

Psychological Trauma in Veterans using EFT (Emotional Freedom Techniques): A Randomized Controlled Trial

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Abstract

A six session protocol of a brief and novel exposure therapy, EFT (Emotional Freedom Techniques) has been efficacious in reducing PTSD and co-occurring psychological symptoms in a within-subjects time series trial. The current study uses a randomized design and a wait list control group (n=13). Experimental group subjects (n=19) received six hour-long EFT coaching sessions, with pretest and posttest evaluations, as well as intermediate tests after three sessions. PTSD was assessed using the PCL-M (Posttraumatic Stress Disorder Checklist – Military), on which the lowest possible score is 17, and a score of 50+ is clinical. The severity and breadth of psychological distress was measured using the SA-45 (Symptom Assessment 45), a short form of the SCL-90. Neither symptoms nor PTSD scores declined in the wait list during the passage of time. The breadth of psychological distress diminished highly significantly in the EFT group, as did the severity (both $p < 0.001$). In examining the EFT treatment results for the WL and EFT groups combined, after 3 sessions 70% scored PTSD-negative, with mean scores going from 62 pre (SE ± 1.63) to 44 (SE ± 2.83) after 3 sessions (both $p < 0.001$). After 6 sessions of EFT, 87% were PTSD-negative, with a mean score of 35 (SE ± 2.68 , $p < 0.001$). Thirteen subjects completed a 3 month follow-up, and all scored PTSD-negative (mean=31, SE ± 2.77 , $p < 0.001$). The results are consistent with other published reports showing EFTs efficacy at treating PTSD and co-morbid symptoms.

Keywords: veterans, PTSD, exposure therapy, trauma, EFT (Emotional Freedom Techniques).

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Introduction

Some 300,000 US military personnel returning from the conflicts in Iraq and Afghanistan are estimated to be PTSD-positive (Institute of Medicine, 2006). PTSD is associated with co-occurring conditions such as depression, anxiety, and other mental health issues subsequent to deployment (Defense Health Board Task Force on Mental Health, 2007). Over 80% of PTSD sufferers meet diagnostic criteria for other psychological disorders (Breslau, 1990; Clancy et al, 2006). In addition to psychological symptoms, PTSD patients are more prone to physical diseases, increasing the cost and complexity of caring for this population (Boston University, 2008). This complex of conditions must be addressed for PTSD treatments to be effective (Tanielian et. al., 2008).

Some analyses consider PTSD likely to be an intractable chronic condition like schizophrenia (Johnson, Fontana, Lubin, Corn, & Rosenheck, 2004). Others believe that it can be remediated (Foa, Keane, & Friedman, 2000). In a study of 24 combat veterans diagnosed with PTSD, subjects received 12 sessions of cognitive restructuring and exposure. After treatment, 40 percent of subjects no longer met the criteria for PTSD. However, half showed no reliable improvement, and co-morbid symptoms such as behavioral avoidance did not improve significantly (Monson et al, 2006). In examining studies of PTSD for efficacious treatments, the IOM (Institute of Medicine), cited the Monson et al study as one of the most encouraging for long-term PTSD sufferers (Institute of Medicine, 2007). Exposure has also been judged efficacious in other examinations of PTSD, such as one conducted by the American Psychiatric Association (Benedek, Friedman, Zatzick, & Ursano, 2009). A meta-analysis by Bradley (2005) found CBT (cognitive behavioral therapy), EMDR (eye movement reprocessing) and exposure therapies to be efficacious, while a meta-analysis by and Seidler and Wagner (2006) found efficacy for EMDR and CBT. The demand for PTSD treatments from veterans returning from deployment has renewed investigations into effective methods.

EFT (Emotional Freedom Techniques) is a brief exposure therapy with a somatic and a cognitive component. It borrows elements from established cognitive and exposure protocols, but adds somatic stimulation. After recalling a traumatic incident, the subject

gives it a score on a Likert-type scale from 0 (minimum) to 10 (maximum), referred to as Subjective Units of Distress or SUD (Wolpe, 1973). The subject pairs the traumatic memory with a self-acceptance statement, eg, “Even though I had to shoot the kid who ran toward my foxhole with the grenade...” (memory), “I deeply and completely accept myself” (self-acceptance statement). The subject then taps on a sequence of points on the body. Repeated sequences of EFT tapping may be performed till the subject’s self-report goes to a 0, indicating no emotional intensity associated with the traumatic memory. EFT was developed by Gary Craig and is described in *The EFT Manual* (Craig, 2008), which has been available as a free online download for over a decade, leading to standardized implementation. *EFT for PTSD* (Craig, 2009) reviews the clinical and research evidence applicable to this condition, and includes case histories and suggested protocols for implementing EFT with PTSD-positive clients. A research consensus method of EFT used in the present and previous studies is available online (www.SoulMedicineInstitute.org/EFT.pdf).

A pilot study using a within-subjects, repeated measures design found six sessions of EFT produced statistically significant reductions across the range of psychological symptoms, as well as in PTSD scores, with gains maintained on follow-up (Church, Geronilla & Dinter, 2009). A one week EFT treatment intensive with 10 to 15 sessions was also found to reduce PTSD and co-occurring conditions (Church, 2009a). EFT has also been found efficacious for treating PTSD in non-military populations (Swingle, Pulos & Swingle, 2004), and other forms of energy psychology have been used for victims of human-caused and natural disasters (Feinstein, 2008a). Studies using EEG to note changes in the limbic structures of brain during the recall of traumatic incidents have also found energy psychology to result in downregulation of the stress response, with gains maintained on followup (Swingle, Pulos & Swingle, 2004; Diepold, 2008; Lambrou, Pratt & Chevalier, 2003). In addition to psychological symptoms, EFT has been used successfully to treat a wide range of organic diseases (Feinstein, et. al., 2005).

A clinical dilemma found in evoking combat memories is the risk of retraumatization. Subjects asked to recall a traumatic incident may be retraumatized rather than desensitized by the experience (van der Kolk, 1996). This safety issue is typically minimized with energy psychology techniques (Mollon, 2007). An absence of

client distress, and the rapid reduction of self-reported emotional intensity, is reported by clinicians using EFT (Mollon, 2008). Reduced affect has been observed even in studies that require war veteran clients to recall highly emotionally evocative combat memories (Church, 2009a; Church, Geronilla & Dinter, 2009). A survey of clinicians found that when the danger of retraumatization is present, energy psychology methods were preferred (Schulz, 2009). Flint, Lammers and Mitnick (2005) have found EFT to be a safe intervention for traumatized individuals, and describe group methods, as well as individual psychotherapy protocols, for applying EFT when retraumatization is a risk.

The mechanisms of action of EFT and other energy psychology techniques involve a variety of physiological systems, coordinated by those that regulate stress in the body. Lane (2009) posits increased regulation of the HPA (hypothalamus-pituitary-adrenal) axis. Oschman (2005) describes the semiconductive properties of connective tissue, and the transmission of stress-reducing signals through this matrix during energy therapy sessions. Sabban & Kvetnansky (2001) describe the regulatory functions of the Immediate Early Genes, especially genes such as C-fos and EGR-1, which reach peak expression during stress. Church (2009b) summarizes the evidence for the silencing of these and other specific stress genes during effective behavioral interventions for PTSD, and the increased reuptake of stress hormones such as cortisol and epinephrine during EFT treatment. LeDoux (2002) describes the threat-assessment neurological wiring in the brain, and how traumatic memories may condition the amygdala to respond, resulting in the “hostile takeover of consciousness by emotion.”

When successful counterconditioning occurs, memories are reconsolidated in these neuroplastic structures, but are now newly paired with proximate non-stressful cues (Davis, Bozon, & Laroche, 2003). Successful psychotherapy produces measurable changes in these brain structures (Felmingham, Kemp & Williams, 2006). Diepold and Goldstein (2008) used EEG to measure brain states, and found that as subjective emotional intensity of traumatic memories reduced following energy psychology treatment, the neural frequencies associated with stress also reduced.

Craig (2008), Gallo (1999), and other originators of energy psychology suggest that these methods are effective because their prescribed tapping points correspond to the

endpoints of the acupuncture meridians. fMRI measurement of the amygdala, hippocampus and other structures associated with fear and pain has noted decreases in activity associated with meridian endpoint acupuncture stimulation (Dhond, Kettner, & Napadow, 2007). Hui (2000) found that acupuncture sends signals directly to the amygdala and other emotional management structures in the brain, mediating hyperarousal. Studies examining the epigenetic effects such stress stimuli have found them to trigger the expression of a cascade of regulatory genes that affect other physiological processes (Sabban & Kvetnansky, 2001; Davis, Bozon & Laroche, 2003; Thayer, 2000). Taken together, these studies provide tentative evidence for a link between acupuncture, stress, affect, and physiological symptoms.

While acupuncture uses needles, studies of other methods of stimulating meridian endpoints have found non-needling methods to be indistinguishable from needling in their effects on brain function. A randomized controlled trial compared acupuncture with pressure on acupoints without puncturing the skin (Cherkin, Sherman & Avins, 2009). It found that somatic stimulation produced the same results as needling. Ultrasound has also been found to produce the same results as acupuncture needling, adding to the evidence for the efficacy of non-needling protocols (Jones, Bae, Wilson, So & Kidney, 2004). EFTs protocol of tapping on acupuncture meridian endpoints is hypothesized by its proponents to produce effects similar to acupuncture.

Because of its utility in reducing affect during the recall of traumatic events such as the flashbacks, nightmares and intrusive thoughts typical of PTSD, EFT is used in many outpatient facilities treating veterans, as well as some Veterans Administration hospitals and VA centers (Iraq Vets Stress Project, 2009). The efficacy of EFT in reducing symptoms that are often co-morbid with PTSD, such as anxiety, depression and phobias, has been demonstrated in several studies (Rowe, 2005, Wells, Polglase, Andrews, Carrington & Baker, 2003; Church & Brooks, 2009). The brevity of treatment time frames in these studies, ranging from one to six sessions, as well as its general effect on psychological and physical symptoms, makes EFT a candidate for formal trials to determine efficacy for the complex of conditions that confront returning war veterans. The purpose of the current study was to evaluate these effects using a randomized controlled design.

Method

Subjects were assessed using the PCL-M and SA-45, after recruitment through online announcements, and referrals from clinicians. Inclusion criteria were a score of 50 or more on the PCL-M, which is the military cut-off point for a PTSD-positive assessment. Subjects were excluded if they scored more than 3 on two questions on the SA-45 related to physical violence. They also completed the ISI (Insomnia Severity Index), and a health history assessing TBI (traumatic brain injury) symptoms, addictions, pain, physical symptoms, drug and alcohol use, and prescription drug use. Subjects were also required to be under the care of a Veterans Administration clinician or other licensed healthcare facility, since coaching in the present study was delivered as a complementary and supportive supplement to the Standard of Care (SOC), whether the subject was in the experimental or control group. They were randomly assigned to a wait list (SOC) or experimental (EFT) group using permuted block randomization (www.randomizer.org), with each EFT provider receiving a block of ten assignments from a blind offsite biostatistician. Permuted block randomization tends to produce groups of unequal size; however it allowed randomization by practitioner at the start of the study, before it was known how many subjects each practitioner would coach.

Experimental subjects received six one hour sessions of EFT over the course of a month. Wait list subjects waited a month, and then received an identical six session intervention. Subjects completed an informed consent form. The study was reviewed for human subject protections, and approved by Copernicus IRB. Data analysis was performed blind and offsite by an independent statistician. Providers were required to possess an EFT competency credential, to complete human subjects protection training provided by the investigators, and to pass the CITI competency examination. Providers were also required to deliver EFT as client-assessed peer-to-peer coaching, to avoid the power differential implicit in a therapist-client relationship, and to support the therapeutic alliance between the client and their existing SOC healthcare provider. Office interventions occurred in the professional offices of the providers; phone sessions were determined by participant location. Results from the six session pilot study (N = 7) (Church, Geronilla & Dinter, 2009) allowed an assessment of the sample size required for statistical significance; results from the first nine subjects (EFT N = 4, SOC/WL N = 5)

confirmed the power analysis by demonstrating the acquisition of significance from this size group. Implementation fidelity was monitored through written session plans and monthly teleconferences.

Subjects were asked to compile lists of traumatic combat memories prior to or at the first session. During sessions, subjects performed one or more sequences of EFT tapping on themselves until the SUD emotional intensity of each memory was 0, or as close to 0 as could be obtained given the limited time frame.

EFT sessions focus on specific traumatic incidents, rather than global generalizations. SUD is the primary measure of progress, rather than observer-rated measures. EFT is typically self-applied, and one focus of coaching is to teach the client to self-apply EFT during stressful events, nightmares, flashbacks, or intrusive memories that occur between sessions. Rather than lengthily and detailed recapitulation of distressing incidents, EFT measures progress through the SUD score. EFT does not require the client to disclose the incident; a high SUD is sufficient to initiate intervention.

Subjects completed a set of assessments after three and six sessions. Follow-ups are being obtained after three and six months; this preliminary report is based on the three month follow-up of the first 13 subjects. A larger sample is being obtained, and the results of the entire sample and follow-ups will be reported in the future. Ethical considerations in the treatment of veterans with PTSD have prompted the release of interim data from this study.

The PCL-M self-assessment (Weathers, 1993) is used by the military as a PTSD assessment tool. It has seventeen items, with a scale ranging from 1 to 5. The 17 items correspond to the PTSD diagnostic categories of the DSM-IV. The SA-45 is a short form of the SCL-90, and measures the same nine symptoms domains. It also has two general scales, the Global Severity Index (GSI) which measures severity of symptoms across all domains, and the Positive Symptom Total (PST) which measures the breadth of symptoms. It has been validated in various studies (Davison, M L, et al. 1997; Maruish, M E 1999). Subjects also completed the Insomnia Severity Index (ISI), since insomnia frequently co-occurs with PTSD (Lamarche & De Konick, 2007).

An ad hoc Confidential Health History form was created for the purpose of this

study. Its goal was to gather data on several aspects of veteran health on a single page, rather than using multi-page forms which resulted in decreased subject compliance in the pilot study. Data from this form included: (1) a cluster of 9 physical PTSD symptoms drawn from criteria used by the National Center for PTSD; (2) a cluster of 17 risk factors for TBI; (3) how many times a week the subject exercised; (4) a scale based on the frequency of recreational drug use in the previous month; (5) cigarette usage; (6) alcohol consumption; (7) alcoholism symptoms; (8) prescription and nonprescription medication use, and (9) physical pain. This data will be reported separately.

A General Linear Model (GLM) repeated measures analysis of variance was conducted on the SA-45 global scales, General Symptom Index (GSI) and Positive Symptom Total (PST), and the PCL-M. Clinical cut-off scores represent the criterion for a clinical diagnosis. For the GSI and PST, scores >60 are clinical. For the PCL-M, >50 is clinical by military standards (National Center for PTSD, 2008). In the tables and figures below, norm for the GSI and PST represents the best possible score. The results are reported below.

Results

Data were received for 32 veterans, 19 in the EFT treatment group and 13 in the wait-list SOC control group. The sample consisted of 29 males and 3 females. Age was $52 \pm$ (range 24-86 years), and deployments ranged from WWII to OEF (the second Iraq war). There was no difference in age or gender distribution between the two treatment groups. All participants were ≥ 50 on the PCL-M, with scores from 50-75, with a mean of 61.7 ($SD \pm 8.7$). There was no statistically significant difference between the groups on the initial PCL-M score, demonstrating similar prognostic indicators at baseline.

A t-test compared the days between initial assessment and pre-treatment assessment date for the wait-list control group vs. the initial assessment date and date of the assessment following the 6th EFT treatment session. There was statistically significant difference in the number of days between assessments, therefore days between assessments was included as a covariate in subsequent analyses.

	group	N	Mean - Days	Std. Deviation	Range - Days	t(df)	Significance
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datediff4	WL	13	29.00	6.10	14-36	-3.97 (21.47)	.001
	EFT	19	51.21	23.27	9-102		

Pre-6 Session Post waiting period analysis

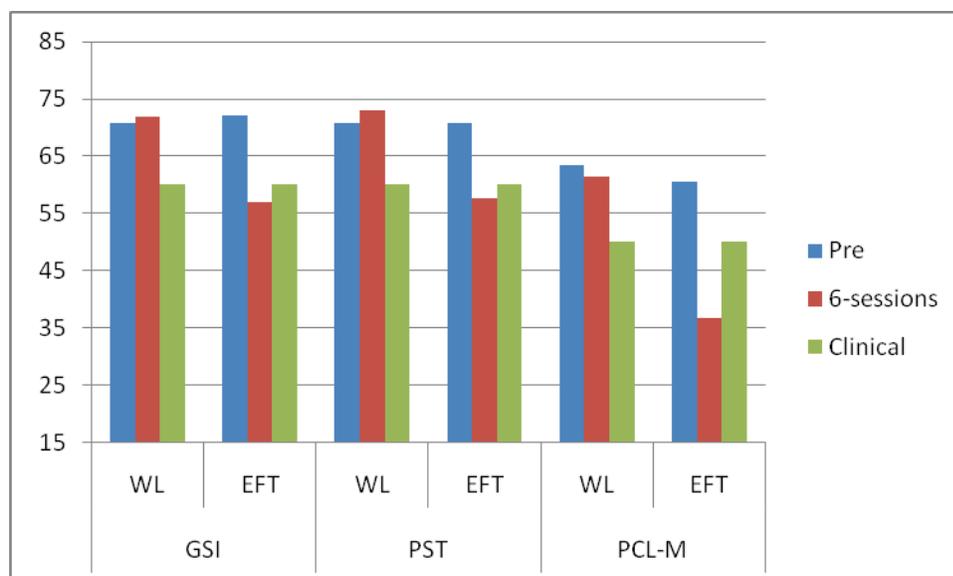
Change over time between the pretest and posttest was examined using the GLM. The screening assessment was the pretest, while the posttest assessment consisted of the assessment at the completion of the 6-session EFT treatment course for the treatment group versus the 30-day assessment at the end of the waiting period for the WL group. The group by time interaction was significant for all three variables: GSI ($F(1,29)=36.49$, $p<.001$), the PST ($F(1,29)=33.81$, $p<.001$), and PCL-M ($F(1,29)=30.02$, $p<.001$). Tukey *post hoc* tests were conducted on the significant findings. In all cases, the EFT treatment group posttest values were significantly lower than the WL posttest and the EFT treatment group pretest, indicating improvement in symptom breadth and severity.

Table 1. GSI, PST, and PCL-M Pre-Post Means and Standard Errors by Group

Variable	Group	N	Norm	Pretest	Posttest	F(1, 29)	Sig
				Mean \pm SE	Mean \pm SE		
GSI	WL	13	38	70.79 \pm 1.53	71.90 \pm 2.31 ^b	36.49	.001
	EFT	19		72.20 \pm 1.23 ^b	56.97 \pm 1.85 ^a		
PST	WL	13	36	70.73 \pm 1.57	73.05 \pm 2.31 ^b	33.81	.001
	EFT	19		70.87 \pm 1.26 ^b	57.71 \pm 1.86 ^a		
PCL-M	WL	13	<50	63.48 \pm 2.56	61.42 \pm 3.83 ^b	30.02	.001
	EFT	19		60.51 \pm 2.06 ^b	36.82 \pm 3.07 ^a		

Posthoc Tukey tests a<b, $p<.05$

Figure 1. GSI, PST, and PCL-M Pre-Post Means by Group (WL=13, EFT=19)



The PCL-M was also categorized as PTSD+ (≥ 50) or PTSD-. A chi-square analysis was conducted on this variable at the posttest. Sixteen participants in the treatment group (84.2%) were PTSD-, while all of the the WL group remained PTSD+ ($\chi^2=21.90$, $p<.001$).

Table 2. Meets PCL-M criteria at 6-session posttest by group

PCL-M criteria	WL N(%)	EFT N(%)	Total N(%)
< 50 no PTSD	0 (0%)	16 (84.2%)	16 (50%)
≥ 50 PTSD	13 (100%)	3 (15.8%)	16 (50%)

Treatment change over time – Pretest, 3-sessions, 6-sessions

A General Linear Model (GLM) repeated measures analysis of variance was conducted on the SA-45 global scales, General Symptom Index (GSI) and Positive Symptom Total (PST), and the PCL-M. The first model examined change over time between the pretest, after 3 EFT sessions, and after 6 EFT sessions. A t-test compared the screening (30-days before treatment) and the pre-treatment assessment for the WL group. There was no difference between the two assessments; therefore the screening assessment was used as the pretest for the WL group. Treatment group was included as the between subjects variable in the model to determine whether the delayed start of the intervention for the WL impacted overall treatment effectiveness. There was no difference between the two groups on the number of days between the initial assessment

date and date of the assessment following the 6th EFT treatment session (WL Mean \pm SD: 61.3 \pm 10.5 vs. EFT Mean \pm SD: 51.2 \pm 23.3).

There was also no difference between the WL and EFT treatment groups in terms of mode of delivery, phone vs. in-person. Overall, 68.8% of the sample received the EFT intervention by phone, 61.5% of WL and 73.7% of EFT received the intervention by phone. Two WL participants dropped out prior to the 3-session assessment so the sample size for the following analyses is 30 (WL N=11, EFT N=19).

The time effect was significant for all three variables: GSI ($F(2,56)=48.6, p<.001$), the PST ($F(2,56)=35.97, p<.001$), and PCL-M ($F(1.6, 45.8)=72.05, p<.001$). The time by group interactions were non-significant. Tukey *post hoc* tests were conducted on all significant time effects. For all 3 measures, both the 3- and 6-session measures were significantly lower than the pre-test. In addition, the 6-session assessment was significantly lower than the 3-session assessment, indicating ongoing improvement in psychological distress and PTSD symptoms.

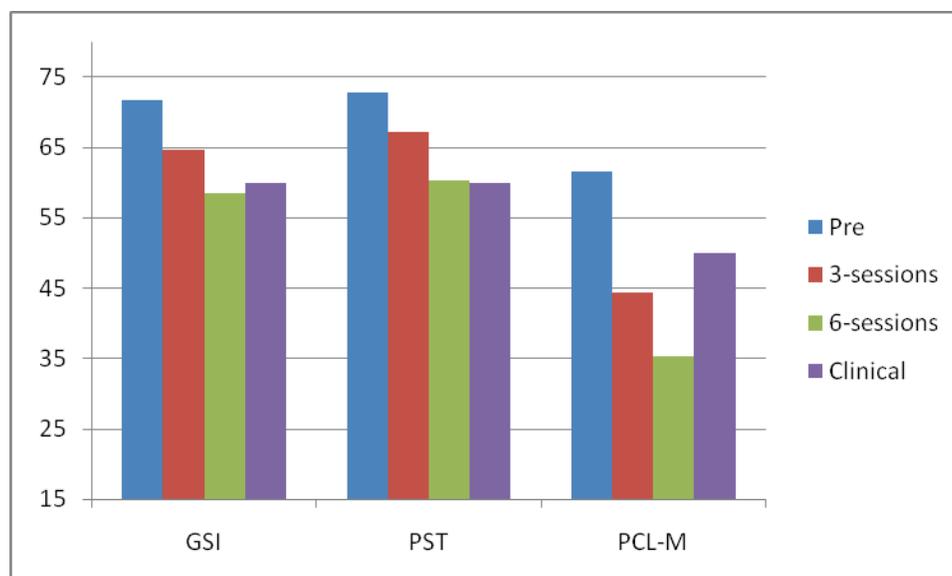
Table 3. GSI and PCL-M Pretest, 3-sessions, and 6-sessions Treatment Means and Standard Errors

Variable	Norm*	Pretest	After 3 sessions	After 6 sessions	F(df)	Sig
		Mean \pm SE	Mean \pm SE	Mean \pm SE		
GSI	38	71.78 \pm 0.93 ^b	64.66 \pm 1.50 ^{b,c}	58.56 \pm 1.76 ^a	48.60 (2, 56)	.001
PST	36	72.70 \pm 2.08 ^b	67.18 \pm 2.83 ^{b,c}	60.25 \pm 3.87 ^a	35.97 (2, 56)	.001
PCL-M	<50	61.51 \pm 1.63 ^b	44.44 \pm 2.83 ^{b,c}	35.32 \pm 2.68 ^a	72.05 (1.6, 45.8)+	.001

Posthoc Tukey tests a<b, p<.05; a<c, p<.05

+Sphericity Assumptions not met, Greenhous-Geisser F statistic

Figure 2. GSI, PST, and PCL-M Pre-During-Post Treatment (N=13)



The PCL-M was also recoded into a dichotomous variable to indicate whether the participant met the criteria for PTSD (≥ 50) or not. A chi-square analysis was conducted on the dichotomous variable at 3- and 6-sessions. There was no difference between the two groups. After 3 EFT sessions, 21 participants (70%) no longer met the criteria for PTSD. This improved to 26 (86.7%) of the participants after 6 EFT sessions.

Table 4. Meets PCL-M criteria at 6-session posttest by group

PCL-M criteria	After 3 sessions N(%)	After 6 sessions N(%)
< 50 no PTSD	21 (70.0%)	26 (86.7%)
≥ 50 PTSD	9 (30.0%)	4 (12.5%)

Treatment change over time – Pretest, 3-sessions, 6-sessions, 3-month follow-up

Three-month follow-ups have been conducted for 13 of the participants; 5 WL and 8 EFT participants. A General Linear Model (GLM) repeated measures analysis of variance was conducted on the SA-45 global scales, General Symptom Index (GSI) and Positive Symptom Total (PST), and the PCL-M. The first model examined change over time between the pretest, after 3 EFT sessions, after 6 EFT sessions, and 3-month follow-up. Treatment group was included as the between subjects variable in the model to determine whether the delayed start of the intervention for the WL impacted overall

treatment effectiveness. There was no difference between the two groups on the number of days between the initial assessment date and date of the 3-month follow-up assessment (WL Mean \pm SD: 153.8 \pm 8.7 vs EFT Mean \pm SD: 126.0 \pm 38.9).

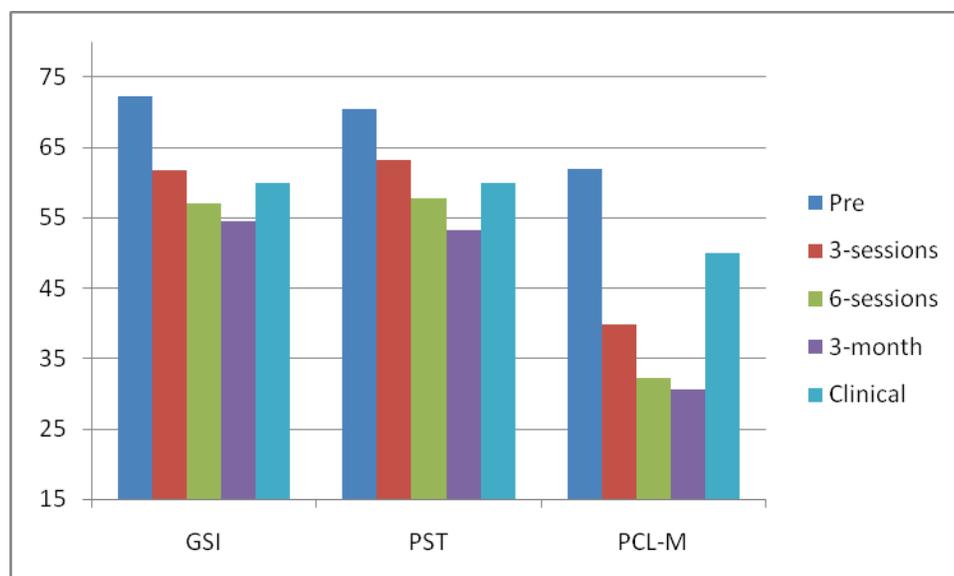
The time effect was significant for all three variables: GSI ($F(3,33)=24.7$, $p<.001$), the PST ($F(3,33)= 22.8$, $p<.001$), and PCL-M ($F(3,33)=39.2$, $p<.001$). The time by group interactions were non-significant. Posthoc Tukey tests were conducted on the significant time effects. For all three measures, the 3-session, 6-session, and 3-month follow-ups were significantly lower than the pretest. In addition, the 3-month follow-up was also significantly lower than the 3-session assessment, providing a trend line of continuing improvement in psychological distress and PTSD symptoms.

Table 5. GSI and PCL-M Pretest, 3-sessions, 6-sessions, and 3-month Follow-up Treatment Means and Standard Errors

Variable	Pretest	After 3 sessions	After 6 sessions	3-month	F(3,33)	Sig
	Mean \pm SE	Mean \pm SE	Mean \pm SE	Mean \pm SE		
GSI	72.18 \pm 1.64 ^b	61.68 \pm 1.57 ^{a,d}	57.03 \pm 2.03 ^a	54.55 \pm 2.68 ^{a,c}	24.7	.001
PST	70.36 \pm 1.20 ^b	63.13 \pm 1.73 ^{a,d}	57.79 \pm 1.85 ^a	53.26 \pm 2.53 ^{a,c}	22.8	.001
PCL-M	61.96 \pm 2.72 ^b	39.85 \pm 2.98 ^{a,d}	32.19 \pm 2.71 ^a	30.68 \pm 2.77 ^{a,c}	39.2	.001

Posthoc Tukey tests a<b, $p<.05$; c<d, $p<.05$

Figure 2. GSI, PST, and PCL-M Pre-During-Post Treatment and 3-month follow-up



The PCL-M was also recoded into a dichotomous variable to indicate whether the participant met the criteria for PTSD (≥ 50) or not. All 13 participants no longer met the criteria for a clinical diagnosis of PTSD (≥ 50). PCL-M scores ranged from 17-45, with a mean of 30.9.

There were 7 dropouts in the experimental group, and 3 dropouts in the control group. The 3 reasons given by participants for dropping out included, in order of frequency, (a) uncomfortable levels of emotion when being asked to recall old memories, (b) unwillingness to fill out forms, such as the PCL-M (which is also used by the Veterans Administration) which require recalling potentially retraumatizing incidents, and, (c) “not enough time.” No adverse events, or increase in participant distress, were reported in the present study.

Case Histories

The following are informal anecdotal accounts that represent a range of the experiences encountered by the investigators, and treated with EFT, in the course of the present study.

Case History 1: Vietnam Nurse

Subject’s body was so sensitive that she was unable to tolerate EFT tapping on any part of it without getting violently nauseous. Subject reported many incidents of physical

abuse starting in early childhood, and was so physically sensitive that she was easily triggered by physical stimuli. She couldn't wear socks or shoes, and couldn't tolerate physical touch by others. Her companion, reporting that their life situation was "unbearable," and that she was "in complete desperation," arranged for coaching.

Subject's intolerance to touch presented a challenge to finding a way to let her apply EFT. She found that she was able to tolerate tapping between her eyebrows, so that was the only point used in the first session, which focused on fear and safety issues.

Half way through the second session, she noticed that she could now tap on every EFT point, including the collar bone point, which had previously been her most sensitive spot. During this and subsequent sessions, the client worked with three specific war memories, and two physical symptoms, among other issues.

(1) Subject had rescued some Vietnamese village people, elderly and children and was treating them in her field hospital. A US Army sergeant came in and ordered her to discharge them immediately because the space was required to treat American service personnel. The subject outranked the sergeant, and refused. At that point, he withdrew his service revolver from its holster and put the barrel to her head. He said he was going to kill the villagers one way or the other, and her only choice was whether or not she was going to die first.

Realizing the rage he was in, she knew she had no choice, and rescuing the villagers was completely out of her control. She knew that the only thing she could do was to allow for them to go in peace and with dignity, with no fear or panic, in the tradition of their culture. To insulate them to the violence of the sergeant, she very gently pulled the IVs out of their arms, allowed the children to gather around the elders for support, and encouraged them to leave the hospital as a group. Once outside, they were shot by the sergeant.

The nurse never recovered emotionally from the experience. She blamed herself for being responsible for the killing. She continued to have nightmares about the incident even decades later.

During the EFT session, subject tapped on the separate scenes of this traumatic

event. She began to feel a sense of connection with the villagers, and come to an understanding that they were actually grateful for her. They had witnessed the gun at her head and they knew that there was nothing more she could do. They didn't blame her but appreciated that she did the best she could. After this cognitive shift, the nightmares about the incident did not recur.

(2). The subject lives close to a military base. Helicopters frequently fly overhead, and she would go into involuntary panic at the sound. After several rounds of EFT, subject said that she now simply noticed the sound of the helicopters, without panic or agitation.

(3). One of the subject's most traumatic memories was of an incident in which the hospital she was working in was bombarded by friendly fire and collapsed on her. At the time the bombardment began, she had been walking down a corridor. Two children were present, and she grabbed them and threw herself over them, protecting them with her body while the hospital roof collapsed. She was the only person pulled out alive from the rubble. She spent many months in hospital and rehabilitation following the incident. She had frequent nightmares about the scene. After EFT, the memory no longer held emotional triggers. She was able to recount the incident calmly, without the emotional upheaval that she reported before.

(4) Subject had an allergic reaction whenever she consumed ice cream. She used EFT for the substance itself, and for her symptoms. Subject recounted that, in Vietnam, there were two things that wounded men requested: steak, and ice cream. Both were difficult to obtain, and represented the comforts of home. When subject would eat ice cream, she felt connected with the pain that she had witnessed. After EFT, the allergy subsided.

(5) Subject had a hearing impairment, due to scar tissue from various injuries. She identified shutting off her hearing as a defense mechanism, and repeated application of EFT was required. After EFT, her hearing improved to the point where she could hear the clicking of the keys on her computer keyboard.

Case History 2: Vietnam Combat Veteran

Subject had a violent, alcoholic father. He was drafted to Vietnam. He worked on two specific memories, among others:

(1). The first night in Vietnam, he woke up horror, realizing he was in imminent danger, when an enemy artillery bombardment began at 2:30 am. The camp was completely unprepared, with plywood floors and no security, and the draftees had not yet been issued weapons with which to defend themselves. Their anger at the army for not being prepared for them and keeping them safe was enormous. The subject remembered drinking a bottle of scotch whiskey and smoking a pack of cigarettes the first night, while a friend of his, newly married, sobbed helplessly. The recruits slept uneasily under their beds. The artillery fire resumed every night at 2:30 am. Before the first EFT session, subject would wake up every morning at this time. After EFT, he was able to sleep through the night.

(2). Some of the workers in the camp were Vietnamese. They pretended to be friendly, but their families were connected to the enemy, and the subject discovered that they were secretly passing information about the base to the Vietcong. So he and the other recruits were never safe. Subject felt a sense of betrayal, and being unsafe, ever since, and was able to reduce his SUD score around these issues with EFT.

Other Combat Memory Examples

EFT is effective at reducing SUD score for specific memories rather than global issues. The following are examples of specific memories on which EFT reduced SUD scores to 0:

(1) An Iraq veteran described an incident in which the Humvee in which his best friend was the driver, hit an Improvised Explosive Device or IED, and was unable to extricate himself. He burned to death. The veteran used EFT for the incident. He then began to spontaneously recall the funerals of other people who had loved him. After reducing his SUD score for each one, he began to relax.

(2) Another Iraq veteran was the driver of a transport truck, and in charge of transporting the men inside safely. At night, he had a very limited field of vision through the vehicle's armor. The lack of peripheral vision made the drive very stressful for him.

His passengers yelled at him for his inadequate driving, and he felt overwhelming anger for their resentment while he was so stressed, and trying to do a good job. He performed EFT for these memories, as well as for finding forgiveness, and tapped while imagining the other soldiers asking for forgiveness, using phrases like, “Sorry man for yelling at you. It wasn’t personal,” coupled with the EFT self-acceptance statement.

(3) A former Vietnam officer described ongoing threats from his subordinates. He described huge tension between white and black soldiers. He had stood up for a Vietnamese woman who was about to be raped, and prevented the rape by his comrades. As a result, he was harassed by his compatriots for months.

One of his soldiers went into a rage after drinking heavily and pointed his rifle through the tent door at the soldier while he was asleep. The officer handcuffed his opponent outside the bar until he sobered up. From that moment on, the soldier tried to shoot the officer wherever his back was turned. The officer did not have a safe moment until the subordinate was killed in a firefight.

(4) Another Veteran shot a 9 year old girl who was pointing a rifle on him. He said, “I only saw the rifle! I was trained to shoot when somebody point a rifle at me! I found out later that it wasn’t loaded. She is always with me, smiling, and she never says a word. I have asked for forgiveness, I have asked my life to be taken for hers, but it hasn’t. I have to live with this memory every day, and I always see her. I wish I’d never come back from Vietnam.” The little girl was with him as a flashback for 44 years, quietly smiling at him. After EFT, she now disappeared. Most veterans report severe childhood trauma in addition to combat trauma. Issues include sexual abuse, parental alcoholism, physical abuse, poverty, and neglect. Some reported that releasing childhood trauma was more effective than releasing war memories in producing a reduction in emotional distress levels.

Discussion

A six session protocol of EFT, as well as other brief treatment protocols, has been efficacious in previous trials with statistically significant results (Church, Geronilla & Dinter, 2009, Church 2009a). The present brief report is part of a larger randomized

clinical trial (RCT) of EFT with combat veterans, and has been released prior to the full report due to the ethical considerations prompted by the study's positive findings. The case load of veterans from the Iraq and Afghanistan conflicts, added to the existing population of Vietnam veterans, has lent new urgency to the search for effective methods of reducing PTSD symptoms in a treatment time frame consistent with the demands on an overstretched cohort of clinicians.

The RCT will analyze data for which the current sample is too small, and monitor whether or not EFTs effects hold over longer follow-up periods. In all studies of energy psychology that included long term follow-up, results have held up over time (Feinstein, 2008a). Long term improvements were also observed in trauma victims in disaster areas (Feinstein, 2008b), and in healthcare workers who self-applied EFT (Church & Brooks, 2009). Besides the long-term improvements found in previous EFT studies noted above, Rowe (2005) found that participant gains were maintained over time in a general population, and Wells (2003) found that phobias, after being extinguished by a single EFT treatment, remained so on follow-up. Of particular interest is whether TBI symptomatology changes with reductions in PTSD, since PTSD has been associated with neurological changes that are resistant to treatment (Vasterling & Brewin, 2005).

To the established evidence-based techniques of exposure and cognitive challenge, EFT adds the somatic signal of tapping. This signal is incongruous with a hyperarousal of fight-or-flight physiology. It pairs the traumatic memory with a physiologically incongruous input of tapping, sending a confounding signal to the body. Current research in the mechanisms of memory retrieval during stress suggest that memories are reconsolidated in conjunction with proximate cues from the current environment (Davis, Bozon & Larouche, 2003; LaDoux, 2002). In the language of evolutionary biology, "you would not be tapping if you were being chased by a tiger." This interrupts activation of the body's Hypothalamic-Pituitary-Adrenal (HPA) stress axis. EFTs pairing of a combat trauma with a self-acceptance statement plus a physiological stimulus indicating safety is hypothesized to reconsolidate the memory in such a way to as render it non-traumatic. Somatic stimulation has been demonstrated to reduce affect more than interventions that do not include a somatic component (Baker, Carrington & Putilin, 2009; Waite & Holder, 2003).

EFT was delivered as a supplement to the care provided to these subjects by their primary caregivers, usually a Veterans Administration hospital. EFT coaching was overtly supportive of the therapeutic alliance between the subject and the primary caregiver. Coaches did not diagnose or treat any condition, or attempt to diagnose PTSD according to DSM-IV criteria. While coaches did not diagnose, the majority of subjects reported previous diagnoses of PTSD by their primary caregivers. Most subjects were recruited based on referrals by Veterans Administration psychiatrists and psychologists. Often, after seeing one treatment-resistant client successfully coached, such clinicians referred additional difficult cases to the study. A strength of coaching is that it is client-rated; to facilitate client-focused outcomes of research, self-reports are recommended (Glasgow, Magid, Beck, Ritzwoller, & Estabrooks, 2005).

There are several limitations to this study. Coaching, by its nature, uses client self-rating rather than clinician-rated scales. The PCL-M self-report used in this study, however, has been found to correlate with clinician-rated assessments of PTSD (Monson et al, 2006). An extension of the current study that included clinician ratings, coach ratings and client ratings would determine if the three types of assessments agree.

Secondly, the design did not include a third group, with an active intervention such as CBT, to control for nonspecific factors such as therapist attention and client expectancy that are present in any therapeutic setting. However, it should be noted that of the many studies of PTSD reviewed in the Institute of Medicine report as well as the American Psychiatric Association meta-analyses (Bradley et al, 2005; Benedek et al, 2009), many of them with precisely this type of active control, none provides the degree of client gains noted above. In one of the most “hopeful” studies identified by the Institute of Medicine, 60% of subjects were still PTSD-positive after treatment (Monson et al, 2006).

The inclusion criteria of the present study were deliberately set to be as broad as possible, in order to permit greater generalizability of the results. A provider group of coaches, rather than therapists and social workers, was chosen to determine whether PTSD symptoms could be effectively remediated by providers without mental health licensure, mimicking the front-line staff available to hospitals, such as physician’s

assistants, health counselors, and trained volunteers. Though EFT is efficacious when applied by such practitioners, the authors of this study hypothesize that it may be more effective when combined with rapport, insight, pattern recognition, Socratic questioning, mindfulness, and the full range of tools possessed by the experienced and trained mental health professional. EFT sessions, though they evince Carl Rogers' "necessary and sufficient" conditions for successful treatment, essentially use the EFT method to quickly reduce affect. This may be the starting point for more elaborate and in-depth mental health interventions. The client now has awareness that his or her life will not be overwhelmed by the recall of traumatic memories, and a tool to relieve this emotional anxiety when it appears between therapeutic sessions. Such tools give the client confidence, and lessen dependence on strategies such as denial and self-medication with drugs and alcohol to cope with the aftermath of trauma. Many veterans report unwillingness to visit Veterans Administration hospitals, and avail themselves of care, because "I went there and it did no good." They may associate therapy with retraumatization. EFT, by providing such subjects with immediate gains even confronted with their most painful specific memories, gives them some assurance that they may learn to navigate their way back to health, and restore confidence in the course of treatment prescribed by a mental health professional.

There are many good reasons to treat PTSD proactively with EFT. Unresolved emotional trauma correlates highly with physical diseases, including cancer, heart disease, diabetes, and hypertension. These risk factors are not alleviated by the passage of time (Felliti, et. al. 1998). A study of apparently healthy Vietnam veterans found that anger, depression and hostility predicts a rise in protein risk markers for cardiovascular disease (Boyle, et. al. 2007). Dysregulation of the autonomic nervous system has been linked to both psychological and physiological disorders; Thayer (2005) regards it as "the final common pathway linking negative affective states and conditions to ill health." By reducing emotional traumas using EFT coaching, these later health consequences can be modified or avoided. The benefits of PTSD treatment can spread far beyond the traumatized individual; families and communities that might otherwise be disrupted (McFarlane & van der Kolk, 1996/2007) can be spared the consequences of transferred PTSD (Church, 2009a). Treating Iraq war veterans with PTSD effectively pays for itself

in under two years (Tanielian, et. al. 2008).

The benefits of EFT treatment for PTSD are therefore considerable. EFT can be used to treat many veterans quickly, using limited resources. EFT presents a low risk of retraumatization; it can be learned by a client in a few minutes; it can be delivered by a physician's assistant, life coach, or auxiliary personnel, and it can be self-applied by the client for traumatic memories that intrude between therapeutic session. EFT is also efficacious when applied in groups (Rowe, 2005; Church & Brooks, 2009), suggesting further research on group EFT as a proactive resilience-building resource for veterans prior to deployment, and an effective post-deployment strategy, before the conditioned response of traumatic recall can take neurological root.

Conclusions

The current study utilized a randomized controlled design, contrasting a wait list control group with a group treated with six sessions of EFT (Emotional Freedom Techniques) coaching. EFT was applied by life coaches as supplementary care, supportive of the standard of care being provided by subjects' primary care providers. The wait list group's results were unchanged over time, while the EFT group demonstrated statistically significant drops in PTSD, from clinical to subclinical scores, as well as improvement in the severity and breadth of a range of comorbid psychological problems such as depression and anxiety. A significant effect size in such a small number of participants (n=32) indicates a robust effect. The results of the present study are consistent with previous trials showing that brief EFT treatments improve PTSD as well as co-occurring conditions, with gains maintained over time. EFT was applied as coaching to demonstrate its utility as a front-line intervention by occupational categories with very basic levels of formal training. Taken together with prior research showing EFTs efficacy for treating PTSD symptoms, the results of this study indicate that a six session protocol of EFT warrants clinical application in institutions that treat large numbers of veterans and other populations with PTSD. Further research will determine if group EFT interventions produce the effects similar to those noted in one-to-one delivery, and whether higher levels of mental health training of providers correlates with greater effects.

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