


The Treatment of Combat Trauma in Veterans Using EFT (Emotional Freedom Techniques): A Pilot Protocol

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Abstract

With a large number of U.S. military service personnel coming back from Iraq and Afghanistan with posttraumatic stress disorder (PTSD) and comorbid psychological conditions, a need exists to find protocols and treatments that are effective in brief treatment time frames. In this study, a sample of 11 veterans and family members were assessed for PTSD and other conditions. Evaluations were made using the SA-45 (Symptom Assessment 45) and the PCL-M (Posttraumatic Stress Disorder Checklist–Military) using a time-series, within-subjects, repeated measures design. A baseline measurement was obtained 30 days prior to treatment and immediately before treatment. Participants were then treated with a brief and novel exposure therapy, EFT (Emotional Freedom Techniques), for 5 days. Statistically significant improvements in the SA-45 and PCL-M scores were found at posttest. These gains were maintained at both the 30- and 90-day follow-ups on the general symptom index, positive symptom total, and the anxiety, somatization, phobic anxiety, and interpersonal sensitivity subscales of the SA-45, and on PTSD. The remaining SA-45 scales improved posttest but were not consistently maintained at the 30- and 90-day follow-ups. One-year follow-up data were obtained for 7 of the participants and the same improvements were observed. In summary, after EFT treatment, the group no longer scored positive for PTSD, the severity and breadth of their psychological distress decreased significantly, and most of their gains held over time. This suggests that EFT can be an effective postdeployment intervention.

Keywords

veterans, posttraumatic stress disorder (PTSD), exposure therapy, depression, anxiety, Emotional Freedom Techniques (EFT)

Introduction

A report commissioned by the U.S. Department of Veterans Affairs found that all veterans in war zones are at risk for posttraumatic stress disorder (PTSD; Institute of Medicine, 2006). It is estimated by some military psychiatrists that the number of U.S. troops requiring treatment for PTSD may exceed 300,000 (Iraq Vets Stress Project, 2008). Other estimates find PTSD percentages as high as 27% of noncommissioned officers serving three or more tours (Shanker, 2008). In addition, PTSD is often comorbid with traumatic brain injury (TBI) and addictions, as well as depression, anxiety, and other mental health issues (Boston University, 2008). Breslau, Davis, Andreski, and Peterson (1991) found that 83% of PTSD-positive individuals meet diagnostic criteria for other psychological disorders. Successful treatments thus address this complex of co-occurring conditions (Tanielian & Jaycox, 2008).

Complicating treatment, most cases of PTSD are complex PTSD, with origins in multiple emotionally traumatic events, rather than simple single-incident traumas. PTSD is associated with physical diseases, longer hospitalizations, and other

social costs (Boston University, 2008). In addition, military personnel are increasingly required to serve repeated deployments, and the proportion with PTSD has been shown to rise with greater combat exposure (Clancy et al., 2006). This has spurred efforts to examine PTSD protocols and treatments, such as a meta-analysis by Bradley, Greene, Russ, Dutra, and Western (2005), which found cognitive behavior therapy, exposure therapy, and eye movement desensitization and reprocessing (EMDR) to be efficacious therapies. Because of the large population of PTSD-positive veterans, a need exists for therapies that are effective in a limited number of sessions.

The method used in this study, EFT or Emotional Freedom Techniques, is often clinically applied in very limited time frames. A pilot study using six sessions of EFT with Iraq and

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Vietnam veterans found significant reductions in PTSD, depression, anxiety, and the breadth and severity of psychological symptoms (Church, Geronilla & Dinter, 2009). Gains were maintained at follow-up. EFT has demonstrated efficacy in other PTSD-positive populations such as accident victims (Swingle, Pulos, & Swingle, 2000). Case studies of Iraq and Vietnam veterans treated with EFT for four to six sessions have demonstrated improvement in PTSD and co-occurring psychological symptoms (Dinter, 2008). EFT is one of a family of therapies, collectively called Energy Psychology, that are used for treating physical maladies, as well as psychological symptoms (Feinstein, Eden, & Craig, 2005). A British trial underway is examining the efficacy of EFT for British veterans, after numerous case histories compiled by clinicians at Britain's National Health Service (NHS) applying the therapy reported success with PTSD (Brown, 2008). Energy Psychology has demonstrated efficacy with a number of anxiety-based disorders (Feinstein, 2008a), and clinical reports from numerous sources suggest that it is effective with PTSD (Carbonell & Figley, 1999).

Diepold and Goldstein (2009) found that when a traumatic memory was recalled, it produced changes in quantitative electroencephalogram (qEEG) measures that were not present when neutral events were recalled. After treatment with a form of Energy Psychology called TFT, qEEG readings taken during traumatic recall became consistent with normal results, and on 18-month follow-up, gains were maintained. Diepold and Goldstein also found that subjective measures of distress (SUD) tracked qEEG results. Energy Psychology has been used in many conflict zones, from Kosovo to Rwanda, to treat traumatic stress, and reports from practitioners, survivors, and local health officials indicate positive outcomes following both natural and human-caused disasters (Feinstein, 2008b).

One of the dilemmas involved in treating combat experiences is that recalling a traumatic incident may retraumatize rather than desensitize the client (van der Kolk, McFarlane, & Weisaeth, 1996). For this reason, therapies such as EMDR are delivered only in a clinical setting, in which client abreactions can be immediately treated. This safety issue is minimized with EFT. Mollon (2008) reports the absence of client distress as a characteristic of EFT interventions, and a survey of clinicians who use both Energy Psychology and other techniques such as cognitive behavioral therapy and EMDR finds that they prefer Energy Psychology in cases involving the recall of traumatic memories for this reason (Schulz, 2008). Their findings are consistent with other reports in which client distress decreases with EFT treatment even though specific traumatic combat memories are being evoked (Church, Geronilla, & Dinter, 2009; Dinter, 2008).

EFT is delivered in a standardized manner described in *The EFT Manual* (Craig, 2008), and summarized in a brief standard consensus protocol being used by researchers for clinical trials of EFT. The clinical experiences distilled from

the current study, two other studies of EFT for PTSD, plus several hundred case histories supplied by clinicians, are summarized and standardized in *EFT for PTSD* (Craig, 2009).

Treatment Protocol

The veterans in the present study were treated with EFT intensively for 5 days. EFT is an exposure therapy that combines both a cognitive element and a somatic element. The cognitive element of EFT involves a self-assessment of the degree of distress, and the pairing of an abbreviated exposure statement and a self-acceptance statement. The degree of distress is evaluated by the subject on an 11-point Likert-type scale, in which 0 represents *absolutely no distress*, whereas 10 represents the *maximum distress possible* (Wolpe, 1973). This is referred to as the subjective units of distress or SUD, and gives the clinician as well as the client a sense of the degree of severity of symptoms experienced by the client, as well as a repeated measure by which the progress of treatment can be evaluated.

The pairing of an exposure statement with a self-acceptance element is referred to in EFT as the "setup statement." A typical setup statement is of the simple structure: "Even though I have (stated problem), I fully and completely accept myself." Examples of setup statements drawn from actual combat experience is "Even though I hated shooting the kid as he ran toward my platoon pulling the pin on the grenade, I fully and completely accept myself," or, "Even though I want to vomit when I think about that time I had to pull my buddy's decomposing body from the rubble, I fully and completely accept myself."

The somatic portion of an EFT treatment consists of the subject or therapist rubbing or tapping 12 points on the body with one or two fingertips. Five of these are on the head, two are on the torso, and five are on the hand. The head points are the inside of either eyebrow, the bony outside of the eye socket, the bottom of the eye socket below the pupil, below the nose, and below the lower lip. The torso points are the inside edge of the collarbone near where it meets the sternum, and under the arm just above the lowest ribs. The hand points are the points on the cuticle nearest the torso of the thumb and each finger with the exception of the ring finger, and the fleshy outside edge of the palm, referred to for convenience as the "karate chop point."

After assessing SUD, an EFT treatment begins by repeating the setup statement three times while tapping the karate chop point with the fingers of the opposite hand. Then, each of the other points is tapped 5 to 10 times. This is referred to as a "round" of "tapping." After a round of tapping, SUD is reassessed. If the number has not gone down, one or more rounds of EFT may be performed, till the SUD number is at or near zero.

EFT was developed by Gary Craig (2008), based on an earlier and much more elaborate method called thought field

therapy or TFT (Callahan, 2000). Some proponents of EFT and other Energy Psychology methods attribute the efficacy of treatments to the location of the tapping points, which are located on the endpoints of acupuncture meridians as described in traditional Chinese medicine (Gallo, 1999). However, others ascribe the mechanisms of action of Energy Psychology to more conventional biomechanical mechanisms, such as

- increased regulation of sympathetic–parasympathetic interaction, and of the HPA (hypothalamus–pituitary–adrenal) axis (Lane, 2006);
- decreased hyperarousal of the limbic system and other brain structures involved in the fight-or-flight response generated by exposure to trauma (Feinstein, 2008a);
- changes in the amygdala and anterior cingulate areas of the brain (Felmingham et al., 2006);
- utilization of the semiconductive properties of connective tissue (Oschman, 2006);
- downregulation and increased reuptake rates of cortisol and other stress hormones (Church, 2008); and
- increased expression of the stress-regulatory immediate early genes (IEGs; Church, 2009).

Mollon (2008) has argued that the “energy” nomenclature used by proponents of this group of therapies is misleading, and that their effectiveness can be explained entirely in terms of well-understood physiological mechanisms, such as those described by the above authors. The pervasiveness of these mechanisms is noteworthy; during the stress response, entire organ systems are affected. In response to a stress stimulus—whether an objective environmental threat or a subjective experience such as a traumatic memory—wholesale reallocation of physiological resources occurs. The body shunts resources away from nonessential systems such as digestion, immunity, and reproduction, and toward essential survival systems such as the peripheral musculature, the cardiovascular system, insulin production, and the respiratory system. More study is required to determine which of these physiological mechanisms, singly or in combination, may be at work to produce the trauma-reduction effects of EFT and other Energy Psychology therapies.

Method

The 11 participants in this study spanned a wide sociodemographic spectrum. Their ages ranged from 26 to 61 years. Four were female, seven were male. They had served in wars from Vietnam to the second Iraq war. Nine were veterans, and, to assess the impact of transferred military PTSD, 2 were family members of veterans. One was the mother of a veteran who was also a participant, and one was the wife of a veteran who was also a participant. Physical disabilities

ranged from amyotrophic lateral sclerosis (ALS) to osteoarthritis; 2 participants habitually used wheelchairs.

PTSD was assessed using the PCL-M (PTSD Checklist–Military). Psychological symptoms were assessed using the Symptom Assessment 45 (SA-45) questionnaire. The use of a multisymptom assessment for co-occurring conditions is useful; according to Department of Defense data, 49% of National Guard troops, 38% of Army troops, and 31% of Marines report psychological symptoms subsequent to deployment (Defense Health Board Task Force on Mental Health, 2007). Participants also completed a 7-day sleep diary, and provided a personal list of issues in their own words prior to treatment. Study participants were a convenience sample drawn from applicants who submitted email requests to the EFT Web site in response to a call for veterans with PTSD and family members for treatment in a week-long intensive format.

Subjects were assessed 1 month prior to beginning the study, at the beginning of the first day of treatment, at the end of the last day of treatment, 30 and 90 days after treatment, and 1 year later. Assessments included the SA-45 30 days in advance, a sleep diary the week before treatment, a second SA-45 and a PCL-M at the start of the first day of treatment, a third SA-45 and a second PCL-M at the end of the final day, a sleep diary the subsequent week, and PCL-Ms, sleep diaries, and SA-45s 30 days, 90 days, and 1 year later. Proximate data was collected by a research assistant onsite, and pre- and follow-up data by mail. All analysis was done blind and offsite by an independent statistician. There were no dropouts in the sample through the required 90-day data collection period, though only 7 of the 11 subjects completed the optional 1-year follow-up.

The PCL-M is a self-assessment used by the military to score PTSD severity (Weathers, Litz, Herman, Huska, & Keane, 1993). It has 17 items. Respondents report to what degree they were “bothered by that problem in the past month.” A sample question is, “In the past month, how much have you been bothered by repeated, disturbing memories, thoughts or images of a stressful military experience?” The assessment uses a 5-point scale ranging from 1 (*not at all*) to 5 (*extremely*).

The SA-45 a quick measure of psychological symptoms based on degree of distress. It is normed to a database of 18,000 subjects, and uses the same items, symptom domains, and structure as the 90-item SCL-90 (Symptom Checklist 90). It is a 45-question assessment. Respondents are asked to rate each item on a severity scale from 1 (*not at all*) to 5 (*extremely*). As well as its primary measures, the SA-45 has nine subscales. They measure

Anxiety: Nervousness, tension, panic, apprehension

Depression: Feeling down, hopeless, lonely, worthless, loss of interest in life

Obsessive–compulsive: Unwanted, but irresistible, thoughts, impulses, actions

Somatization: Distressful perceptions of bodily dysfunctions

Phobic anxiety: Irrational fear of specific person, place, object, or situation

Hostility: Aggression, irritability, rage, resentment

Interpersonal sensitivity: Feeling inferior, self-conscious

Paranoid ideation: Suspicious of others

Psychoticism: Disordered thought, hallucinations, belief in thought control

In addition to the above subscales, the SA-45 has two measures of general psychological issues. One is the global severity index or GSI, which measures overall psychological distress. The second, the positive symptom total or PST, measures the breadth of symptoms regardless of severity. Numerous studies have validated the reliability of the SA-45 (Davison et al., 1997; Maruish, 1999).

Insomnia frequently co-occurs with PTSD (Lamarche & De Koninck, 2007), thus participants completed a 7-day sleep diary starting the week before treatment, and at subsequent data points. The sleep diary contained numerical ratings for quality of sleep, number of times subject awoke during the night, and quality of function during the subsequent day. These were compiled into a single composite sleep disorder score (SDS) ranging from a lowest possible value of 2 (few sleep disorders) to 60 (maximum sleep disorders).

Treatment Structure

Prior to the start of treatment, the participants emailed their list of problematic combat-related psychological issues to the research coordinator. The number of issues ranged from a low of 4 to a high of 30. In their personal problem list, participants also reported physical symptoms. Reports included diabetes, tremors, tinnitus, impotence, too-high medication use, arthritis, gingivitis, excess weight, cigarette and alcohol abuse, headaches, overweight, fever blisters, temporomandibular joint, diverticulitis, irritable bowel syndrome, nausea, and severe pain. Psychological self-reports included helplessness, guilt, anger, suicidal ideation, paranoia, anxiety, panic attacks, memory lapses, resentment, sadness, fear, and nightmares.

All participants signed informed consent forms. EFT was delivered by six practitioners, who were either licensed psychotherapists, or life coaches trained personally in EFT by EFT founder Gary Craig, who was present. EFT was delivered using the standardized method described in *The EFT Manual* (Craig, 2008). Sessions were videotaped to assess treatment fidelity, and fidelity assessed daily by Craig. The intensive treatment period began with a group meeting the night before the first EFT treatments were administered. Participants received an introductory talk about EFT. The research coordinator characterized participants' attitudes during the introductory evening as "negative and skeptical."

The following 5 days followed the same routine: Each morning, participants met with an assigned EFT practitioner at 8:30 a.m. They reviewed their lists of issues with the practitioner, assessed progress from the previous day using a SUD score, identified any new issues or traumatic combat memories that had arisen, and defined their focus for the coming day. They were then assigned to a room and a practitioner. Sessions lasted about 60 minutes, and each veteran received two to three sessions per day, depending on the availability of therapists and client issue matches. Each practitioner performed four or five sessions per day. Participants also had the option of spending time in a larger public room in which EFT was occasionally conducted, so that they could observe treatments, but this option was exercised by few. Each day's last treatment session concluded at 5:00 p.m.

Each evening, Craig met with the six EFT practitioners from 5:30 p.m. for approximately 90 minutes, reviewed fidelity, and the group completed a progress report on each participant. Based on this assessment, participants were assigned to a particular practitioner for the subsequent day, predicated on factors such as the degree of rapport, the practitioner's specialty, and insights into participants' issues gained by the practitioners.

Practitioners reported that although they were able to facilitate resolution most of the combat-related traumas during the course of the 5 days, they were not able to address all the other issues in the participants' lives. For instance, one participant had substance abuse problems in addition to severe combat trauma; because of time constraints, treatment focused on the latter rather than the former. A minority of participants reduced their SUD scores for all their combat traumas to a 0 and began to add other nonmilitary traumas to their lists of issues to work on daily. At the end of the study, participants were given an instructional DVD of EFT to take home with them. Assessments were completed the morning of the first day and the afternoon of the final day. Other data points were obtained by emailing forms to participants, who returned them by regular mail.

Results

Using the PCL-M, participants were scored for PTSD before and after treatment, 30 and 90 days after, and 1 year after treatment. A total score of 50 on the PCL-M is considered PTSD positive in military populations (National Center for PTSD, 2008). The lowest possible score is 17, and the highest possible score is 85. The group's average score was 62. After treatment, the average score was 23. And after 30 days, the average score was 32, after 90 days, 33, and after 1 year, 33 (Figure 1).

The SA-45 provides normed scores for each subscale. Figure 2 reflects the value above normal for the sample at each point. Figure 3 reflects values for the two general scales indicating the breadth and severity of symptoms.

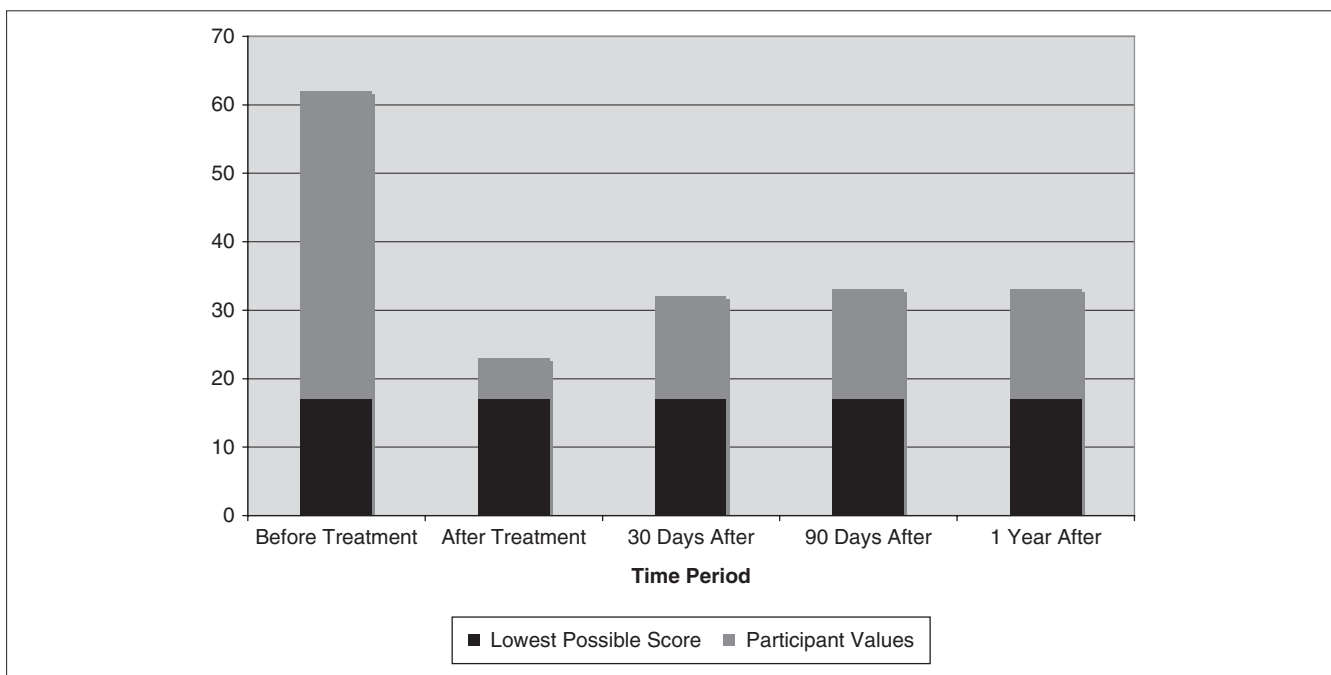


Figure 1. Changes in posttraumatic stress disorder (PTSD) scores before and after treatment, and follow-ups

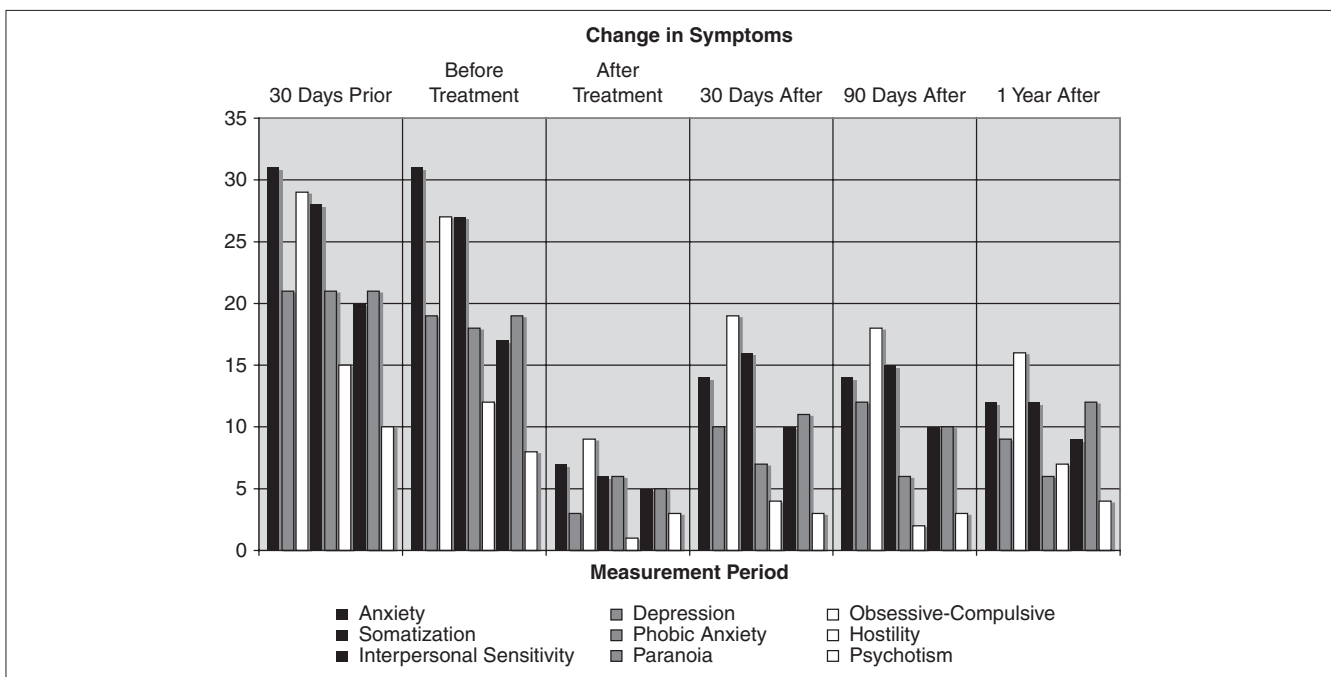


Figure 2. Changes in scores for nine psychological conditions
 Bars within each time period indicate, from left to right, scores for anxiety, depression, and so on.

Data were analyzed by conducting a general linear model (GLM) repeated measures analysis of variance on each SA-45 subscale, the SA-45 cumulative scales (GSI and PST), the PCL-M, and sleep scores (Figure 4). Multivariate Wilks’s lambda was used to determine overall significance of the

models. Post hoc Tukey tests were conducted on the statistically significant models. The less stringent repeated measures analysis was chosen over more stringent approaches such as analysis of covariance because of the small sample size, lack of a comparison group, and exploratory nature of the study.

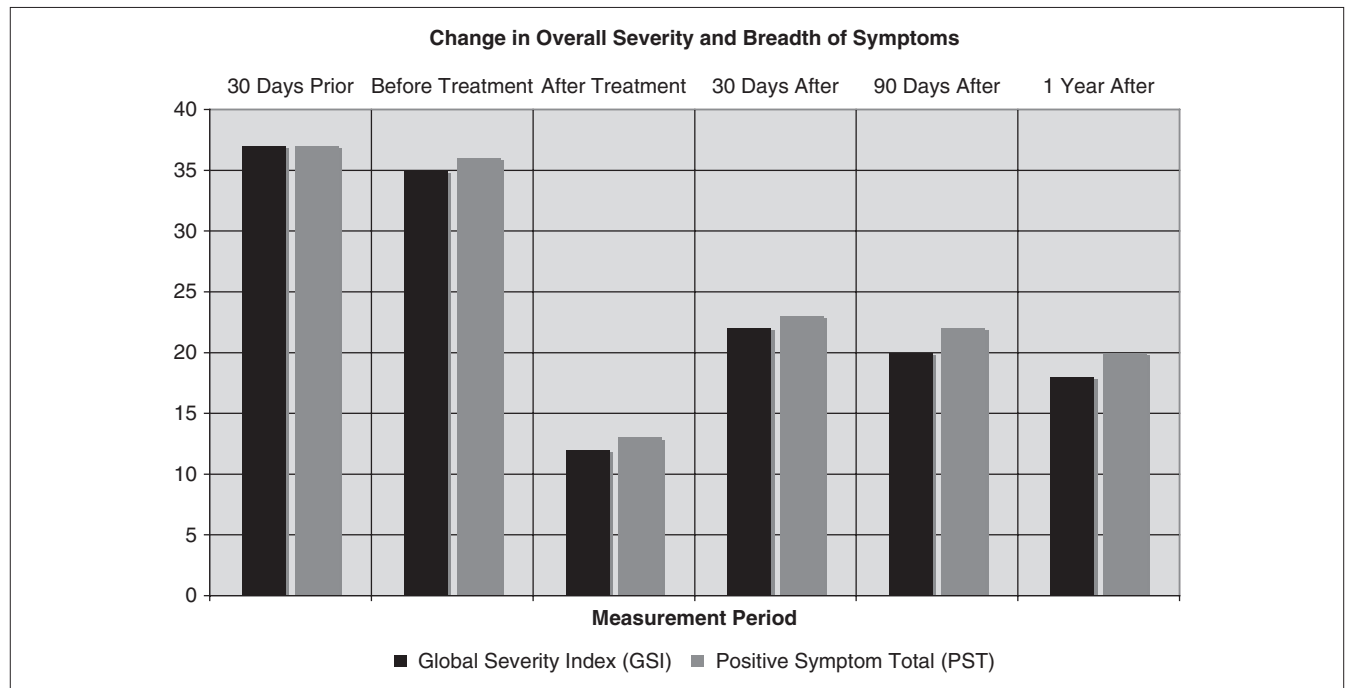


Figure 3. Changes in severity and breadth of symptoms

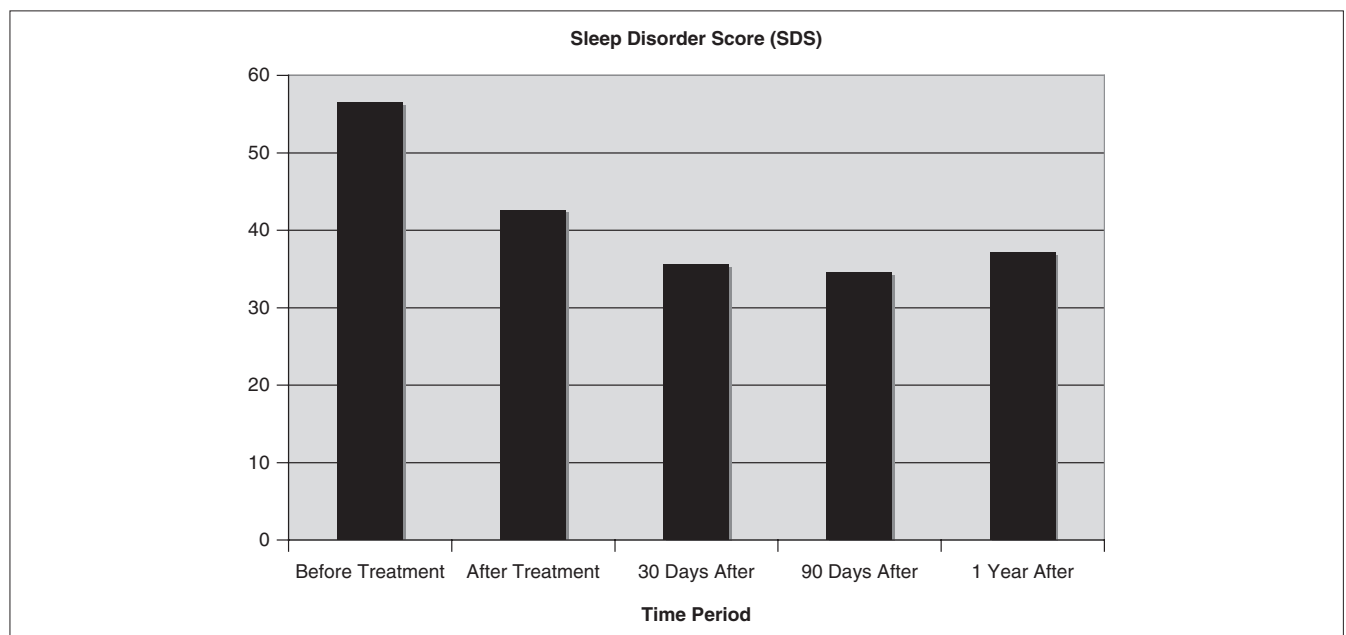


Figure 4. Sleep disorder scores

The overall GLM models for the cumulative scales, all but two SA-45 subscales, and the PCL-M were statistically significant ($p < .01$). The hostility and psychoticism subscales were marginally significant ($p < .1$). Follow-up post hoc tests were conducted on all significant models. A statistically significant difference between the 30-day pretest, the posttest score, 30-day posttest, and 90-day posttest was

found for all of the models. In addition, a statistically significant difference was found between the pretest and all posttest scores for the GSI, PST, anxiety, somatization, phobic anxiety, and interpersonal sensitivity subscales. These gains were maintained at the 30- and 90-day posttests for all but the somatization subscale as evidenced by the lack of statistical significance between the posttest and

Table 1. Means, Standard Deviation, and Significance Tests for SA-45 and PCL-M

Variable	30-Day Pretest	Pretest	Posttest	30-Day Posttest	90-Day Posttest	<i>F</i> (4,7)	Significance
Anxiety	77.8 ± 8.5 ^a	77.2 ± 5.4 ^c	53.3 ± 8.0 ^{b,d}	60.6 ± 8.8 ^{b,d}	60.6 ± 11.4 ^{b,d}	14.6	.002
Depression	68.7 ± 9.4 ^a	67.2 ± 7.5 ^c	50.6 ± 4.8 ^{b,d,e}	57.9 ± 9.3 ^{b,d}	60.4 ± 10.3 ^{b,f}	10.0	.005
Obsessive–compulsive	73.9 ± 8.6 ^a	71.9 ± 10.3 ^c	53.2 ± 9.7 ^{b,d,e}	63.5 ± 13.8 ^{b,f}	62.2 ± 13.9 ^{b,d,f}	12.4	.003
Somatization	74.8 ± 5.9 ^a	73.8 ± 8.7 ^c	52.8 ± 9.5 ^{b,d,e}	62.7 ± 10.4 ^{b,d,f}	61.0 ± 11.6 ^{b,d,f}	25.5	.001
Phobic anxiety	79.8 ± 8.8 ^a	76.9 ± 8.8 ^c	64.6 ± 8.3 ^{b,d}	65.9 ± 10.4 ^{b,d}	64.6 ± 9.1 ^{b,d}	10.8	.004
Hostility	67.8 ± 10.7	64.6 ± 8.5	53.3 ± 3.8	56.6 ± 6.7	54.8 ± 5.0	3.7	.062
Interpersonal sensitivity	68.4 ± 9.5 ^a	65.4 ± 8.6 ^c	53.6 ± 8.1 ^{b,d}	58.8 ± 11.6 ^{b,d}	58.6 ± 9.8 ^{b,d}	7.0	.014
Paranoid ideation	67.4 ± 5.9 ^a	64.7 ± 4.2 ^c	51.5 ± 5.2 ^{b,d}	57.1 ± 8.6 ^b	56.0 ± 8.7 ^{b,d}	22.4	.001
Psychoticism	67.7 ± 7.3	66.4 ± 6.4	61.0 ± 4.9	60.9 ± 4.2	60.9 ± 4.1	3.0	.095
General symptom index	75.4 ± 8.4 ^a	73.2 ± 6.1 ^c	49.9 ± 11.1 ^{b,d}	59.8 ± 12.6 ^{b,d}	58.1 ± 13.4 ^{b,d}	13.5	.002
Positive symptom total	72.7 ± 8.7 ^a	71.4 ± 6.5 ^c	48.8 ± 11.3 ^{b,d}	58.6 ± 12.1 ^{b,d}	57.4 ± 12.9 ^{b,d}	12.2	.003
PCL-M	Not available	62.3 ± 15.13 ^a	23.2 ± 6.2 ^b	32.5 ± 13.2 ^b	32.6 ± 16.7 ^b	26.4	.001
Sleep (<i>n</i> = 7; <i>df</i> (3,4))	Not available	7.2 ± 2.1	6.08 ± 2.3	5.6 ± 1.3	5.7 ± 1.3	4.73	.083

NOTE: SA-45 = Symptom Assessment 45; PCL-M = Posttraumatic Stress Disorder Checklist–Military. Post hoc Tukey tests: a > b, *p* < .05; c > d, *p* < .05; e < f, *p* < .05.

Table 2. 30-Day Pretest and 1-Year Follow-up Means, Standard Deviations, and Paired *t*-Test Results (*N* = 7)

Scale	30-Day Pretest	1-Year Follow-up	Change in Mean	<i>t</i> (6)	Significance
Anxiety	76.14 ± 8.3	58.29 ± 10.9	17.86 ± 9.8	4.84	.003
Depression	66.57 ± 11.2	57.00 ± 8.5	9.57 ± 8.1	3.13	.020
Obsessive–compulsive	71.86 ± 8.9	60.00 ± 16.4	11.86 ± 10.3	3.04	.023
Somatization	72.43 ± 4.7	58.86 ± 11.7	13.57 ± 10.9	3.29	.017
Phobic anxiety	78.00 ± 10.5	64.57 ± 8.0	13.43 ± 7.8	4.56	.004
Hostility	64.86 ± 12.0	59.43 ± 10.3	5.43 ± 7.2	2.00	.093
Interpersonal sensitivity	66.00 ± 10.9	57.29 ± 10.3	8.71 ± 7.4	3.10	.021
Paranoia	67.71 ± 7.3	57.57 ± 11.2	10.14 ± 8.5	3.15	.020
Psychoticism	69.43 ± 6.1	61.86 ± 4.9	7.57 ± 6.9	2.88	.028
Global severity index	73.43 ± 10.0	56.00 ± 16.4	17.43 ± 12.7	3.63	.011
Positive symptom total	71.71 ± 11.0	55.00 ± 17.2	16.71 ± 12.1	3.67	.011

the 30- and 90-day posttest scores. The improvement in scores on the somatization subscale was not maintained at follow-up as evidenced by the statistical significance between the posttest and the 30- and 90-day posttest scores; however, they did not return to their baseline levels indicating that some level of improvement was still maintained at the follow-up. Improvements in the remaining subscales, depression, obsessive–compulsive, and paranoid ideation were found at the posttest, but not consistently maintained across the 30- and 90-day posttests. For both the obsessive–compulsive and paranoid ideation subscales, the 30-day posttest returned to the pretest level but improved slightly at the 90-day posttest. In the case of the depression subscale, the 90-day posttest returned to the pretest level. The GLM repeated measures analysis for the PCL-M was also statistically significant, $F(3,8) = 26.4$, $p < .001$. Post hoc Tukey tests revealed a statistically significant improvement from pretest to posttest that was maintained at the 30- and 90-day posttests (see Table 1). Complete sleep data were available for 7 participants. A trend was observed for the sleep scores with sleep quality improving over time, $F(3,4) = 26.4$, $p < .083$).

One-year follow-up data were obtained for 7 of the 11 participants. Paired *t*-tests were conducted to determine if the 1-year follow-up SA-45, PCL-M, and sleep scores had returned to either the 30-day pretest or pretest levels. The results are presented in Tables 2 and 3. With the exception of the hostility subscale, all SA-45 subscales and the two global indices were significantly lower than the 30-day pretest level. Similarly, most of the SA-45 subscales and the two global indices were significantly lower than the pretest level. Hostility, interpersonal sensitivity, and paranoia were lower; however the difference was not statistically significant. In addition, the PCL-M was significantly lower. No statistically significant difference was found for sleep. These findings indicate that the gains observed following EFT treatment were maintained 1 year later for these 7 participants.

Discussion

Elements of EFT, such as cognitive restructuring, and exposure therapy, have been used to treat the effects of combat stress. To these well-researched therapies, EFT and other Energy Psychology techniques add tapping, touch, or other

Table 3. Pretest and 1-Year Follow-up Means, Standard Deviations, and Paired *t*-Test Results (*N* = 7)

Scale	Pretest	1-Year Follow-up	Change in Mean	<i>t</i> (6)	Significance
Anxiety	77.00 ± 5.5	58.29 ± 10.9	18.71 ± 10.4	4.75	.003
Depression	67.00 ± 9.1	57.00 ± 8.5	10.00 ± 7.9	3.37	.015
Obsessive–compulsive	71.43 ± 8.2	60.00 ± 16.4	11.43 ± 9.8	3.09	.021
Somatization	73.86 ± 6.4	58.86 ± 11.7	15.00 ± 13.3	2.99	.024
Phobic anxiety	78.00 ± 7.0	64.57 ± 8.0	13.43 ± 7.4	4.82	.003
Hostility	64.14 ± 10.4	59.43 ± 10.3	4.71 ± 6.6	1.89	.108
Interpersonal sensitivity	63.71 ± 10.0	57.29 ± 10.3	6.43 ± 7.0	2.41	.052
Paranoia	65.29 ± 5.0	57.57 ± 11.2	7.71 ± 9.8	2.08	.082
Psychoticism	67.71 ± 6.6	61.86 ± 4.9	5.86 ± 6.3	2.45	.050
Global severity index	73.43 ± 6.4	56.00 ± 16.4	17.43 ± 13.9	3.32	.016
Positive symptom total	72.43 ± 7.6	55.00 ± 17.2	17.43 ± 13.3	3.47	.013
PCL-M	65.43 ± 16.2	33.43 ± 16.6	32.00 ± 17.0	4.99	.002
Sleep (<i>n</i> = 6)	7.36 ± 2.0	5.28 ± 2.9	2.07 ± 3.3	1.54	.184

NOTE: PCL-M = Posttraumatic Stress Disorder Checklist–Military.

somatic cues, which may reinforce the cognitive processes involved in psychological symptom improvement. Such cues may also introduce incongruent physiological information that, when paired with a traumatic memory, interrupts fight-or-flight activation of the HPA axis (“If you were *really* being chased by the enemy, you wouldn’t be sitting down and tapping on your body.”).

Questions such as how many EFT treatments are efficacious for PTSD, and in what sequence, have yet to be definitively tested. Six biweekly hour-long therapy sessions with EFT have yielded significantly positive drops in depression, anxiety, and PTSD scores, as well as drops in levels of cortisol, a primary hormonal marker of stress (Church, Geronilla, & Dinter, 2009).

In a randomized controlled pilot trial of cortisol levels in normal patients recalling emotional memories, a single hour-long session of EFT resulted in larger drops in cortisol levels than either psychotherapy, or no treatment, indicating that stress biochemistry is being positively affected by EFT (Church, 2008). Clinicians using EFT within the Veterans Administration and military hospitals, as well as outpatient clinics, report improvement in PTSD symptoms (Iraq Vets Stress Project, 2008). In a series of case studies using EFT with Vietnam and Iraq veterans, male and female, Dinter (2008) reported large drops in participant scores on both the PCL-M and SA-45 after six sessions.

A potentially beneficial method of delivering EFT to veterans is in the format of large groups. A study of 216 health care workers, who had no individual treatment, but self-applied EFT over the course of 2 hours in groups of 15 to 70 individuals, found significant immediate drops in physical pain, cravings for addictive substances, SUD levels, traumatic memories, and psychological symptoms ($p < .001$) as measured by the SA-45 (Church & Brooks, 2008). Because EFT has measurable positive outcomes on stress biochemistry and psychological problems in sessions ranging from

2 hours, to the 5-day protocol of the present study, it will require further outcome testing of different protocols for administering EFT to determine a robust evidence-based standard for treating veterans with PTSD.

The small sample size and the demographic diversity of the sample make it impossible to generalize the results of this study. The lack of a comparison group further limits the ability to conclude that the positive changes observed were because of the treatment and not a placebo effect. Other possible confounding variables are regression to the mean, demand characteristics of the therapeutic setting, novelty effects, nonspecific effects such as sympathetic attention, and implicit pressure on participants to report gains. In addition, scores on the questionnaires used in this study do not constitute a formal diagnosis of PTSD, though some veterans in this study may have received such diagnoses from their primary caregivers. Scores on standardized tests such as the PCL-M are considered by military clinicians to be suggestive rather than diagnostic; a structured interview with a clinician, using assessments such as a Clinician-Administered PTSD Scale or PTSD Symptom Scale–Interview Version, is preferred.

The robustness of participant gains in the present study is consistent with other published research. Subjects in an EFT phobia study by Wells, Polglase, Andrews, Carrington, and Baker (2003) maintained their gains on 6-month follow-up, whereas another study using the SA-45 in a sample of 102 normal individuals (Rowe, 2005), showed improvement over pretest baseline scores 6 months after treatment. A recent analysis of prior published studies of Energy Psychology (Feinstein, 2008a), showed that, in all studies that included follow-up assessment, gains held. Long-term improvements were also observed in trauma victims in disaster areas who were treated with Energy Psychology (Feinstein, 2008b).

This group in this study was heterogeneous. Future studies should examine military family members separately, to determine the extent of transmitted PTSD. Further research

should also examine Vietnam veterans, Iraq I (Operation Desert Storm), and Iraq II (Operation Iraqi Freedom) veterans separately, to determine effects of EFT on each group, particularly with regard to whether the passage of time has an effect on the severity of symptoms, and whether treatments are more effective, or less effective, in traumas of recent origin.

Further study should also include clinical diagnoses of PTSD, biological markers, and medical exams. Correlations between psychological well-being and physiological symptoms have been noted in many studies, such as recent finding, in a population of 212 healthy Vietnam veterans, that high degree of anger, hostility, and depression raises protein risk markers for cardiovascular disease (Boyle, Jackson, & Suarez, 2007). Such risk factors do not decrease with the passage of time, a large-scale study found high correlations between unresolved emotional trauma and heart disease, cancer, diabetes, and hypertension even 50 years after the original trauma (Felitti et al., 1998). An account by one of the study participants, a male in his late 50s, illuminates the lingering somatic components of emotionally traumatic memories:

I'm a Vietnam veteran and I suffer from PTSD. At the VA I was also diagnosed as bipolar or manic depressive. I have nightmares, I spent since 1997 in hospitals and institutions. I take meds for bipolar, it's hard to get any alternative treatment at the VA. My world wasn't that great, everything in my life was a major challenge. When I came to the EFT event I had no clue what I was walking into. I never been to the west coast, I never been on a plane, I hate flying.

One of my bad Vietnam War memories involved an enemy attack where I had to pull bodies out of the rubble. I talked about it at the EFT event and the intensity was so bad I had to leave the room because I felt I was going to puke. Now that EFT has been done on it, I can think the same incident with little or no intensity. It is no longer part of my dreams. That's a kind of freedom I never thought I would have. Other war memories have faded as well. The event was outstanding.

I've been doing EFT ever since then. The changes in my life are 110 percent totally different. Once you start EFT it's a totally different way you handle things. Everything like sleep and nightmares and even suicide thoughts all come into a place where a total turnaround happens. I can't explain it. Now I want to help other veterans get this stuff. I'll go on a plane anywhere to help other veterans with EFT."

This participant's experience, in which he is able to discharge the emotional intensity of a war memory that triggers nausea, is a recurrent report in EFT case histories, hundreds of which are posted on the EFT Web site, www.emoftime.com.

Once this veteran discovered he could deal with an old emotional issue, memories of the bodies, he became willing to tackle a current emotionally triggering issue, his fear of flying.

Some participants faced considerable hurdles on leaving the therapeutic environment and returning to their familiar routines, such as loss of homes and jobs, difficulty obtaining medication, and bankruptcy. Treatment focused on combat-related trauma; it was apparent to therapists that participants had other traumas such as childhood abuse, sexual abuse, and addictions, but treating these was beyond the scope of the week-long protocol. For example, a young Iraq war veteran had considerable distress concerning a relationship with an abusive father, and while his combat trauma scores declined, when he returned home he immediately had a major conflict with his father. A Vietnam veteran had a high level of physical pain, and took high doses of medication to control it. Prior to his 30-day follow-up, he did not receive an anticipated shipment of painkillers from the Veterans Administration in a timely manner, and thus completed this assessment without the pain-masking effect of medication present during other data collection points. These factors skew the distribution of data in a small sample.

Because of high demand for effective PTSD treatments from Veterans Administration sites, Veterans Centers, military hospitals, and veterans outpatient treatment centers, a number of psychiatrists, social workers, and psychologists at these sites are using EFT (Iraq Vets Stress Project, 2008). The Iraq Vets Stress Project has been set up as a clearinghouse for research and therapy information, and to connect veterans seeking Energy Psychology treatments within the military health care system with therapists who provide it. In addition, several military bases are formally or informally using or studying EFT for treating PTSD in populations of veterans returning from tours of combat duty.

EFT sessions resemble life coaching more than traditional psychotherapy in several ways. Instead of sessions being directed by the therapist toward the derivation of a global and general diagnosis, abstracted from the client's experiences, sessions focus on the client's specific life incidents. Lists are made of traumatic memories, and the SUD level of each is noted before and after EFT. This results in client-reported SUD levels being the primary measure of progress, rather than observer-rated measures. EFT is usually self-applied, and homework given. Instead of the power differential typical of the therapist-client relationship, the EFT session focuses on the client's ability to reduce symptom severity, thus suggesting the potential for positive self-directed future change. Little attention is paid to lengthy recapitulations of distressing incidents; the focus is on reducing the intensity of these stories instead of elaborating on them. EFT does not even require the client to tell the practitioner the nature of the incident if the recall would restimulate emotional distress; a SUD score is sufficient to begin treatment.

The therapist–client ratio in this study was 1 to 2, one therapist for every two clients, and the time frame, 5 days, or a working week, was a substantial time commitment. However, this time and money commitment is worthwhile: A recent study that analyzed the cost of treating Iraq war veterans with PTSD found that such treatment would pay for itself in less than 2 years in the form of reduced medical costs and mortality costs to society (Tanielian & Jaycox, 2008). If intensive treatments produce normal scores in veterans suffering from PTSD, the economic and human costs more than justify such a commitment.

Conclusions

EFT shows promise as a treatment for PTSD. This study examined a group of veterans with PTSD and their family members, and after 5 days of daily treatment with EFT, the group no longer scored positive on standard military measures of PTSD. A 1-year follow-up found that the group had maintained their gains. In addition, EFT treatment resulted in significant improvements in other co-occurring measures of psychological distress, including anxiety and hostility. The breadth and severity of psychological problems also decreased significantly, with gains maintained at follow-up. The results of this study are not generalizable because of the small sample size, the heterogeneity of sample, and the lack of a control group. Results were consistent with other published research on EFT.

Although the 5-day intensive treatment delivery protocol used in this study involves a considerable commitment of resources, the alternatives are more costly. The medical and economic costs to society of PTSD sufferers, who would otherwise face many additional years of impaired functioning, are substantial. EFT merits consideration as a treatment for PTSD and comorbid conditions in veterans and other at-risk populations.

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