Efficacy of Two Evidence-Based Therapies, Emotional Freedom Techniques (EFT) and Cognitive Behavioral Therapy (CBT), for the Treatment of Gender Violence in the Congo: A Randomized Controlled Trial

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Abstract

Psychological trauma in the aftermath of sexual violence is a persistent problem in both developing and developed nations, and appropriate treatment techniques are needed to address the special needs of this population. The objective of this study was to assess whether two evidence-based therapeutic methods for PTSD, Cognitive Behavioral Therapy (CBT) and Emotional Freedom Techniques (EFT), are efficacious for sexual gender-based violence (SGBV). Participants were 50 internally displaced female refugees who had been victims of SGBV in the Democratic Republic of Congo (DRC). They were assessed using the Harvard Trauma Questionnaire (HTQ) and the Hopkins Symptom Checklist–25 (HSCL-25), which measures general mental health. Participants received two 2-1/2 hour treatment sessions per week for 4 consecutive weeks (eight sessions total). Assessments occurred before and after treatment, and 6 months later. Participants demonstrated significant posttest improvement in both groups on both measures. Follow-up assessments showed that participants maintained their gains over time whether treated with EFT or CBT. The results are consistent with earlier trials, and indicate that both EFT and CBT are efficacious when delivered in group format, as well as being effective treatments for SGBV in the setting of a developing nation.

Keywords: Cognitive Behavioral Therapy, CBT, Emotional Freedom Techniques, EFT, PTSD, posttraumatic stress disorder, mental health, sexual violence

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War places civilians at increased risk of many forms of violence. The fear of violence can promote forced and mass displacement. According to a report by the United Nations High Commissioner for Refugees (UNHCR, 2004), 59.5 million people were forcibly displaced worldwide, with 57.7 million people registered as refugees or internally displaced persons (IDPs). During transitions through conflict and displacement, refugees and IDPs continue to live with heightened vulnerability to violence resulting from the breakdown of family and social structure, and reduced law enforcement and protective social services. Significant efforts have been made to assess for, prevent, and respond to gender-based violence (GBV) that occurs in these settings (UNHCR, 2003; Hagan, Rymond-Richmond, & Palloni, 2009; Amowitz, et al., 2002; IASC, 2005). There are a number of definitions of GBV (e.g., United Nations General Assembly, 1993). The U.S. Department of State and the U.S. Agency for International Development (2012) define GBV as:

> violence that is directed at an individual based on his or her biological sex, gender identity, or perceived adherence to socially defined norms of masculinity and

femininity. It includes physical, sexual, and psychological abuse; threats; coercion; arbitrary deprivation of liberty; and economic deprivation, whether occurring in public or private life. Gender-based violence takes on many forms and can occur throughout the life cycle.

The U.S. Centers for Disease Control and Prevention (CDC) defines sexual violence as:

> …any nonconsensual completed or attempted contact (between the penis and the vulva or the penis and the anus involving penetration, however slight), nonconsensual contact between the mouth and the penis, vulva, or anus; nonconsensual penetration of the anal or genital opening of another person by a hand, finger, or other object; nonconsensual intentional touching, either directly or through the clothing, of the genitalia, anus, groin, breast, inner thigh, or buttocks; or nonconsensual non-contact acts of a sexual nature such as voyeurism and verbal or behavioral sexual harassment. All the above acts also qualify as sexual violence if they are committed against someone who is unable to consent or refuse… (Basile & Saltzman, 2002).

Displaced women and girls experience an increased vulnerability to a range of sexual violence including forced sex (rape), sexual abuse by an intimate partner, child sexual abuse, coerced sex, and sex trafficking in conflict and humanitarian settings (Ward & Vann, 2002). Many studies have focused on the issue of rape as a weapon of war, which has led to assumptions that only the armed and military personnel are the main perpetrators of sexual violence (Hynes & Lopes Cardozo, 2000). Other perpetrators, however, may also include family members, non-governmental organization and humanitarian workers, trusted individuals, or strangers who take advantage of the heightened vulnerability of victims (Human Security Report Project, 2012; Wirtz, et al., 2013). As a result, women and girls who experience sexual violence may experience a range of long-lasting physical (Campbell, et al., 2002, Ellsburg, 2008), reproductive (Draughton, 2012; McLean, 2011; Olynik, Petovello, Cannon, & Lachapelle, 2002), and mental health consequences of sexual violence (Ellsburg, Jansen, Heise, Watts, & Garcia-Moreno, 2008).

Posttraumatic Stress Disorder

Posttraumatic stress disorder (PTSD) is a mental health condition that is triggered by either witnessing or experiencing a terrifying event. Epidemiological studies on PTSD have shown lifetime prevalence rates of up to 6.8% (Kessler, Berglund, et al., 2005), with as many as 10% of women and 5% of men being affected (Kar, 2011). It has been estimated that, by 2020, psychological trauma will be among the leading causes of disability (Kalia, 2002). Symptoms of PTSD include flashbacks, nightmares, and severe anxiety, as well as intrusive thoughts about the event. Symptoms of PTSD are not typically ameliorated by the passage of time. Even 30 years after military service, PTSD is associated with increased disease risk and all-cause mortality (Beckham, et al., 1998, Boscarino, 2006). Veteran populations with higher levels of symptomatic PTSD are known to be heavier consumers of medical services, and have poorer health behaviors (such as alcohol and drug abuse) than those without PTSD (Hoge, Terhakopian, Castro, Messer, & Engel, 2007; Zen, Whooley, Zhao, & Cohen, 2012; Cohen, et al., 2010).

Psychological trauma in the aftermath of sexual violence is a persistent problem in both developing and developed nations, and appropriate treatment techniques are needed to address the special needs of this population. In the war-torn African continent, PTSD is among the most commonly encountered mental disorders, with prevalence figures typically ranging from 30% to 40% (Njenga, Nguithi, & Kang'ethe, 2006).

CBT Methodology

Cognitive Behavior Therapy (CBT) or Cognitive Therapy (CT) is a form of psychotherapy pioneered by Dr. Aaron T. Beck in the 1960s. It is a form of treatment that focuses on examining the relationships between thoughts, feelings, and behaviors. By exploring the patterns of thinking that may lead to self-destructive actions and the beliefs that direct these thoughts, individuals with mental illnesses or conditions are empowered to modify their patters of thinking to improve coping (Beck Institute for Cognitive Therapy, 2015).

At each therapy session, cognitive behavior therapists help patients specify the problems they

have encountered during the previous week or that they expect to encounter in the current week. They then collect data to identify the ideas and behaviors that have interfered with patients' ability to solve problems themselves. Cognitive behavior therapists engage patients to help them decide where to start working. Together, they develop an "action plan" that consists of homework assignments for patients to complete during the week to implement solutions to problems and/or to make changes in their thinking and actions. This iterative process gets patients actively involved in their own treatment; they begin to recognize that the way to get better is to make small changes in how they think and what they do every day. When treatment ends, patients are able to use the skills and tools they have learned in therapy in their day-to-day lives.

In adults, CBT has been shown to be effective in the treatment of anxiety disorders (Otte, 2011; Robinson, 2010), depression (Driessen, 2010; Foroushani, Schneider, & Assareh, 2011), eating disorders (Murphy, Straebler, Cooper, & Fairburn, 2010), chronic low back pain (Gatchel & Rollings, 2008), personality disorders (Matusiewicz, Hopwood, Banducci, & Lejuez, 2010), psychosis (Borrego & Bonome, 2009), schizophrenia (Rathod, Phiri, & Kingdon, 2010), and substance abuse disorders (McHugh, Hearon, & Otto, 2010). In children and adolescents, CBT is an effective part of treatment plans for anxiety (Seligman & Ollendick, 2011), body dysmorphic disorder (Phillips & Rogers, 2011), depression and suicidality (Spirito, Esposito-Smythers, Wolff, & Uhl, 2011), eating disorders and obesity (Wilfley, Kolko, & Kass, 2011), obsessive-compulsive disorder (Boileau, 2011), and PTSD (Kowalik, Weller, Venter, & Drachman, 2011), as well as tic disorders, trichotillomania, and other repetitive behavior disorders (Flessner, 2011).

CBT and PTSD

CBT has been found to be effective for PTSD that occurs after terrorist attacks, for example, with the survivors of the 9/11 terrorist attack on the World Trade Center (Levitt, Malta, Martin, Davis, & Cloitre, 2007), the 2005 London bombings (Brewin, et al., 2010), and the 1998 bomb explosion in Omagh, Northern Ireland (Gillespie, Duffy, Hackmann, & Clark, 2002). CBT for the victims of the World Trade Center attack was manualized, applied flexibly, in 12–25 sessions, by therapists with a variety of backgrounds ranging from no prior training through to extensive training in CBT. Victims saw significant pre-post reductions in symptoms of PTSD and depression. The improvement seen in PTSD in victims of the 2005 London bombings was maintained an average of 1 year later. Patients with PTSD from the Omagh bombing received an average of eight treatment sessions by staff with modest prior training in CBT for PTSD. However, the degree of improvement was comparable to that in reported research trials, despite almost half of the patients (53%) having psychiatric comorbidity.

One study showed promise for CBT in the treatment of PTSD among those traumatized by war (Beidel, Frueh, Uhde, Wong, & Mentrikoski, 2011). The study examined the efficacy of multicomponent CBT, Trauma Management Therapy (TMT), which combines exposure therapy and social emotional rehabilitation, in a group of male combat veterans with chronic PTSD. Thirty-five Vietnam veterans with PTSD were randomly assigned to receive either TMT or exposure therapy only. Participants in the TMT group showed increased frequency and greater time spent in social activities, from mid-treatment to post-treatment, supporting the hypothesis that TMT alone (and thus CBT) would result in improved social functioning.

There is also evidence that CBT is successful in reducing the symptoms of PTSD following assault on females, rape (Foa, Zoellner, & Feeny, 2006; Jaycox, Zoellner, & Foa, 2002; Nishith, et al., 2003), and childhood sexual abuse (McDonagh, et al., 2005). Various studies have shown that these gains are maintained in the long-term at follow-up assessment points (Foa, et al., 2006; Jaycox, et al., 2002). One study compared prolonged exposure alone, prolonged exposure plus cognitive restructuring, and a wait list in female patients with chronic PTSD following sexual assault (Foa, et al., 2005). It found that CBT reduced PTSD and depression in intent-to-treat (ITT) and completer samples compared with wait-list. However, the addition of cognitive restructuring did not enhance the treatment outcome. This study also showed that treatment by counselors with minimal CBT experience was as efficacious as that of CBT experts. Studies have found that CBT helps to decrease self-reported PTSD

symptom severity and the associated anxiety, and participants can show sustained improvement (Butler, Chapman, Forman, & Beck, 2006).

Refugees with PTSD often present with a matrix of traumatic symptoms. They have often been subject to prolonged and repeated exposure to traumatic events, along with acculturation difficulties. Many studies of CBT in refugees suggest that it is effective in treating PTSD in this population (Paunovic & Öst, 2001). Clinical issues, such as adapting CBT to the culture and language of the refugees, are challenging and have been addressed in some studies (Otto, et al., 2003). A program of CBT emphasizing information, exposure, and cognitive restructuring has been successfully used with a refugee population (Otto, et al., 2003).

Large effect sizes have been obtained in some of the previous CBT studies, indicating a broad suitability of CBT for this population (Palic & Elklit, 2011). Refugees with pharmacology-resistant PTSD have also benefitted from CBT (Hinton, Hofmann, Pollack, & Otto, 2009). In a sample of Vietnamese refugees with treatment-resistant PTSD and panic attacks, CBT produced significant improvements for all outcome measures (Hinton, et al., 2004). Assessments used in this study included the Harvard Trauma Questionnaire (Mollica, et al., 1992) and the Hopkins Symptom Checklist–25 (Parloff, Kelman, & Frank, 1954; Hesbacher, Rickels, Morris, Newman, & Rosenfeld, 1980). In an illustrative case report, a male asylum seeker living in Sweden who had been tortured received 16 sessions of CBT. These involved self-exposure to trauma-related cues. Treatment was associated with significant improvement across all measures of PTSD, anxiety, and depression, and gains were maintained at 6-month follow-up (Başoğlu, Ekblad, Bäärnhielm, & Livanou, 2004).

EFT Methodology

Emotional Freedom Techniques (EFT) is an evidence-based practice, with more than 100 randomized controlled trials, outcome studies, and review papers published in peer-reviewed journals listed in the online research bibliography at Research.EFTuniverse.com. EFT meets the criteria of the American Psychological Association's Division 12 Task Force on Empirically Validated Treatments for a number of psychological conditions, including anxiety, depression, phobias, and PTSD (Church, Feinstein, Palmer-Hoffman, Stein, & Tranguch, 2014). Meta-analyses of EFT for anxiety and depression have found moderately large treatment effects (Nelms & Castel, 2015; Clond, 2015). A meta-analysis of seven randomized controlled trials of EFT for PTSD that met the APA Division 12 quality criteria found large treatment effects (Sebastian & Papworth, 2015).

EFT has also been found to produce improvement in physical conditions such as fibromyalgia (Brattberg, 2008), psoriasis (Hodge & Jurgens, 2011), tension headaches (Bougea, et al., 2013), pain (Church, 2014), traumatic brain injury (Church & Brooks, 2014), and seizure disorders (Swingle, 2010). In service evaluations performed by the U.K. National Health Service, EFT produced an improvement in general physical functioning as well as mental health (Stewart, Boath, Carryer, Walton, & Hill, 2013; Boath, Stewart, & Rolling, 2014; Stewart, Boath, Carryer, Walton, Hill, Phillips, & Dawson, 2013). The wide range of conditions for which EFT is effective is usually attributed to the technique's ability to reduce stress, which is a component of many emotional and physical disorders (Lane, 2009; Church, 2013a).

EFT treatment is standardized, with a consistent treatment manual being available since the inception of the method and most published studies using the manualized protocol (Craig & Fowlie, 1995; Church, 2013b). EFT combines acupressure with elements of two other evidence-based psychotherapeutic techniques: exposure therapy and cognitive therapy. While vividly recalling a traumatic event, clients are instructed to tap on 12 acupressure points with their fingertips. The client reports the emotional intensity of the event on an 11-point Likert scale both before and after the application of EFT (Wolpe, 1958). Studies and clinical reports note rapid reductions in distress after tapping (Church, 2013a; Mollon, 2007; Schulz, 2009). Clinical EFT is the manualized evidence-based form of the original EFT methodology (Church, 2013b). Clinical EFT is generally considered safe, with few accounts of abreactions or emotional flooding (Schulz, 2009; Flint, Lammers, & Mitnick, 2005). These benefits extend even to the most highly traumatized populations (Feinstein, 2008).

One study (Gurret, Caufour, Palmer-Hoffman, & Church, 2012) examined PTSD symptoms in a convenience sample of 77 male Haitians (ages 22 to 25) following the 2010 earthquake. Participants were scored using the PTSD Checklist (PCL) and 48 (62%) participants exhibited scores in the clinical range (>49; mean score = 54.4). Participants received 2 days of instruction in EFT after which they were again assessed. Following the training, 0% of the participants scored in the clinical range. A paired *t*-test analysis of pre-post PCL scores revealed a statistically significant decrease ($p < 0.001$) to a mean of 27.2 at posttest. Posttest scores decreased by an average of 72%, ranging from a 21% reduction to a 100% reduction in symptom severity.

Boath, Steward, and Rolling (2014) conducted a pilot study to establish the feasibility and effectiveness of Matrix Reimprinting (MR), a specialized EFT protocol, in treating posttraumatic stress symptoms in civilian survivors of the war in Bosnia. Participants ($n = 18$) were asked to complete a modified version of the PTSD Checklist–Civilian Checklist (PCL-C; Blanchard, et al., 1996) at baseline, immediately after a 2-week MR intervention, and then at 4-week follow-up. There was a significant reduction in the mean scores from baseline to post intervention ($p = 0.009$) and again at 4 weeks follow-up ($p = 0.005$). The size of the effect was sustained at follow-up (0.65). Qualitative analysis of the data revealed four themes pertaining to the impact of EFT and MR: (a) physical and psychological changes, (b) strength to move on and self-care, (c) rapport with MR practitioners, and (d) recommending treatment to others.

In another study, a team of four energy therapy practitioners visited Rwanda in September of 2009 to conduct trauma remediation programs with two groups of orphan genocide survivors with complex PTSD symptoms (Stone, Leyden, & Fellows, 2010). Remediation consisted of multimodal intervention with three energy psychology methods—Tapas Acupressure Technique (TAT), Thought Field Therapy (TFT), and EFT—with the techniques employed being based on participant needs. Interventions were performed on 2 consecutive workshop days followed by 2 days of field visits with students. Data were collected using the Child Report of Posttraumatic Stress (CROPS) to measure pre- and post-intervention results, using a time-series, repeated measures design. A total of 28 orphans with clinical PTSD scores completed a pretest. Of these, 10 (34%) completed posttest assessments after 1 week, 3 months, and 6 months, and all analysis was done on this group. Participants demonstrated an average reduction in symptoms of 37.3% ($p < .005$). Four of the 10 students (40%) dropped below the clinical cutoff point for PTSD at the 6-month follow-up.

There have been many studies of EFT for PTSD in war veterans. In one randomized controlled trial in which veterans received six EFT sessions, PTSD symptoms dropped significantly by 64% (Church, Hawk, et al., 2014). A replication of this study showed similar results (Geronilla, McWilliams, & Clond, 2014). Other studies find that EFT remediates PTSD in three to 10 sessions (Karatzias, et al., 2011; Church, Geronilla, & Dinter, 2009; Church, 2009). Participants typically maintain their gains on follow-up. The objective of the present study was to assess whether two evidence-based therapeutic methods for PTSD—CBT and EFT—are efficacious for SGBV.

Methods

Participants and Procedures

The study was approved by the institutional review board of North Carolina State University. All participants provided informed consent. Participants were assessed using two valid and reliable instruments, the Hopkins Symptom Checklist–25 (HSCL-25; Parloff, Kelman, & Frank, 1954; Hesbacher, et al., 1980) and the Harvard Trauma Questionnaire (HTQ; Mollica, et al., 1992). The HTQ includes 16 diagnostic criteria based on the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition* (DSM-IV). Participants score PTSD symptoms on a 4-point scale. A score of 2.5 or greater indicates probable PTSD, while some studies with refugee populations have used a cutoff of 2 (Cohen, Shi, et al., 2011; Oruc, et al., 2008). The HSCL-25 is regarded as an indicator of mental health, with scores of 1.75 or greater indicating general psychological distress (Hesbacher, et al., 1980).

Participants were clients of a center for displaced women who were survivors of the war in Congo whose mean HTQ scores were 2 (>1.5). They were randomly allocated to one of the two treatment groups using a randomization

table generated by the university's research department. Of the 50 clients assessed, all met the inclusion criteria. EFT was delivered with fidelity to *The EFT Manual* (Craig & Fowlie, 1995; Church, 2013b), and CBT according to the *Group Therapy Manual for Cognitive-Behavioral Treatment for Depression* (Muñoz & Miranda, 1993). After assessment, participants received two group treatment sessions per week for 4 weeks. Each session lasted 2-1/2 hours. Both the CBT and the EFT therapists were licensed mental health professionals. Assessments were completed before and after treatment, and 6 months later. Each participant received a payment of $10. Data were analyzed blind. There were no dropouts, and no adverse events were reported. Since all participants lived in communities close to the displacement center, and visited it often for goods and services, all were available for follow-up. The flow of participants through the study is represented in the CONSORT diagram in Figure 1.

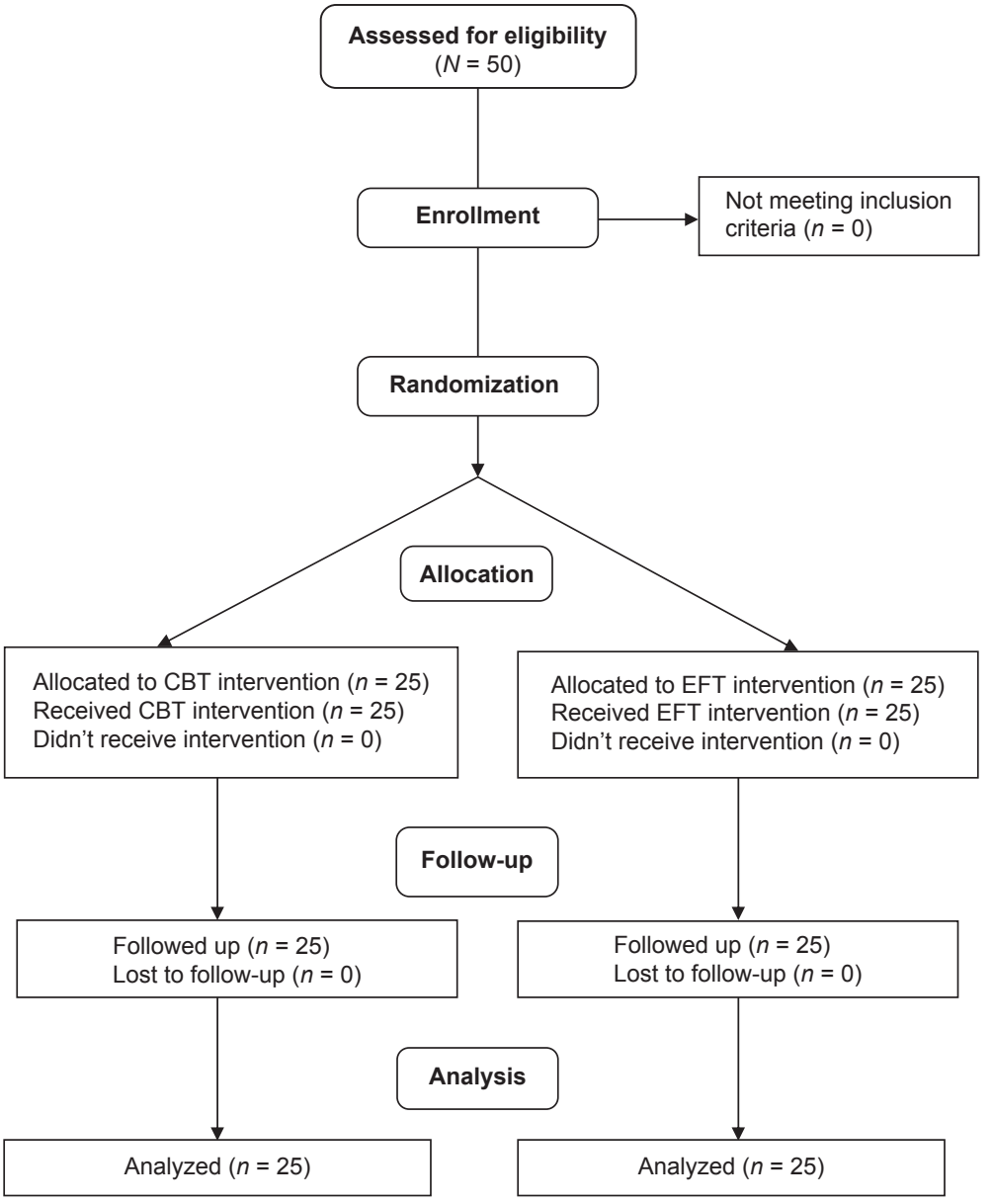

Figure 1. CONSORT flow chart.

Table 1: *Participant Characteristics by Group Before Intervention*

	CBT (n = 25)	EFT (n = 25)
Age (SD) years	30 (7.6)	31 (7.6)
Mean HSCL-25 score	2.52 (0.59)	2.31 (0.54)
Mean HTQ score	2.71 (0.57)	2.54 (0.42)

Statistical Approach

Linear mixed-effects models were conducted on participant HSCL-25 and HTQ scores, with participant as a random effect to allow specific intercepts to be modeled over time. Participant group scores immediately after treatment and 6 months after treatment were compared to baseline scores before treatment. Variables included in the model were age, group, period, and interaction between period and group. Statistics were calculated using R version 3.1.2.

Results

Baseline Levels

Mean age was 31 years, ranging from 18 to 47. Mean HSCL-25 score was 2.41 and ranged from 1.24 to 3.28. Mean HTQ score was 2.62 and ranged from 1.55 to 3.94. Baseline HSCL-25 and HTQ scores in the EFT and CBT groups are summarized in Table 1. Baseline differences between groups for age and primary outcome measures (HSCL-25 and HTQ) were compared using *t* tests. No significant differences were found between groups.

Comparison of Treatment Effects

Mean HSCL-25 and HTQ before and after treatment are presented in Table 2. Age did not have a significant effect on HSCL-25 scores (χ^2 = 0.60, df = 1, p = 0.437) or HTQ scores (χ^2 = 3.78, df = 1, p = 0.052), although there was a trend for older respondents to have lower HTQ scores. The interaction between period and treatment group had no significant effect on HSCL-25 scores (χ^2 = 0.22, df = 2, p = 0.897), but there were significant differences between periods (χ^2 = 69.25, df = 2, p < 0.001), indicating that both treatments were equally effective in reducing HSCL-25 scores. Immediately after treatment, patient HSCL-25 scores decreased by 0.683 ± 0.078 (*SD*), and were still 0.672 ± 0.078 (*SD*) lower than baseline levels 6 months later. The interaction between period and treatment group did have a significant effect on HTQ scores (χ^2 = 6.62, df = 2, p = 0.036, post hoc comparisons in Table 3). In the CBT group, HTQ scores decreased from baseline levels by 0.88 ± 0.09 (*SD*) immediately after treatment, and were 1.11 ± 0.09 (*SD*) below baseline levels 6 months later. In the EFT group, HTQ scores decreased

Table 2: *Mean HSCL-25 and HTQ Scores Before and After Treatment*

	HSCL-25 (mean and SD)	HTQ (mean and SD)
CBT		
Before	2.52 (0.59)	2.71 (0.57)
After	1.80 (0.55)	1.83 (0.60)
6 months	1.84 (0.48)	1.60 (0.38)
EFT		
Before	2.31 (0.54)	2.54 (0.42)
After	1.66 (0.49)	1.59 (0.41)
6 months	1.64 (0.48)	1.69 (0.42)
P value: Period	<0.001	<0.001
P value: Period—Treatment group interaction	0.897	0.036

Table 3: *Post Hoc Comparisons of HSCL-25 and HTQ Scores in Different Periods for Each Treatment*

Comparison	HCSL-25		HTQ	
	T value	***P* value**	**T value**	***P* value**
CBT				
Before—After	6.48	<0.001	9.32	<0.001
Before—6 months	6.12	<0.001	11.74	<0.001
After—6 months	–0.93	0.931	2.41	0.046
EFT				
Before—After	5.87	<0.001	10.07	<0.001
Before—6 months	6.03	<0.001	8.97	<0.001
After—6 months	0.16	0.986	–1.10	0.516

from baseline levels by 0.95 ± 0.09 (*SD*) immediately after treatment, and were 0.85 ± 0.09 (*SD*) below baseline levels 6 months later.

Differences between groups were not significant for all three time periods, but there was a significant reduction from baseline HSCL-25 scores immediately after treatment, and the reduction was retained 6 months later. *P* values from post hoc comparisons are shown in Figure 2.

For both treatment groups, there was a significant reduction from baseline HTQ scores immediately after treatment, and HTQ scores were still lower than baseline levels 6 months later. There was no significant statistical interaction between treatment group and period using the HSCL-25 ($p = 0.897$); however, a statistically significant period-treatment group interaction was observed in the HTQ ($p = 0.036$). The presence of a significant interaction indicates that the effect of one predictor variable on the response variable is different at different values of the other predictor variable. In this case, the CBT group showed an even greater reduction in HTQ score 6 months after treatment when compared with immediately after treatment. *P* values from post hoc comparisons are shown in Figure 3.

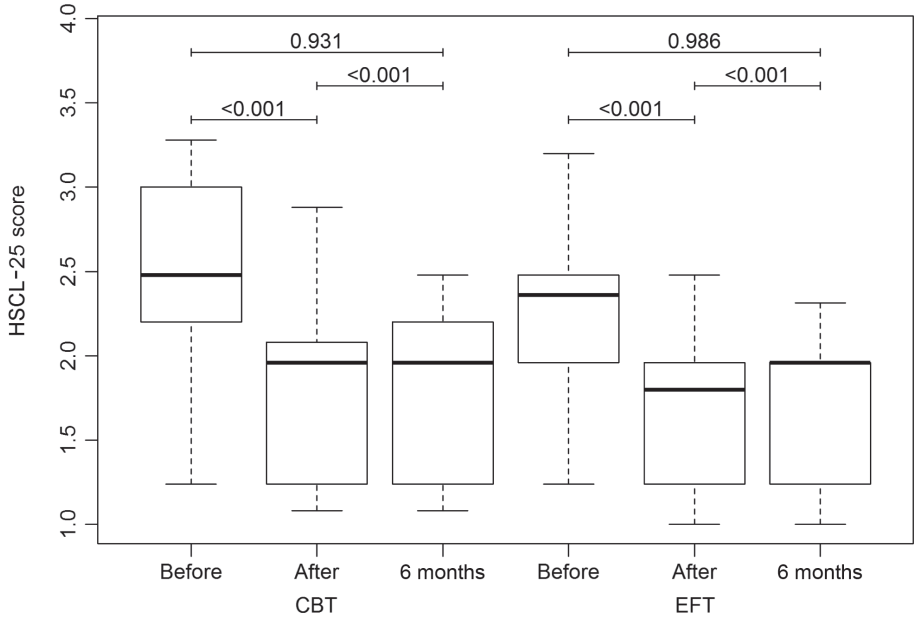

Figure 2. Changes in HSCL-25 scores by treatment group before, immediately after, and 6 months after treatment.

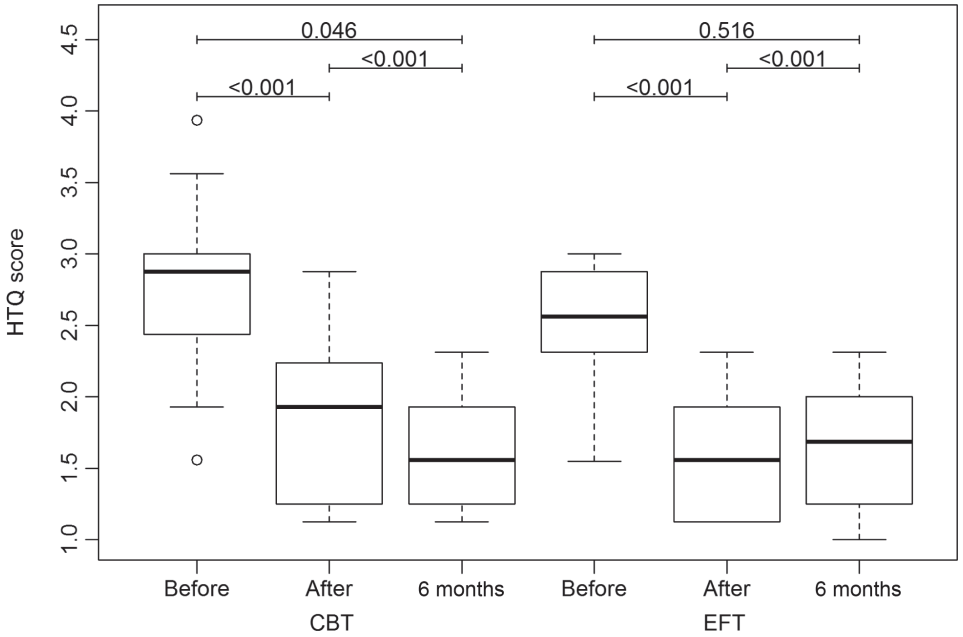

Figure 3. Changes in HTQ scores by treatment group before, immediately after, and 6 months after treatment.

Discussion

We found that CBT and EFT both lowered HSCL-25 and HTQ mean scores in a statistically significant manner directly after treatment. These lowered symptom and trauma scores were maintained at levels statistically significantly below baseline ($p < 0.001$) 6 months after the intervention. The CBT group showed an even greater reduction in HTQ score 6 months after treatment when compared with immediately after treatment.

This study benefited from a sample size larger than most previous studies of this type. Groups were of equal and adequate size to make the required statistical comparisons. Treatment subgroups were randomized, and the statistician performing the analysis was blind to group assignment. All participants provided informed consent and were assessed using the HSCL-25 and HTQ, both of which have been validated for and employed for studies of the effect of psychotherapy techniques in similar populations.

A further strength of our study was that there were no dropouts and no participants lost to follow-up. The population under study was served by a center for displaced women that provided a variety of needed goods and services. As they received access to these at the center, they were more inclined to remain in the center-sponsored study for the duration of the treatment and follow-up period. Social support may have been enhanced by the group format of treatment. Treating traumatized individuals in groups can be both efficient and cost-effective. In a study of 218 U.S. combat veterans and their spouses who attended one of six weeklong workshops, EFT was shown to remediate PTSD in the majority of participants, with gains maintained on follow-up (Church & Brooks, 2014). The authors of that particular study hypothesized that the social support offered by group treatment may have been a key factor in EFT's success.

One major limitation of this study is the absence of a non-treatment group. Although significant improvements were observed over time for both EFT and CBT, these findings do not compare their effects with a group receiving no treatment. It is possible that social support, sympathetic attention, and the removal of trauma-related environmental cues might decrease symptoms over time. However, as a matter of ethics, not treating a trauma survivor for 6 months after arrival at a displacement center may cause more harm if the passage of time does not produce improvement.

Two more limitations should be considered. First, as the entire study population was accessed

through one displacement center, it is possible that the results are not representative of the effect of CBT and EFT on all victims of sexual gender-based violence. Though this study produced a statistically significant treatment effect, the use of more than one location could provide heterogeneity (and thus better generalizability) to our results. As mentioned, it is possible that social support within the group of women meeting at the displacement center or relationships with staff could have created a unique situation that produced a positive effect.

Second, the positive treatment effect for both CBT and EFT could be related to the reception of goods and services by the women in the study. Displacement centers provide for the basic needs of the surrounding community. It is possible that the women in the study may have seen the treatment as a condition or benefit of their participation at the center, whether that was the intended by the researchers or not. The study population's relationship with the center may have influenced the women to answer the HSCL-25 and HTQ in a manner indicative of improvement.

Third, because the two groups lived in communities close to the displacement center, with daily contact, cross-contamination between the two treatment groups is likely to have occurred, especially during the 6 month follow-up period. Because of the intensity of the treatment experience during the 4 week treatment period, we did not observe enough interaction between members of the two groups to significantly influence the pre-post results. However, during the follow-up period, when members of both groups were interacting both at the center and in their living communities, the members of the CBT group were frequently exposed to EFT, and may have used it in addition to the CBT skills they had learned during the treatment period. The combination of CBT and EFT may explain the significant drop in symptoms in the CBT group between the posttest and follow-up data points, a result not typically found in studies of either EFT or CBT. The effect of this cross-contamination may have in part been to turn the CBT group into a "CBT plus EFT" group. A study that uses matched groups in different facilities instead of randomizing within one facility could isolate the two treatments and remove this confounding variable. We recommend that an extension of this study also include a group that receives both CBT and EFT, in order to test the hypothesis that a combination of the two therapies is more effective than either one in isolation.

Conclusions

The results of the current study are consistent with previously published reports demonstrating that both EFT and CBT are robust evidence-based treatments for PTSD. Both are well tolerated by refugee populations and appropriate for the treatment of SGBV. The group treatment delivery format is cost-effective, clinically effective, and appropriate for settings in which time and resources are limited. Taken together with previous research, this study indicates that both EFT and CBT should be considered treatments of choice for clinicians and institutions tasked with the welfare of refugees, especially those suffering from PTSD.

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