioning would improve during the course of treatment and that parents participating in the treatment would experience improvement in PTSD and depression.

We used an open (uncontrolled) treatment design and included multiple assessments timed to correspond with important phases of treatment to assess not only overall pre- to posttreatment changes but also to evaluate whether the hypothesized processes of change would be supported by correspondingly timed changes in the relevant instruments. The model is designed to provide interventions to improve affective modulation and stress reduction skills in sessions 1 to 4, trauma-specific exposure and cognitive processing interventions in sessions 5 to 8, interventions focused on naming and accepting what the child lost with the death of the loved one in sessions 9 to 12, and preserving positive memories and making meaning of the loss in sessions 13 to 16. Instruments that measured CTG and PTSD symptoms were readministered at the 4th, 8th, 12th, and 16th (final) treatment sessions to evaluate the relative impact of distinct interventions on these symptoms. Other instruments were administered before and after treatment only. We hypothesized that, similar to the findings in the Layne et al. (2001a) study, greater improvement in children's PTSD symptoms would occur in the first 8 weeks of treatment, corre-

sponding with the trauma-focused treatment components in the first half of treatment. Consistent with conceptualization of CTG being related to but somewhat distinct from PTSD, we hypothesized that CTG would improve during the first eight sessions in a parallel manner to PTSD but that CTG would also continue to improve during the second eight sessions of treatment in response to grief-focused treatment components. Thus, despite the trial being uncontrolled, the design maximized our ability to assess the impact of specific treatment components on the primary target symptoms (CTG and PTSD) of the treatment model.

METHOD

Subjects

The subjects were 22 children aged 6 to 17 years referred to an urban outpatient child trauma program that is part of an academic medical center. These children had lost their loved ones due to a variety of traumatic events, including accident, medical causes, suicide, homicide, and drug overdose. Primary sources of referral were a community-based child bereavement support program, pediatricians, and self-referrals by parents. The bereavement program referred children whose loved one had died in objectively traumatic (i.e., sudden, unexpected, shocking) circumstances. Parents and pediatricians referred children whom they believed were not recovering in an expected way from their loss (a typical comment was that the child "is not getting over it like he should"). Demographic characteristics of this sample are described in Table 1. Inclusion criteria were significant CTG and PTSD symptoms as defined by a score of ≥ 30 on the CTG Scale of the Expanded Grief Inventory and a score of ≥ 12 on the Child PTSD Symptom Scale. Exclusionary criteria were serious cognitive or developmental delays (defined by a mental retardation educational placement or a diagnosis of

pervasive developmental disorder) or inability to communicate in English. No children were excluded for these reasons. Children and parents signed assent and consent forms, respectively, approved by the hospital's Institutional Review Board. Consents included agreeing to have treatment sessions audiotaped and rated for adherence to the treatment model; audiotaping was not required for participation, but all families agreed to this procedure.

Instruments

The following standardized self-report instruments were used to measure child symptoms:

The Expanded Grief Inventory (EGI) (Layne et al., 2001b) is a 28-item instrument that was designed to measure CTG symptoms. A recent factor analysis yielded three subscales, Childhood Traumatic Grief (CTG), Ongoing Presence (OP), and Positive Memories (PM) (Brown and Goodman, in press). The CTG scale includes 23 items that measure the impingement of trauma symptoms on the child's ability to tolerate memories of the deceased, for example, "I don't do positive things that I want or need to do because they remind me of the person who died," "I don't talk about the person who died because it is too painful to think about him/her," "Unpleasant thoughts about how the person died get in the way of enjoying good memories of him/her." The OP scale includes the following two items indicative of a sense of the ongoing presence of the deceased: "I feel that even though the person is gone, he/she is still an important part of my life" and "I think I see him/her or feel his/her presence." The PM scale includes the following three items: "I enjoy good memories of him/her," "I have pleasant or comforting dreams about the person who died," and "I enjoy thinking about him/her." Items on the EGI are self-reported on a Likert scale scored 0 ("almost never, less than once a month"), 1 ("rarely, monthly"), 2 ("sometimes, weekly"), 3 ("often, daily"), or 4 ("always, several times a day"). Cronbach α for the CTG scale was .94; α values for the OP and PM scales were .62 and .73, respectively (Brown and Goodman, in press). The EGI has been standardized with children as young as 6 years old (Brown and Goodman, in press).

The Children's PTSD Symptom Scale (CPSS) (Foa et al., 2001) is a 24-item instrument composed of a 17-item self-report measure of PTSD symptoms rated on a 4-point Likert scale (0 = none or only one time; 3 = five or more times per week/almost always) and a seven-item scale of adaptive functioning (with each item rated yes or no with regard to impairment). The CPSS has high test-retest reliability and high convergent validity when compared with a structured clinical interview; the CPSS is also superior to other self-report instruments of child PTSD in having higher discriminant validity (Foa et al., 2001).

The Mood and Feelings Questionnaire (MFQ) (Angold et al., 1995) is a 33-item self-report instrument to measure child and adolescent depression. This version of the MFQ has high internal reliabilities (Cronbach $\alpha > .90$) and high convergent and discriminatory validity compared with other self-report instruments for child depression.

The Screen for Children's Anxiety Related Emotional Disorders (SCARED) (Birmaher et al., 1997) is a 38-item self-report measure for children's anxiety that includes five factors: somatic/panic symptoms, general anxiety, separation anxiety, social phobia, and school phobia. Internal consistency α values are .74 to .93; test-retest reliability and discriminative validity are also high.

The following instruments were completed by parents to report on children's symptoms:

TABLE 1
Demographic Characteristics of Sample

Measure	<i>n</i>	%
Age (yr)		
6-10	10	46
11-14	6	27
15-17	6	27
Gender		
Male	11	50
Female	11	50
Ethnicity		
White	15	68
African American	7	32
Identity of deceased		
Parent	11	50
Sibling or close relative	11	50
Time since death (mo)	Mean = 11.5 (range 1-38)	

UCLA PTSD Index for *DSM-IV* Parent Report Version (UCLA Index) (Pynoos et al., 1998) is a 21-item instrument for the parent to report the child's PTSD symptoms. Parent report has moderate convergent reliability with the child's report on the UCLA Index; the instrument has a Cronbach α of .78 for the total score and interrater reliability between .94 and .97. It is the only parent report questionnaire that measures child PTSD symptoms.

Child Behavior Checklist (CBCL) (Achenbach, 1991) is one of the most widely used parent-report measures of child emotional and behavioral problems, with well-established reliability and validity. For this study, only the broadband factors (internal, external, total behavior problems) were analyzed.

The following instruments were completed by parents with regard to their personal symptoms:

PTSD Diagnostic Scale (Foa, 2001) is a 49-item instrument that assesses *DSM-IV* criteria for PTSD in adults. Internal consistency α is .92 for the total scale, with sensitivity of .89 and specificity of .75 when compared with a structured clinical interview for PTSD.

Beck Depression Inventory II (BDI-II) (Beck et al., 1996). The BDI-II is a widely used self-report measure of adult depression, with strong reliability and validity that have been verified in numerous studies.

Instrument Administration

The EGI and the CPSS were given to children before treatment and after the 4th, 8th, 12th, and 16th weeks of treatment to track the changes in CTG and PTSD symptoms as different treatment components were provided. The MFQ, SCARED, CBCL, UCLA-PTSD Parent Report, PTSD Diagnostic Scale, and BDI-II were administered at before and after treatment only. Instruments were administered by an independent evaluator who was not a study therapist. Children were asked to read one item aloud from each instrument. If they were unable to read the item and explain what it meant, the evaluator read the assessment instrument to the child.

Treatment

The trauma-focused CBT-CTG treatment protocol (Cohen et al., 2001; Cohen and Mannarino, in press) adapted an empirically validated treatment for traumatized children (Cohen et al., 2000; Cohen et al., 2004; Deblinger and Heflin, 1996) and added grief-focused treatment components that were selected from the descriptive child bereavement literature (Schut et al., 2001; Webb, 2002). The protocol was used after an airline disaster in 1994 (Stubenbort et al., 2001) and was further modified after the September 11, 2001, terrorist attacks on New York City, through consultation with numerous treatment providers in the Greater New York area. It has subsequently been used in an ongoing randomized, controlled treatment trial for children who lost uniformed officer parents on September 11 (Brown and Goodman, 2002).

The treatment included eight trauma-focused sessions followed by eight grief-focused sessions, provided individually to children and parents with two joint parent-child sessions included in each of the two modules. Each treatment session was 60 minutes, equally divided between parent and child sessions. Sessions were audiotaped and rated for adherence to the treatment model, with >90% adherence required for inclusion in the analysis. Therapy was provided by two therapists, one Ph.D.-level social worker and one master's degree-level social worker; each child-parent dyad was treated by a single therapist. The content of each session included

the following specific CBT trauma and/or grief components, with flexibility included to allow the therapist to also address issues as they arose with each individual family. The content of parent sessions paralleled that of the child sessions, with additional parent components included, as noted in Table 2 (Cohen et al., 2001; Cohen and Mannarino, in press).

It should be noted that issues related to confidentiality of the child's sessions were addressed at the outset of treatment. Children were encouraged to permit the therapist to share their narrative with their parent but could choose to keep parts or all of it confidential. All the children did permit the therapist to share their narrative with their parents.

Procedures

On referral to the clinic, intake information was obtained, and for those children who appeared to meet study criteria, the treatment study was briefly explained. Families who agreed were scheduled for an initial assessment to determine eligibility for the study. Minimum scores of 30 on the CTG scale of the EGI and 12 on the CPSS-PTSD scale were required for inclusion in the study to only include children who had significant CTG and PTSD symptoms. Three children who were screened did not meet this cutoff and were

TABLE 2
Cognitive-Behavioral Therapy for Childhood Traumatic Grief

Session No	Description of Activity
1	Introduction to model; psychoeducation; feeling identification; affective modulation skills
2	Relaxation/self-soothing skills (parent session: parent management skills)
3	Introduction to cognitive triad, i.e., relationships of thoughts, feelings, and behaviors
4	Review of coping skills; introduction to rationale for creating the trauma narrative
5-7	Creation of child's trauma narrative of events related to the death; cognitive processing (parent sessions: reading child's narrative to parent)
7-8	Joint parent-child sessions: child sharing trauma narrative with parent; identifying and preparing for trauma reminders in future
9	Introduction to grieving and loss; psychoeducation about grief reactions
10	Recognizing and naming what has been lost
11-12	Unresolved issues and ambivalent feelings about the deceased
13	Creating positive memories of the deceased/memorizing
14	Recommitting to ongoing and new relationships; making meaning of the traumatic loss
15-16	Joint parent-child sessions: sharing positive memories; the circle of life; predicting, preparing, and giving permission for future loss reminders and grief symptoms; graduation

not included in the study. Treatment was provided free of charge for study participants. Assessment instruments were administered at pre-treatment (T_1), after sessions 4, 8, and 12 (EGI and CPSS only), and at the conclusion of treatment (session 16).

Data Analysis

Data analysis was conducted using SPSS General Linear Modeling programs. Repeated measures analyses of variance were conducted to evaluate sequential change in each four-session interval of treatment on the primary outcome instruments (EGI and CPSS). Paired sample t tests were performed on the MFQ, SCARED, CBCL, UCLA Index Parent Version, PTSD Diagnostic Scale, and BDI-II to assess overall improvement during treatment because we did not hypothesize specific timing for improvement on these instruments. The Bonferroni correction was used to control for type I errors. Exploratory correlational analyses between age, gender, ethnicity, and outcome measures were also conducted.

RESULTS

Correlational analyses revealed that neither age, gender, nor ethnicity was significantly correlated with initial measures. Only age was significantly correlated with treatment response (change from pre- to post-treatment scores) with older age correlating with greater improvement on CBCL Externalizing and Total Problems and with greater parental improvement on BDI-II. Due to this finding, age was entered as a covariate in the repeated measures analyses.

As Tables 3 and 4 demonstrate, PTSD symptoms as measured by the CPSS decreased significantly during treatment ($p < .001$), with significant improvement occurring only between pre-treatment and after session 4 and between after session 4 and after session 8. CTG scores on the EGI also decreased significantly from pre- to post-treatment ($p < .001$). Consistent with our hypothesis that CTG symptoms would improve both during the trauma-focused (sessions 1–8) and grief-

focused (sessions 9–16) modules of treatment, CTG symptoms significantly improved between pre-treatment and after session 4, between after session 4 and after session 8, and between after session 12 and after session 16. In the interval between sessions 9 and 12 in which the focus was on what the child had lost with the loved one's death, there was no significant improvement in CTG symptoms.

We did not make specific hypotheses about changes in the EGI OP and PM scales for two reasons. First, these scales contain only two to three items and have lower internal consistency than the CTG scale. Second, there was considerable variability in this sample with regard to the length of time that had passed since the loved one's death, so that the trajectory of "normal" grieving might be expected to differ among these children once CTG symptoms had resolved. The available clinical descriptions of normal child bereavement suggest that when the death is not believed by the child to have been preventable, the grief reaction is typically intense but brief, i.e., of less than a few months' duration (Burgen, 1983; Webb, 2002). Thus, it might be expected that once CTG symptoms had resolved, it would be "normal" and functionally optimal to experience a lessening of ongoing presence and positive memories of the deceased, as a child recommits to current relationships and resumes normal developmental tasks. In our sample, OP decreased significantly from pre- to post-treatment, with transient significant changes throughout treatment. There was no significant change in PM from pre- to post-treatment, but there was a significant transient drop in PM at session 4.

Problems in adaptive functioning decreased from pre- to post-treatment, with all the significant improvement occurring from pre-treatment through after ses-

TABLE 3
Repeated-Measures Analyses of Variance (SPSS General Linear Modeling)

Measure	Pre-treatment	4 Weeks	8 Weeks	12 Weeks	16 Weeks	Time F	p	η^2 Effect Size
	Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD	Mean \pm SD			
EGI-CTG ($N = 22$)	53.75 \pm 13.72	36.80 \pm 20.54	25.40 \pm 18.31	24.00 \pm 19.33	19.55 \pm 17.56	21.52	.000	0.83
EGI-OP	4.30 \pm 1.68	2.95 \pm 2.03	3.85 \pm 2.34	2.60 \pm 2.13	2.90 \pm 1.88	4.37	.01	0.52
EGI-PM	10.05 \pm 1.87	8.30 \pm 3.11	9.90 \pm 1.94	9.85 \pm 2.64	10.00 \pm 1.80	1.47	.25	0.26
CPSS-PTSD	28.40 \pm 8.14	19.15 \pm 8.73	12.35 \pm 9.09	10.55 \pm 9.05	8.60 \pm 8.14	17.64	.000	0.81
CPSS Adaptive Functioning	10.55 \pm 2.50	9.33 \pm 2.05	8.11 \pm 1.45	7.77 \pm 1.39	8.00 \pm 2.05	4.40	.01	0.55

Note: EGI = Expanded Grief Inventory; CTG = Childhood Traumatic Grief subscale; OP = Ongoing Presence subscale; PM = Positive Memories subscale; CPSS = Children's PTSD Symptom Scale; PTSD = posttraumatic stress disorder

TABLE 4
Pairwise Comparisons of CTG and PTSD Measures

Measure	Pre-treatment-4 Weeks	4-8 Weeks	8-12 Weeks	12-16 Weeks
	Mean Difference ± SE	Mean Difference ± SE	Mean Difference ± SE	Mean Difference ± SE
EGI-CGT (<i>N</i> = 22)	16.95 ± 3.37***	11.40 ± 4.04**	1.40 ± 1.85	4.45 ± 1.66**
EGI-OP	1.35 ± 0.58**	-0.90 ± 0.44*	1.25 ± 0.44**	-0.30 ± 0.38
EGI-PM	1.75 ± 0.71*	-1.60 ± 0.69*	0.05 ± 0.33	-0.15 ± 0.51
CPSS-PTSD	9.25 ± 2.23***	6.80 ± 1.73***	1.80 ± 1.37	1.95 ± 1.15
CPSS-Adaptive Functioning	1.22 ± 0.52*	1.22 ± 0.42**	0.33 ± 0.19	-0.22 ± 0.45

Note: SE = standard error

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

sion 8. Thus, improvement in adaptive functioning most closely paralleled improvement in PTSD symptoms.

With regard to the other outcome measures, pre- to posttreatment scores on all instruments improved as expected, with significant ($<.01$ – $<.001$) changes in all cases, as shown in Table 5. It is important to note that not only the child, but also parent measures, showed significant improvements from pre- to post-treatment. Several of these statistically significant changes were also clinically significant, i.e., scores fell from the clinical to normal range on the MFQ, CPSS, SCARED, UCLA Index-Parent Form, CBCL-Internal Scale, and BDI-II. Although the EGI-CTG scale does not have an established clinical range, it is likely that the decrease in this score (from a mean of 53.75 to a mean of 19.55) was also clinically meaningful. Specifically, these means correlate with CTG symptoms decreasing from more

than once per week (mean score 2.34) to less than once per month (mean score 0.85).

DISCUSSION

This study is the first to evaluate the potential efficacy of a parallel individual child and parent trauma- and grief-focused treatment protocol for resolving CTG, PTSD, depression, and other symptoms in traumatically bereaved children. Additionally, it demonstrates the potential efficacy of such an intervention in improving children's adaptive functioning and parental PTSD and depressive symptoms in the wake of a traumatic family death. Most of the hypothesized changes occurred in the expected time frame, indicating that the trauma- and grief-focused modules successfully addressed their target symptoms. Without a control group, it is impossible to know whether the significant improvements seen in the children and parents in this study were in response to treatment or due to their natural recovery processes. A randomized, controlled trial is needed to address that question. However, the fact that these children had clinically significant levels of PTSD an average of a year after the death of their loved ones died suggests that some of these children merited clinical intervention for chronic PTSD, regardless of whether they may have eventually recovered on their own.

The most striking difference based on specific segment of treatment was in PTSD symptoms, which improved to a highly significant degree during weeks 1 to 4 and 4 to 8, with no further significant improvement afterward. This suggests that the trauma-focused interventions used early in treatment were effective in specifically targeting PTSD symptoms for children with CTG, as has been found in previous studies of non-

TABLE 5
Paired Samples *t* Test (Pre- Versus Post-treatment)

Measure	T1	T2	<i>t</i>	<i>p</i>
	Mean ± SD	Mean ± SD		
MFQ (<i>N</i> = 22)	22.14 ± 9.06	10.86 ± 18.47	2.73	.01
CBCL-Internal	61.86 ± 8.23	52.82 ± 9.50	3.79	.001
CBCL-External	54.64 ± 9.40	49.18 ± 7.89	2.88	.009
CBCL-Total	56.41 ± 10.10	50.32 ± 8.03	2.71	.01
UCLA Index	47.50 ± 19.44	24.28 ± 17.66	8.05	.000
PSS-SR	19.27 ± 11.25	8.18 ± 7.75	5.77	.000
BDI-II	18.32 ± 11.04	9.14 ± 8.09	5.74	.000
SCARED	33.05 ± 10.16	17.25 ± 13.98	4.48	.000

Note: MFQ = Mood and Feelings Questionnaire; CBCL = Child Behavior Checklist; UCLA Index = UCLA PTSD Index for DSM-IV Parent Report Version; PSS-SR = PTSD Scale Self-Report; BDI-II = Beck Depression Inventory II; SCARED = Screen for Children's Anxiety Related Emotional Disorders.

bereaved children with PTSD symptoms (Cohen et al., in press; Deblinger et al., 1996). Although improvements in PTSD paralleled those for CTG in the first half of treatment, only the CTG scores significantly improved during the last half of the grief-focused treatment module. This lends tentative support to the current conceptualization that CTG is not simply the presence of PTSD symptoms during bereavement, but the impingement of those symptoms on the normal tasks of grief. It also suggests that the focus of the final four sessions on positive aspects of grieving (preserving positive memories, making meaning of the loss, and recommitting to present relationships) may have contributed to further resolution of CTG symptoms above and beyond resolving trauma (PTSD) symptoms. Alternatively, it is possible that once PTSD symptoms had lessened, CTG symptoms would have continued to resolve on their own without the additional grief-focused treatment components. A randomized, controlled trial is needed to evaluate these alternative explanations.

Although it is impossible to meaningfully interpret changes in the OP or PM scales at this time, it is interesting to note that scores on both decreased significantly after the fourth session when the child had heard the rationale for creating a trauma narrative but had not actually started one. It is possible that anticipatory anxiety about having to directly discuss the circumstances of the death could contribute to a transient decrease in OP and PM, but at this time this is mere speculation. More extensive evaluation of the OP and PM scales of the EGI is needed, as is empirical documentation of the range of normal responses to childhood bereavement and where CTG fits in relation to this spectrum.

Limitations

There are several limitations of the current study, most notably the absence of a control or comparison treatment condition and the relatively small number of subjects in the treatment group. Additionally, the study did not include minority subjects other than African Americans. As noted above, a randomized, controlled treatment trial is underway to examine the efficacy of the trauma-focused CBT-CTG model for children bereaved by the terrorist attacks of September 11, 2001 (Brown and Goodman, 2002). Additional randomized treatment trials with larger sample sizes will be needed

to determine whether this treatment approach is efficacious for children traumatically bereaved by more diverse types of traumatic events. Additionally, it will be important to operationalize the types of treatments that children with CTG currently receive in community settings and to compare this trauma-focused CBT-CTG and other manual-based treatment models with usual treatments for this population.

Clinical Implications

The current study is the first to preliminarily evaluate the efficacy of an individual child and parent treatment model for CTG. The results support the promise of this treatment approach and lend a degree of empirical support to the validity of sequentially providing trauma- and grief-focused treatment components to optimally resolve CTG, PTSD, and other symptoms. It also suggests the value of including parents in the treatment of children with CTG because parental symptoms also improved significantly during the course of this child-focused treatment. Randomized, controlled trials are needed to further test this treatment model.

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Recurrent Abdominal Pain, Anxiety, and Depression in Primary Care John V Campo, MD, Jeff Bridge, PhD, Mary Ehmann, BA, Sarah Altman, BS, Amanda Lucas, MEd, MBA, Boris Birmaher, MD, Carlo Di Lorenzo, MD, Satish Iyengar, PhD, David A Brent, MD

Objective The prevalence of psychiatric disorder in children and adolescents with functional recurrent abdominal pain (RAP) is unknown. Our aim was to determine whether RAP is associated with psychiatric symptoms and disorders. anxious temperament, and functional impairment in pediatric primary care. **Methods** Children and adolescents who were 8 to 15 years of age, inclusive, and presented with RAP ($N = 42$) or for routine care in the absence of recurrent pain ($N = 38$) were identified by a screening procedure in pediatric primary care office waiting rooms and recruited to participate in a case-control study. Outcome measures were psychiatric diagnoses generated by standardized psychiatric interview administered blind to subject status and self, parent, and clinician ratings of child psychiatric symptoms, temperamental traits, and functional status. **Results** RAP patients were significantly more likely to receive a diagnosis of a psychiatric disorder, with a categorical anxiety disorder in 33 (79%) and a depressive disorder in 18 patients (43%), and higher levels of anxiety and depressive symptoms, temperamental harm avoidance, and functional impairment than control subjects. Anxiety disorders (mean age of onset: 6.25 [standard deviation: 2.17] years) were significantly more likely to precede RAP (mean age of onset: 9.17 [standard deviation: 2.75] years) in patients with associated anxiety. **Conclusions** Youths who present with RAP in primary care deserve careful assessment for anxiety and depressive disorders. Future studies should examine treatments that are proved to be efficacious for pediatric anxiety and/or depressive disorders as potential interventions for RAP. Longitudinal, family, and psychobiological studies are needed to illuminate the nature of observed associations among RAP, anxiety, and depression. *Pediatrics* 2004;113:817-824