

Treating Maladaptive Grief and Posttraumatic Stress Symptoms in Orphaned Children in Tanzania: Group-Based Trauma-Focused Cognitive–Behavioral Therapy

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This study was designed to test the feasibility and child clinical outcomes for group-based trauma-focused cognitive behavior therapy (TF-CBT) for orphaned children in Tanzania. There were 64 children with at least mild symptoms of grief and/or traumatic stress and their guardians who participated in this open trial. The TF-CBT for Child Traumatic Grief protocol was adapted for use with a group, resulting in 12 weekly sessions for children and guardians separately with conjoint activities and 3 individual visits with child and guardian. Using a task-sharing approach, the intervention was delivered by lay counselors with no prior mental health experience. Primary child outcomes assessed were symptoms of grief and posttraumatic stress (PTS); secondary outcomes included symptoms of depression and overall behavioral adjustment. All assessments were conducted pretreatment, posttreatment, and 3 and 12 months after the end of treatment. Results showed improved scores on all outcomes posttreatment, sustained at 3 and 12 months. Effect sizes (Cohen's *d*) for baseline to posttreatment were 1.36 for child reported grief symptoms, 1.87 for child-reported PTS, and 1.15 for guardian report of child PTS.

Low- and middle-income countries (LMICs) are home to an estimated 132 million single and double orphans (United Nations Children's Fund [UNICEF], 2008; World Bank Group, 2013). An estimated 16.6 million children have had at least one parent die from HIV disease, and 90% of these live in sub-Saharan Africa (Joint United Nations Programme on HIV/AIDS, United Nations Children's Fund, & U.S. Agency for International Development, 2012). Orphaned children in LMICs have high rates of unmet psychological needs (Kieling

et al., 2011) and limited access to mental health care (Saxena, Thornicroft, Knapp, & Whiteford, 2007). When treatment is available, rarely does it have prior evidence of effectiveness (Patel, Flisher, Nikapota, & Malhotra, 2008). Researchers advocate for translating evidence-based treatments (EBT) from the high-income settings (HIC) in which they were developed to the geographical and cultural demands of resource-limited areas (e.g., World Health Organization [WHO], 2007; Patel, Chowdhary, Rahman, & Verdelli, 2011).

The death of a parent can be the most stressful event in a child's life (Joint United Nations Programme on HIV/AIDS, United Nations Children's Fund, & U.S. Agency for International Development, 2004; Rotheram-Borus, Weiss, Alber, & Lester, 2005). Studies with African youth have found that those orphaned have higher rates of maladaptive grief, posttraumatic stress (PTS), depression, suicidal thoughts, anxiety, behavior problems, and a negative outlook on their lives relative to those not orphaned (Atwine, Cantor-Graae, & Bajunirwe, 2005; Cluver, Gardner, & Operario, 2007). In a study in East Africa designed to assess the needs of orphaned children, guardians indicated that their main problem was the child's grief; they did

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not know how to help the child with this sadness (O'Donnell, Nyangara, Murphy, & Nyberg, 2008). The psychological consequences of parental death can be exacerbated by the nature of the death, other life changes, stigma, separation from siblings, and other potentially traumatic circumstances (Andrews, Skinner, & Zuma, 2006; Kaplow, Howell, & Layne, 2014; Whetten et al., 2011).

Terms used for bereavement-related symptoms that impair a child's daily functioning include maladaptive, traumatic, complicated, prolonged, persistent complex bereavement disorder, and others (American Psychological Association [APA], 2013; Cohen, Mannarino, Greenberg, Padlo, & Shipley, 2002; Maercker & Lator, 2012; Melhem, Moritz, Walker, Shear, & Brent, 2007; Nader & Layne, 2009). Here we use maladaptive grief to capture symptoms of grief and distress that persist after 6 months (APA, 2013; Kaplow et al., 2014).

WHO guidelines recommend "structured psychological interventions" (Tol, Barbu, & van Ommeren, 2013, p. 478) for bereavement and cognitive-behavioral therapy (CBT) with a trauma focus for PTS (WHO, 2013). Trauma-focused CBT (TF-CBT) has a strong evidence base (i.e., approximately 14 prior randomized controlled trials) and the flexibility to address both PTS and maladaptive grief (Dorsey, Briggs, & Woods, 2011). Our work builds on two studies in the United States for TF-CBT for childhood traumatic grief (TF-CBT for CTG) delivered individually (Cohen, Mannarino, & Deblinger, 2006; Cohen, Mannarino, & Knudsen, 2004; Cohen, Mannarino, & Staron, 2006). The grief-based protocol for TF-CBT (see Table 1) has not been tested in LMICs or developed for group delivery.

There are growing numbers of studies on EBT in LMIC, though most focus on adults (e.g., Bass et al., 2013; Bolton et al., 2003; Patel et al., 2010; Rahman, Malik, Sikander, Roberts, & Creed, 2008). Three address TF-CBT with children in LMIC. The first, an open trial in Zambia with children exposed to a range of traumatic events, was an individual intervention associated with reductions in PTS (Murray et al., 2013). The second, a randomized controlled trial (RCT) in the Democratic Republic of Congo (DRC) with war-exposed and sexually exploited female adolescents, was group-based and was associated with reduced PTS, depression, anxiety, and conduct problems (O'Callaghan, McMullen, Shannon, Rafferty, & Black, 2013). The third, an RCT in the DRC using group TF-CBT with former child soldiers and other war-affected boys was effective in reducing PTS and psychosocial distress (McMullen, O'Callaghan, Shannon, Black, & Eakin, 2013).

The present study was an open trial set in the urban town of Moshi, Tanzania and in the surrounding rural area. It was designed to develop a group protocol for TF-CBT and to examine the feasibility and clinical outcomes for children with symptoms of grief and/or PTS sustained at least 6 months after parental death. The primary child outcome measures were indicators of child grief and PTS. Secondary aims addressed child depression and overall behavioral and emotional well-being. Study goals also included demonstrating that lay counselors could learn and

deliver the intervention and that child and guardian would find the intervention acceptable.

Method

Participants and Procedure

Participants were identified by local AIDS service organizations that referred children with emotional difficulties associated with parental death. Those referred were visited at home after they gave permission for the organization to release contact information to study personnel. Inclusion criteria were (a) child age 7–13 years, (b) residence in a family home, (c) single or double orphan, (d) age 3 or older when parent died (as younger children might not have specific memories of the death), (e) parental death at least 6 months prior, (f) child and guardian willingness to participate, and (g) child symptoms of grief and/or PTS. Eligibility for the study was identified by total score of 15 or higher for symptoms reported by child or guardian on the UCLA Posttraumatic Stress Disorder-Reaction Index (UCLA PTSD-RI; Steinberg, Brymer, Decker, & Pynoos, 2004) or by a score of 10 or above on the child-reported grief measure (Grief Screening Scale [GSS]; Layne, Pynoos, Savjak, & Steinberg, 1998). There were 74 children screened; nine did not meet the eligibility criteria; one guardian declined participation. Children ($N = 64$) were 6.9–13.7 years old (see Table 2). Children were assigned groups: 6.9–11.0 years old ($M = 9.28$, $SD = 1.19$) and 11.1–13.7 years old ($M = 12.18$, $SD = 0.80$). Guardians were over 90% female, predominantly mothers or grandmothers.

Two focus groups were conducted in Moshi by a U.S.-based qualitative interviewer, a Kiswahili translator, and a note-taker. The adult group included 10 local stakeholders from service organizations, faith-based groups, and HIV/AIDS treatment groups. The adolescent group included 10 youth, none of whom were recently orphaned or (to our knowledge) living with HIV/AIDS. Questions focused on local standards for talking with children about death, how children and guardians handle grief, and possible challenges of talking about death in groups. The consensus was that the intervention would be acceptable and beneficial and that groups should be homogeneous regarding child sex and age (7–10 and 11–13 years). Participants noted that guardians often did not know how to help grieving children and that children were reluctant to broach topics related to death with their guardians.

The TF-CBT for CTG protocol (Cohen et al., 2006) was adapted to be delivered in 12 weekly groups. The adaptation for group delivery followed guidelines from Deblinger, Stauffer, and Steer's (2001) group-based TF-CBT. Three individual visits with child and guardian were added for the narrative creation following the cognitive-behavioral intervention for trauma in schools model (Stein et al., 2003).

As described in Table 1, all TF-CBT components and specific grief elements were provided. Initial sessions (1–3) built a foundation for understanding how loss affects children and

Table 1
TF-CBT Practice and Grief-Focused Components

Session	Components (delivered in parallel, concurrent groups ^a)	Guardian only
1	Psychoeducation: grief, trauma, and PTS	Praise
2	Relaxation; affective expression and modulation: dealing with trauma cues	Positive child-guardian time
3	Cognitive coping: cognitive triad; correcting maladaptive cognitions	Effective instructions
4	Rationale for trauma narration; neutral narration (practice with fun event with details, feelings, and thoughts)	
IS ^b 1	1:1 individual TN meeting separately with child and guardian	
5	TN review, each child individually only; relaxation activities in group; preparation for conjoint TN sharing	Rewards
IS2	1:1 individual TN	
6	TN review; preparation for conjoint TN sharing	Positive attention and ignoring; in vivo mastery: overcoming generalized trauma-related fears
IS3	1:1 individual TN	
7	TN review; cognitive processing of trauma (common child thoughts)	
8	In vivo mastery; conjoint child-guardian session ^c : share child's TN	
9	Acknowledge the death/what has been lost; address ambivalent feelings in the relationship, as appropriate; in vivo mastery; conjoint: children share ambivalent feelings activity with the guardians	Parenting skills review
10	Preserve positive memories; in vivo mastery; conjoint: share positive memories	
11	Develop new relationships: commit to ongoing positive relationships; in vivo mastery; conjoint: share relationships activity	
12	Enhancing safety & treatment closure: TF-CBT review and planning for future reminders	

Note. TF-CBT = trauma-focused cognitive behavior therapy; PTS = posttraumatic stress; TN = trauma narrative.

^a60-minute groups for child and guardian, delivered separately and concurrently; guardian-child conjoint activities where noted. ^bIndividual sessions (IS) conducted at the child's home or a community space, approximately one hour. ^cGuardians come into children groups, sit with their child, and engage for approximately 20 minutes of the hour session. Guardians are prepared to normalize feelings and provide support and praise.

taught relaxation and coping skills. The trauma narrative (TN) and processing components (sessions 5–8 plus 3 individual) facilitated the child talking about memories individually, in groups, and sharing with their guardian. In corresponding sessions, guardians discussed their own feelings about the TN and ways to support the children. The last sessions (9–12) addressed grief-specific elements, each including a conjoint child-guardian activity.

All sessions had the same structure: (a) refreshments, (b) review the previous group, (c) teach new components, (d) assign homework, and (e) preview the next group. Group sessions were 1-hour long on Saturdays in community buildings. Each included eight children with separate groups for guardians. Four were held in an urban location and four in rural Moshi, divided by age group and sex. Individual sessions also lasted approximately 1 hour. Guardians were provided with transportation costs.

The lay counselors were recruited, interviewed, and hired by the board of the local collaborating AIDS services and research organization Tanzania Women's Research Foundation

(TAWREF). Desired capabilities included experience in work with children and/or counseling, bilingual in English, willingness to be trained in a new skillset, and willingness to work with the U.S.-based investigators. Three of the four hired counselors had some university-level education, and three had prior work with children. None had any specific mental health experience. Two interviewers, each with prior experience performing evaluations for children and adults, were hired. The U.S.-based investigators were not fluent in Kiswahili; however, the counselors and interviewers hired were bilingual in Kiswahili and English.

The counselors received an initial 10-day, in-person training focused on the TF-CBT for CTG protocol (the second author is an approved TF-CBT trainer), education about grief and children, and counseling basics. Training included didactics and practice with coaching and feedback. The two interviewers were also trained during this period. The counselors practiced with expert oversight (in person; via Skype) for approximately 1 month. In-person supervision in Tanzania occurred on four additional occasions.

Table 2
Characteristics of Guardian and Child Participants

Variable	<i>n</i>	%
Guardian		
Gender		
Male	6	9.4
Female	58	90.6
Relationship to child		
Biological mother	21	32.8
Biological father	2	3.1
Grandparent	25	39.1
Aunt/uncle	11	17.2
Other relative	4	6.3
Not related	1	1.6
Child		
Gender		
Male	32	50.0
Female	32	50.0
Orphan status		
One parent died, living with biological parent	28	43.8
One parent died, not living with biological parent	21	32.8
Both parents died	15	23.4

Note. *N* = 64, children and guardians.

Protocol fidelity was monitored closely. Counselors completed weekly reports of fidelity to the protocol for each group using report templates developed for this study; they also recorded notes about each child and guardian. The U.S. investigators reviewed reports and discussed them in detail during the weekly supervision calls.

The study was approved by the institutional review boards (IRBs) at Duke University, Kilimanjaro Christian Medical Center in Moshi, and the National Institute for Medical Research in Tanzania in Dar es Salaam. Informed consent from the guardian and assent from the child included consent to the screening for clinical symptoms, and if eligible, group participation. Measures and consent/assent forms were translated and back translated by bilingual native Kiswahili speakers.

Measures

Grief symptoms were assessed by child report using the 10-item Grief Screening Scale (GSS; Layne et al., 1998). Responses were rated as 0 = *none*, 1 = *little*, 2 = *some*, 3 = *much*, and 4 = *most*; and the sum was computed for a total grief score. Layne et al. (2008) reported internal consistency ($\alpha = .86$) for the GSS used in a school-based study in Bosnia in which inclusion was defined by a score of 10 or higher (the cutoff for eligibility used in our study). Internal consistency for the translated tool (Cronbach's α) was .62.

Children and guardians were assessed for child PTSD using the UCLA Posttraumatic Stress Disorder-Reaction Index (UCLA PTSD-RI; Steinberg et al., 2004). Interrater

reliability and criterion-related validity have been reported for children in Zambia (Murray et al., 2011) and Somalia (Ellis, Lhewa, Charney, & Cabral, 2006), showing convergent validity with the Depression Self-Rating Scale ($r = .72, p < .001$) and the War Trauma Screening Scale ($r = .59, p < .001$), respectively. Internal consistency in the Somalia study was $\alpha = .85$ (Ellis et al., 2006). Items are rated: 0 = *none*, 1 = *little*, 2 = *some*, 3 = *much*, and 4 = *most*; a sum score was computed with high scores indicating more PTS symptoms. Internal consistency for the Kiswahili-translated PTSD-RI for the child self-report was $\alpha = .70$ and for guardian report, $\alpha = .81$.

The 25-item Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) was used to measure child behavioral and emotional well-being via guardian report; child self-report is limited to age 11 and older and was not used here. Responses are rated as 0 = *not true*, 1 = *somewhat true*, and 2 = *certainly true*. The Total Difficulties (TD) score is computed as the sum of the 20 items representing four factors associated with difficulties: emotional symptoms, conduct problems, hyperactivity and inattention, and peer relationship problems, with a higher score indicating more symptoms. The 5-item factor indicating prosocial behavior was not included in the TD score. The SDQ is used widely in international studies and translated into 43 languages. Investigations of psychometric properties indicate internal consistency ($\alpha = .73$; Goodman, 2001). Internal consistency for the Kiswahili-translated SDQ was $\alpha = .78$.

The Short Mood and Feelings Questionnaire (SMFQ; Angold et al., 1995) is a 13-item screening tool for child depression with child and guardian versions. Scores are scaled 0 = *not true*, 1 = *sometimes true*, and 2 = *true*; the sum is calculated for a total score used in these analyses. Criterion-related validity was shown using the Schedule for Affective Disorders and Schizophrenia (Ambrosini, 2000), among others. Internal consistency for the Kiswahili-translated SMFQ was calculated for both the child ($\alpha = .80$) and guardian report ($\alpha = .75$).

Data Analysis

Bivariate analyses were used to test for baseline differences in symptoms scores by age group, rural versus urban groups, and males versus females. Mixed-effects linear regression models were used to assess changes from baseline to subsequent assessments. Models were estimated with random intercepts to account for time-invariant differences between children; children were nested within groups. Parameter estimates on indicator variables for each follow-up were used to describe the magnitude of change relative to baseline. Regression analyses were adjusted for child age and sex, rural versus urban setting, months since last parent death, guardian sex, orphan status, child relationship to guardian, and the baseline value of the outcome variable. Joint *F* tests on interactions between follow-up assessments and group membership assessed group-level differences in outcome changes over time. Effect sizes for the two primary outcomes were calculated using Cohen's *d*. Internal validity for the translated measures was

calculated using Cronbach's α . Missing values on child or caregiver characteristics were excluded from the calculation of *M*s and *SD*; missing values on symptom scores were excluded from calculations of *M*s and *SD*s, as well as analyses of changes over time. At most, four values (6%) were missing for any of the variables reported. All analyses were conducted using STATA 13.1 (Stata Statistical Software, Release 13).

Results

Study attrition was low. One guardian who replaced an original guardian declined to continue following the end-of-treatment interview. There was one loss to follow-up after the 3-months follow-up interview. There were no dropouts during the intervention; weekly attendance was over 95% for both children and guardians.

Ninety-seven percent of the referred children reached the cutoff score of 10 on the GSS (range: 4–29, $M = 19.50$, $SD = 5.47$). Ninety-five percent met the eligibility cutoff of 15 for child report on the PTSD-RI (range: 10–52, $M = 26.15$, $SD = 9.05$), and 63% met eligibility by guardian report (range: 0–46, $M = 19.61$, $SD = 10.83$). Ninety-two percent were eligible on both screening tools by child self-report.

Table 3 displays the clinical data from pretreatment, end of treatment, and at 3 and 12 months after the end of treatment. Bivariate analyses of the baseline data to compare older versus younger children, rural versus urban, and males versus females on the clinical assessments were performed (not shown). Younger children had higher PTS, $t(62) = 2.15$, $p = .036$, and depression, $t(62) = 3.66$, $p < .001$, by child report and greater overall difficulties by guardian report, $t(62) = 2.15$, $p = .036$, than older children. Children living in urban areas had significantly higher PTS and depression as reported by children and guardians (all $p < .04$), and lower overall well-being (SDQ) reported by guardians, $t(62) = -2.11$, $p = .039$. There were no baseline differences for males versus females.

Table 3
Symptom Scores at Baseline, End of Treatment, and 3- and 12-Month Follow-Up

Variable	Baseline			End of treatment			3-month FU			12-month FU		
	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>	<i>n</i>	<i>M</i>	<i>SD</i>
PTSD-RI												
Guardian	62	19.61	10.83	60	7.83	8.17	62	6.44	7.30	61	4.86	7.71
Child	64	26.15	9.05	64	10.19	9.16	63	7.84	7.52	61	5.10	5.45
SDQ ^a	64	11.91	6.46	64	7.02	5.91	63	6.56	5.24	61	4.84	4.15
GSS ^b	64	19.50	5.47	64	11.27	4.92	63	9.95	4.90	61	8.02	3.84
SMFQ												
Guardian	64	5.39	4.08	64	1.95	3.82	63	2.29	3.49	61	1.11	3.10
Child	64	9.17	5.86	63	2.90	4.51	63	1.44	2.89	61	0.97	2.14

Note. FU = follow-up; PTSD-RI = UCLA Posttraumatic Stress Disorder-Reaction Index: Total; SDQ = Strengths and Difficulties Questionnaire; GSS = Grief Screening Scale; SMFQ = Short Moods and Feelings Questionnaire.

^aGuardian only. ^bChild only.

Children had reduced symptoms on all measures by the end of treatment, with improvements sustained at 3 and 12 months after treatment (all $p < .001$; see Table 4). The same p values were observed when mixed models were analyzed with children nested in groups; intraclass correlations were low (.01–.23). Therefore, we present findings from the parsimonious, disaggregated models. Change scores from baseline to end of treatment are shown in Figure 1; the magnitude of symptom change did not differ with child age or sex. Children with more symptoms reported by self or guardian at baseline showed greater improvement by the end of treatment (all measures $p < .001$, except guardian SMFQ at end of treatment, $p = .028$).

Effect sizes for the primary outcomes from baseline to end of treatment were $d = 1.36$ for child-reported grief symptoms, $d = 1.87$ for child-reported PTS, and $d = 1.15$ for the guardian report of child PTS.

Discussion

The open trial of TF-CBT for orphaned children with grief-related and PTS symptoms at least 6 months following parental death involved adaptation of the TF-CBT for CTG model for use with a group, which included individual sessions for trauma narrative development and the integration of local examples and analogies. The adaptation was consistent with previous reports that only limited modification is needed for EBT from HIC to be feasible and effective in LMIC (e.g., Murray et al., 2013; Patel et al., 2011).

Participating children were at least mildly symptomatic at baseline with 92% meeting the cutoff scores for both grief and PTS symptoms, signifying the consistency between the tools used to establish eligibility. Both children and guardians reported improved child symptoms on primary and secondary outcomes at the end of treatment and at the posttreatment follow-ups at 3 and 12 months. There were no outcome

Table 4
Estimated Changes in Symptom Scores From Baseline for Children and Guardians

Variable	End of treatment		3-month follow-up		12-month follow-up	
	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>	<i>B</i>	<i>SE</i>
PTSD-RI: Total						
Guardian	-11.24***	1.21	-12.73***	1.43	-14.42***	1.56
Child	-15.68***	1.02	-17.91***	1.50	-20.78***	1.91
SDQ: Total guardian	-4.84***	0.57	-5.00***	0.71	-6.69***	0.75
GSS: Total child	-7.92***	0.91	-9.36***	1.00	-11.36***	0.82
SMFQ: Total						
Guardian	-3.33***	0.37	-3.03***	0.38	-4.15***	0.42
Child	-5.79***	0.68	-7.33***	0.98	-7.84***	0.87

Note. PTSDRI = UCLA Posttraumatic Stress Disorder-Reaction Index: Total; SDQ = Strengths and Difficulties Questionnaire; GSS = Grief Screening Scale; SMFQ = Short Moods and Feelings Questionnaire. Regression analyses were adjusted for child age and sex, rural versus urban setting, months since last parent death, caregiver sex, orphan status, relationship to caregiver, and the baseline value for outcome of interest.

*** $p < .001$.

differences by child age or sex. Not surprisingly, children with more symptoms at baseline showed the most improvement. The finding may have been, in part, due to floor effects on the measures or regression to the mean and/or to the natural attenuation of symptoms over time. On the other hand, children who were most symptomatic may also be those most likely to benefit from the grief-focused intervention. The reduction in PTS is similar to three other studies of TF-CBT in sub-Saharan Africa (McMullen et al., 2013; Murray et al., 2013;

O'Callaghan et al., 2013), two of which were randomized controlled trials.

Study limitations should be considered. The study was uncontrolled, prohibiting attributing positive findings solely to the intervention. Improvements may reflect natural symptom change over time, and this limitation can only be addressed by a RCT of this treatment model (currently underway by our teams in Tanzania and Kenya). In addition, potential mediators and moderators of treatment outcomes were not

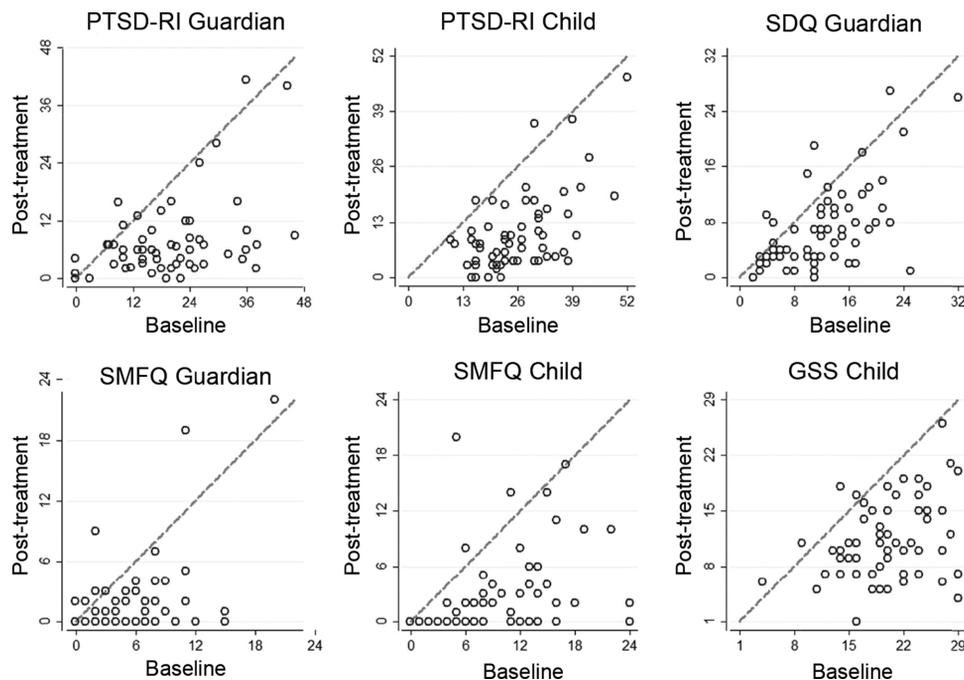


Figure 1. Scatterplots comparing baseline and posttreatment Posttraumatic Stress Disorder-Reaction Index (PTSD-RI), Strengths and Difficulties Questionnaire (SDQ), Short Mood and Feelings Questionnaire (SMFQ), and Grief Screening Scale (GSS) scores for guardian and child participants ($n = 60$ to 64). Circles represent individual participants. A point along the 45-degree line indicates no change, a point below shows the reduction in that score. Greater distance from the line indicates greater change.

examined in this feasibility study (e.g., guardian–child relationship, guardian mental health status, guardian HIV status, guardian religion and tribe). The nature of the parent’s death was not included here because the actual cause of the death is often not known or reported accurately due to stigma. Factors relevant to the child’s care likely play a role in the expression of grief and responsiveness to intervention. Future studies should attend to possible cofactors involved in treatment effects to understand determinates of clinical improvement. Further exploration of the role of the guardian’s mental health status, involvement with the child, and change during the intervention may help move mental health interventions for vulnerable children in LMIC toward a better understanding of the most critical factors in their care.

Limitations and future directions notwithstanding, these findings offer strong evidence for the feasibility of the group adaptation of grief focused TF-CBT in this setting and modest evidence of positive child outcomes. The high rates of attendance by children and guardians are consistent with acceptability of the treatment model. The study represents a first step toward the sustainability of this evidence-based mental health treatment model in a LMIC. The lay counselors trained and supervised during this study are now supervising the lay counselors implementing a current RCT (with oversight by the U.S. collaborators). The third step will be directed toward sustaining local access to the proven treatment model.

References

- Ambrosini, P. J. (2000). Historical development and present status of the Schedule for Affective Disorders and Schizophrenia for school-age children (K-SADS). *Journal of the American Academy of Child & Adolescent Psychiatry, 39*, 49–58. doi:10.1097/00004583-200001000-00016
- American Psychiatric Association. (2013). *Diagnostic and statistical manual of mental disorders* (5th ed.). Arlington, VA: American Psychiatric Publishing.
- Andrews, G., Skinner, D., & Zuma, K. (2006). Epidemiology of health and vulnerability among children orphaned and made vulnerable by HIV/AIDS in sub-Saharan Africa. *AIDS Care, 18*, 269–276. doi:10.1080/09540120500471861
- Angold, A., Costello, E. J., Messer, S. C., Pickles, A., Winder, F., & Silver, D. (1995). Development of a short questionnaire for use in epidemiological studies of depression in children and adolescents. *International Journal of Methods in Psychiatric Research, 5*, 237–249. Retrieved from <http://devepi.duhs.duke.edu/AngoldMFQarticle.pdf>
- Atwine, B., Cantor-Graae, E., & Bajunirwe, F. (2005). Psychological distress among AIDS orphans in rural Uganda. *Social Science & Medicine, 61*, 555–564. doi:10.1016/j.socscimed.2004.12.018
- Bass, J. K., Annan, J., McIvor Murray, S., Kaysen, D., Griffiths, S., Cetinoglu T., . . . Bolton, P. A. (2013). Controlled trial of psychotherapy for Congolese survivors of sexual violence. *New England Journal of Medicine, 368*, 2182–2191. doi:10.1056/NEJMoa1211853
- Bolton, P., Bass, J., Neugebauer, R., Verdelli, H., Clougherty, K. F., Wickramaratne, P., . . . Weissman, M. (2003). Group interpersonal psychotherapy for depression in rural Uganda: A randomized controlled trial. *Journal of the American Medical Association, 289*, 3117–3124. doi:10.1001/jama.289.23.3117
- Cluver, L., Gardner, F., & Operario, D. (2007). Psychological distress amongst AIDS-orphaned children in urban South Africa. *Journal of Child Psychology and Psychiatry, 48*, 755–763. doi:10.1111/j.1469-7610.2007.01757.x
- Cohen, J. A., Mannarino, A. P., & Deblinger, E. (2006). *Treating trauma and traumatic grief in children and adolescents*. New York, NY: Guilford Press.
- Cohen, J. A., Mannarino, A. P., Greenberg, T., Padlo, S., & Shipley, C. (2002). Childhood traumatic grief: Concepts and controversies. *Trauma, Violence, & Abuse, 3*, 307–327. doi:10.1177/1524838002237332
- Cohen, J. A., Mannarino, A. P., & Knudsen, K. (2004). Treating childhood traumatic grief: A pilot study. *Journal of the American Academy of Child & Adolescent Psychiatry, 43*, 1225–1233. doi:10.1097/01.chi.0000135620.15522.38
- Cohen, J. A., Mannarino, A. P., & Staron, V. R. (2006). A pilot study of modified cognitive behavioral therapy for childhood traumatic grief (CBT-CTG). *Journal of the American Academy of Child & Adolescent Psychiatry, 45*, 1465–1473. doi:10.1097/01.chi.0000237705.43260.2c
- Deblinger, E., Stauffer, L. B., & Steer, R. A. (2001). Comparative efficacies of supportive and cognitive behavioral group therapies for young children who have been sexually abused and their non-offending mothers. *Child Maltreatment, 6*, 332–343. doi:10.1177/1077559501006004006
- Dorsey, S., Briggs, E. C., & Woods, B. A. (2011). Cognitive behavioral treatment for posttraumatic stress disorder in children and adolescents. *Child and Adolescent Psychiatric Clinics of North America, 20*, 255–269. doi:10.1016/j.chc.2011.01.006
- Ellis, H. B., Lhewa, D., Charney, M., & Cabral, H. (2006). Screening for PTSD among Somali adolescent refugees: Psychometric properties of the UCLA PTSD Index. *Journal of Traumatic Stress, 19*, 547–551. doi:10.1002/jts.20139
- Goodman, R. (1997). The Strengths and Difficulties Questionnaire: A research note. *Journal of Child Psychology & Psychiatry, 38*, 581–586. doi:10.1111/j.1469-7610.1997.tb01545.x
- Goodman, R. (2001). Psychometric properties of the Strengths and Difficulties Questionnaire (SDQ). *Journal of the American Academy of Child and Adolescent Psychiatry, 40*, 1337–1345.
- Joint United Nations Programme on HIV/AIDS (UNAIDS). (2012). *Global report: UNAIDS report on the global AIDS epidemic*. Geneva, Switzerland: Author. Retrieved from http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2012/gr2012/20121120_UNAIDS_Global_Report_2012_with_annexes_en.pdf
- Joint United Nations Programme on HIV/AIDS, United Nations Children’s Fund, & U.S. Agency for International Development. (2004). *Children on the brink 2004: A joint report of new orphan estimates and a framework for action* (Contract No. HRN-C-00-00-0004-00). New York, NY: Author. Retrieved from http://www.unicef.org/publications/cob_layout6-013.pdf
- Kaplow, J., Howell, K., & Layne, C. (2014). Do circumstances of the death matter? Identifying socioenvironmental risks for grief-related psychopathology in bereaved youth. *Journal of Traumatic Stress, 27*, 42–49. doi:10.1002/jts.21877
- Kieling, C., Baker-Henningham, H., Belfer, M., Conti, G., Ertem, I., Omigbodun, O., . . . Rahman, A. (2011). Child and adolescent mental health worldwide: Evidence for action. *The Lancet, 378* 1515–1525. doi:10.1016/S0140-6736(11)60827-1
- Layne, C. M., Pynoos, R. S., Savjak, N., & Steinberg, A. (1998). Grief Screening Scale. Unpublished measure, University of California-Los Angeles, Los Angeles, CA.
- Layne, C. M., Saltzman, W. R., Poppleton, L., Burlingame, G. M., Pašalić, A., Duraković, E., . . . Pynoos, R. S. (2008). Effectiveness of a school-based

- group psychotherapy program for war-exposed adolescents: A randomized controlled trial. *Journal of the American Academy of Child & Adolescent Psychiatry*, 47, 1048–1062. doi:10.1097/CHL.0b013e31817eecae
- Maercker, A., & Lator, J. (2012). Diagnostic and clinical considerations in prolonged grief disorder. *Dialogues in Clinical Neuroscience*, 14, 167–176. Retrieved from <http://www.dialogues-cns.org/wp-content/uploads/2012/06/DialoguesClinNeurosci-14-167.pdf>
- McMullen, J., O'Callaghan, P., Shannon, C., Black, A., & Eakin, J. (2013). Group trauma-focused cognitive-behavioural therapy with former child soldiers and other war-affected boys in the DR Congo: A randomized controlled trial. *Journal of Child Psychology and Psychiatry*, 54, 1231–1241.
- Melhem, N. M., Moritz, G., Walker, M., Shear, M. K., & Brent, D. (2007). Phenomenology and correlates of complicated grief in children and adolescents. *Journal of the American Academy of Child & Adolescent Psychiatry*, 46, 493–499. doi:10.1097/chi.0b013e31803062a9
- Murray, L. K., Bass, J., Chomba, E., Imasiku, M., Thea, D., Semrau, K., . . . Bolton, P. (2011). Validation of the UCLA Child Posttraumatic Stress Disorder–Reaction Index in Zambia. *International Journal of Mental Health Systems*, 5, 1–13. doi:10.1186/1752-4458-5-24
- Murray, L. K., Familiar, I., Skavenski, S., Jere, E., Cohen, J., Imasiku, M., . . . Bolton, P. (2013). An evaluation of trauma focused cognitive behavioral therapy for children in Zambia. *Child Abuse & Neglect*, 37, 1175–1185. doi:10.1016/j.chiabu.2013.04.017
- Nader, L., & Layne, C. (2009). Maladaptive grieving in children and adolescents: Discovering developmentally linked differences in the manifestation of grief. *Stress Points*, 23, 12–15.
- O'Callaghan, P., McMullen, J., Shannon, C., Rafferty, H., & Black, A. (2013). A randomized controlled trial of trauma-focused cognitive behavioral therapy for sexually exploited, war-affected Congolese girls. *Journal of the American Academy of Child & Adolescent Psychiatry*, 52, 359–369. doi:10.1016/j.jaac.2013.01.013
- O'Donnell, K., Nyangara, F., Murphy, R., & Nyberg, B. (2013). *Child Status Index Manual* (2nd ed.). Chapel Hill, NC: Measure Evaluation.
- Patel, V., Chowdhary, N., Rahman, A., & Verdeli, H. (2011). Improving access to psychological treatments: Lessons from developing countries. *Behaviour Research & Therapy*, 49, 523–528. doi:10.1016/j.brat.2011.06.012
- Patel, V., Flisher, A. J., Nikapota, A., & Malhotra, S. (2008). Promoting child and adolescent mental health in low and middle income countries. *Journal of Child Psychology & Psychiatry*, 49, 313–334. doi:10.1111/j.1469-7610.2007.01824.x
- Patel, V., Weiss, H. A., Chowdhary, N., Naik, S., Pednekar, S., Chatterjee, S., . . . Kirkwood, B. R. (2010). Effectiveness of an intervention led by lay health counsellors for depressive and anxiety disorders in primary care in Goa, India (MANAS): A cluster randomised controlled trial. *The Lancet*, 376, 2086–2095. doi:10.1016/S0140-6736(10)61508-5
- Rahman, A., Malik, A., Sikander, S., Roberts, C., & Creed, F. (2008). Cognitive behaviour therapy-based intervention by community health workers for mothers with depression and their infants in rural Pakistan: A cluster-randomised controlled trial. *The Lancet*, 372, 902–909. doi:10.1016/S0140-6736(08)61400-2
- Rotheram-Borus, M. J., Weiss, R., Alber, S., & Lester, P. (2005). Adolescent adjustment before and after HIV-related parental death. *Journal of Consulting & Clinical Psychology*, 73, 221–228. doi:10.1037/0022-006X.73.2.221
- Saxena, S., Thornicroft, G., Knapp, M., & Whiteford, H. (2007). Resources for mental health: Scarcity, inequity, and inefficiency. *The Lancet*, 370, 878–889. doi:10.1016/S0140-6736(07)61239-2
- StataCorp. (2013). *Stata Statistical Software: Release 13*. College Station, TX: StataCorp LP.
- Stein, B. D., Jaycox, L. H., Kataoka, S. H., Wong, M., Tu, W., Elliott, M. N., & Fink, A. (2003). A mental health intervention for schoolchildren exposed to violence: A randomized controlled trial. *Journal of the American Medical Association*, 290, 603–611. doi:10.1001/jama.290.5.603
- Steinberg, A. M., Brymer, M. J., Decker, K. B., & Pynoos, R. S. (2004). The University of California at Los Angeles Posttraumatic Stress Disorder Reaction Index. *Current Psychiatry Reports*, 6, 96–100. doi:10.1007/s11920-004-0048-2
- Tol, W. A., Barbui, C., & van Ommeren, M. (2013). Management of acute stress, PTSD, and bereavement: WHO recommendations. *Journal of the American Medical Association*, 310, 477–478. doi:10.1001/jama.2013.166723
- United Nations Children's Fund (UNICEF). (2008) Orphans. Retrieved from http://www.unicef.org/media/media_45279.html
- Whetten, K., Ostermann, J., Whetten, R., O'Donnell, K., Thielman, N., & the Positive Outcomes for Orphans Research Team. (2011). More than the loss of a parent: Potentially traumatic events among orphaned and abandoned children. *Journal of Traumatic Stress*, 24, 174–182. doi:10.1002/jts.20625
- World Bank Group. (2013). How we classify countries. Retrieved from <http://data.worldbank.org/about/country-classifications>
- World Health Organization. (2007). *Task shifting to tackle health worker shortages*. Geneva, Switzerland: Author. Retrieved from http://www.who.int/healthsystems/task_shifting_booklet.pdf
- World Health Organization. (2013). *Guidelines for the management of conditions specifically related to stress*. Geneva, Switzerland: Author. Retrieved from http://apps.who.int/iris/bitstream/10665/85119/1/9789241505406_eng.pdf