



**TITLE:** The Emotional Freedom Technique for the Treatment of Post-Traumatic Stress Disorder, Depression, or Anxiety: A Review of the Clinical Evidence

**DATE:** 26 September 2013

## **CONTEXT AND POLICY ISSUES**

The Emotional Freedom Technique (EFT) is based on the idea that imbalances in the body's energy system have an effect on an individual's psychology.<sup>1</sup> The technique aims to correct the energy imbalances by tapping at the ends of the body's energy meridians, thereby correcting the negative effect on a person's mental well-being. Energy meridians are also central to the practices of acupuncture and acupressure.<sup>1</sup> The technique involves the recall of a traumatic memory paired with the repetition of a self-acceptance statement while an individual taps on a sequence of points on the body.<sup>2</sup> Within a single session, the tapping and statement repetition are continued until the individual's self-rated subjective units of distress (SUDs) reach a zero, which indicates that there is no longer any emotional intensity associated with that particular traumatic memory at that time. The author of the EFT manual suggests that the technique can be used to alleviate a range of conditions including pain, phobias, performance anxiety, addiction, generalized anxiety, depression, and post-traumatic stress disorder (PTSD).<sup>1</sup> Individuals can learn to perform the technique on themselves or it can be administered by a trained provider. The EFT may be considered an alternative to standard care, such as pharmaceutical therapy or cognitive behavioral therapy, or an alternative to other treatments such as eye movement desensitization and reprocessing (EMDR).

## **RESEARCH QUESTIONS**

1. What is the clinical effectiveness of the emotional freedom technique for the treatment of adults with post-traumatic stress disorder?
2. What is the clinical effectiveness of the emotional freedom technique for the treatment of adults with depression?
3. What is the clinical effectiveness of the emotional freedom technique for the treatment of adults with anxiety?

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## KEY FINDINGS

Limited evidence was identified regarding the effectiveness of the EFT for the treatment of PTSD. The results of the included studies indicate that the EFT may be effective for reducing the symptoms of PTSD. More controlled studies may be necessary before making a clear decision whether to implement the use of EFT as a standard treatment for PTSD. More studies are required before considering the EFT as therapy for the treatment of anxiety or depression.

## METHODS

### Literature Search Strategy

A limited literature search was conducted on key resources including PubMed, OVID MEDLINE, OVID PsycINFO, The Cochrane Library (2013, Issue 7), University of York Centre for Reviews and Dissemination (CRD) databases, Canadian and major international health technology agencies, as well as a focused Internet search. No filters were applied to limit the retrieval by study type. The search was limited to English language documents published between January 1, 2009 and August 28, 2013.

### Selection Criteria and Methods

One reviewer screened citations and selected studies. In the first level of screening, titles and abstracts were reviewed and potentially relevant articles were retrieved and assessed for inclusion. The final article selection was based on the inclusion criteria presented in Table 1.

**Table 1: Selection Criteria**

<b>Population</b>	Adults with post-traumatic stress disorder, depression, or anxiety
<b>Intervention</b>	Emotional freedom technique (EFT)
<b>Comparator</b>	Usual care, active treatments (including: cognitive processing therapy, pharmaceutical treatment, eye movement desensitization and reprocessing), individual components of EFT
<b>Outcomes</b>	Clinical benefit, symptom reduction
<b>Study Designs</b>	Health technology assessments, systematic reviews, meta-analyses, randomized controlled trials, non-randomized studies with a control group

### Exclusion Criteria

Studies were excluded if they did not satisfy the selection criteria, if they were duplicate publications, or were published prior to January 1, 2009.

### Critical Appraisal of Individual Studies

Key methodological aspects relevant to each study design were appraised and summarized

narratively. Randomized controlled trial quality was assessed using the Downs and Black instrument.<sup>3</sup> A numeric score was not calculated for each study. Instead, strengths and limitations of each study were summarized and described.

## **SUMMARY OF EVIDENCE**

### **Quantity of Research Available**

A total of 53 citations were identified in the literature search. Following screening of titles and abstracts, 47 citations were excluded and six potentially relevant reports from the electronic search were retrieved for full-text review. Two potentially relevant publications were retrieved from the grey literature search. Of these potentially relevant articles, five publications were excluded for various reasons, while two randomized studies met the inclusion criteria and were included in this report. Appendix 1 describes the PRISMA flowchart of the study selection.

### **Summary of Study Characteristics**

Two RCTs<sup>2,4</sup> regarding the use of the EFT for the treatment of PTSD were identified. No studies were identified regarding the use of the EFT for the treatment of anxiety or depression.

In the RCT by Church et al.,<sup>2</sup> veterans with a PTSD Checklist-Military (PCL-M) score greater than or equal to 50 (indicating probable PTSD) and under the care of a clinician were eligible for inclusion. Participants were randomized to standard care and six one hour EFT coaching sessions over 30 days or 30 days on the wait list for standard care followed by EFT sessions. Participants were assessed at baseline, during, and after treatment and were treated by mental health practitioners or coaches who were certified in the administration of the EFT.

Karatzias et al.<sup>4</sup> recruited participants, who satisfied the DSM-IV criteria for PTSD, from the National Health Service Psychotherapy waitlist. After potential participants spent eight weeks on the waitlist they were reassessed according to the inclusion criteria and, if eligible, randomized to EMDR or the EFT. EMDR is based in the idea that current pathology results from past experiences that have not yet been processed. Both treatments were administered by experienced psychotherapists. Participants underwent up to eight one hour sessions in either group. The mean number of sessions in the EMDR group was 3.7 and a mean of 3.8 in the EFT group.

The Church study took place in the USA<sup>2</sup> while the Karatzias study was conducted in Scotland.<sup>4</sup>

Details of the characteristics of the included studies are provided in Appendix 2.

### **Summary of Critical Appraisal**

Overall, the quality of the included studies was limited. Both studies had a randomized design. In one study<sup>4</sup> the outcome assessor was blinded to the intervention used, but in the second study<sup>2</sup> assessors were not blinded. One study<sup>2</sup> clearly described the patients lost to follow-up but did not perform an intention-to-treat (ITT) analysis. In contrast, the other RCT<sup>4</sup> reported a high drop-out rate but included an ITT analysis, however the authors did not provide a description of those patients lost to follow-up or the reasons for withdrawal. The main limitation of the included trials was that the studies relied on small sample sizes, with no power

calculations described to determine an appropriate number of study participants to detect clinically important differences, and self-reported outcome measures to make their conclusions regarding the effectiveness of the EFT for the treatment of PTSD.

A detailed summary of the critical appraisal of the individual included reports can be found in Appendix 3.

### **Summary of Findings**

A detailed summary of the findings of the individual included trials can be found in Appendix 4.

#### *PTSD*

In the Church study,<sup>2</sup> participants were asked to compile a list of traumatic combat memories. The EFT sequences were performed while the participant thought of the traumatic event and tapped on themselves until their reported SUDs were zero. Participants in the treatment group were also directed in how to use the technique on themselves between formal sessions. All subjects with at least two data points were included in the analysis ( $n = 55$ ). After completing six treatment sessions, 98.7% (26 of 29) of participants in the EFT group no longer met the PCL-M clinical criteria for PTSD. One of 25 (4%) participants in the standard of care group no longer met clinical criteria for PTSD. The difference between groups in PCL-M score was significant ( $P < 0.001$ ). At the end of the treatment period, 85.7% (42 of 49) of all participants improved to the point where they no longer met clinical criteria for PTSD. The percentage of participants not meeting criteria was the same at three month follow-up (85.7%, 36 of 42), however some patients were lost to follow-up. At six months, the success rate was reduced to 79.5% (31 of 39). The authors reported good tolerance and acceptance of the EFT by participants.

In the Karatzias study,<sup>4</sup> the effects of the EMT and EDMR for PTSD were compared. Observed effect sizes were similar in both treatment groups. The lack of significant difference indicates that neither treatment is clinically superior to the other with regards to individual clinical improvement. Using the Cohen  $d$  formula, the authors determined the treatment effect sizes were large in each group ( $d \geq 0.80$ ) across all outcomes and time points, but the effect was slightly higher for EDMR. Overall, higher rates of clinical change were observed in EMDR group. The authors concluded that each intervention produced significant therapeutic gains for the participants both immediately after completing treatment and at follow-up three months after treatment.

#### *Depression*

No relevant literature was identified regarding the use of EFT for the treatment of depression in adults.

#### *Anxiety*

No relevant literature was identified regarding the use of EFT for the treatment of anxiety in adults.

## **Limitations**

The study by Church did not include an active intervention comparison group due to budgetary constraints.<sup>2</sup> The study did not include an intention-to-treat analysis. There was a high dropout rate in the control group with 13 of the 30 standard of care waitlist participants completing the six month follow-up. There were significant differences between the two study groups at baseline in terms of smoking, prescription drug use, and insomnia, which the authors suggested may indicate a failure of randomization, though the analysis adjusted for potential confounders. The authors indicated there was the possibility that the “sympathetic attention” of the EFT provider to the participant could account for the observed positive effect in the active treatment group.

The drop-out rate reported in the Karatzias study was high.<sup>4</sup> Eleven of 23 participants in the EFT group and 12 of 23 in the EMDR group failed to complete the final study follow-up. The difference between groups was not statistically significant. The authors indicated that the drop-out rate was higher than what had been reported in previous research studies. Participants who did not complete the study were not followed to determine the reason for drop-out. The authors also indicated that the observed effect sizes were smaller than those reported in previous similar studies.

Both of the included studies relied on the use of self-report measures for measuring the main study outcomes.<sup>2,4</sup> The Karatzias study also included the Clinician-Administered PTSD Scale.<sup>4</sup> The sample sizes in both studies were relatively small and no power calculations were provided to indicate if the studies had the statistical power to demonstrate a true difference between treatments.

## **CONCLUSIONS AND IMPLICATIONS FOR DECISION OR POLICY MAKING**

Limited evidence was identified regarding the effectiveness of the EFT for the treatment of PTSD. The results of the included studies indicate that the EFT may be effective for reducing the symptoms of PTSD.<sup>2,4</sup>

The results of the three uncontrolled, non-randomized studies<sup>5-7</sup> (included in Appendix 5) indicate the EFT may have a positive clinical effect. However, these non-randomized studies were excluded because they did not include a control group. In order to demonstrate a true effect, an intervention must be compared with an alternative intervention, whether that intervention is an active intervention (such as the standard of care) or placebo. Uncontrolled studies can be helpful for indicating the intervention of interest produces an effect on participants, but it cannot be determined whether that effect is greater than what would be observed in similar participants who received no treatment or an alternative.

More well designed, controlled clinical studies may be necessary before making a clear decision whether to implement the use of EFT as a standard treatment for PTSD. More studies are required before considering the EFT as therapy for the treatment of anxiety or depression.

### **PREPARED BY:**

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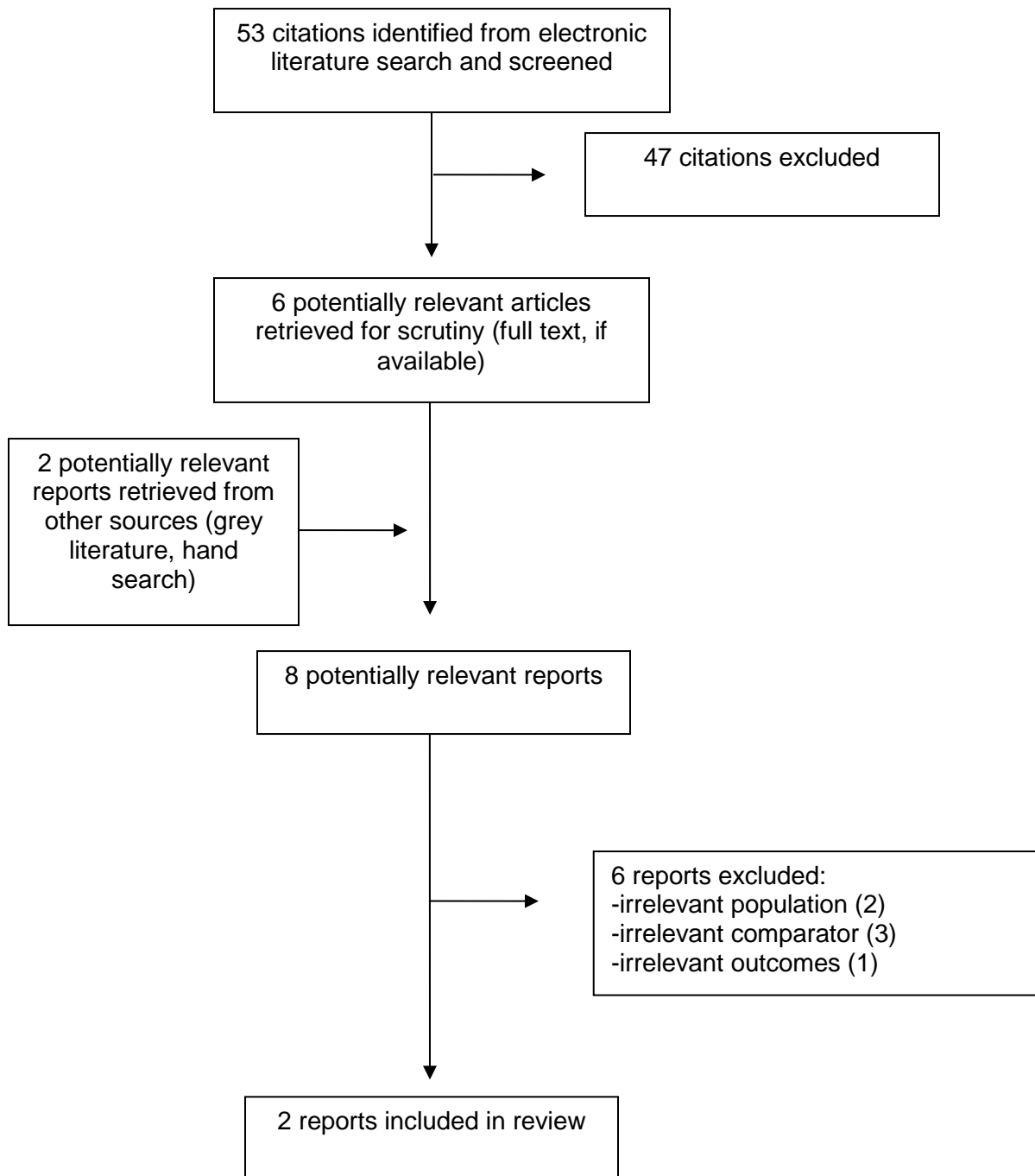
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APPENDIX 1: Selection of Included Studies



Appendix 2: Characteristics of Included Studies

Author, Year, Study Design, Country	Objectives	Patient Characteristics	Outcomes
Church et al. (2013) <sup>2</sup> RCT USA	<p>EVT vs standard of care wait list for veterans with PTSD under the care of a clinician</p> <p>Assessed at baseline, 3 sessions and 6 sessions</p> <p>WL Assessed at day 30, 3 and 6 months</p> <p><u>EFT</u> 6 x 1 hour coaching sessions plus standard care over 1 month</p>	<p>N = 59</p> <p><u>EFT</u> n = 30 mean age (SD) = 49.4 (16.2) men = 28 (93.3%) mean PCL-M = 62.3 (8.8) mean GSI = 73.4 (5.6) mean PST = 71.4 (4.6)</p> <p><u>SOC</u> n = 29 mean age (SD) = 54.1 (11.1) men = 25 (86.2%) mean PCL-M = 65.1 (9.3) mean GSI = 72.5 (5.2) mean PST = 71.4 (4.6)</p>	<p>PCL-M SA-45 GSI SA-45 PST</p>
Karatzias et al. (2011) <sup>4</sup> RCT Scotland	<p>EFT vs EMDR for PTSD</p> <p>recruited from NHS Psychotherapy Service waitlist</p> <p>ITT analysis</p> <p>assessed at baseline, after an 8 week waiting period, after treatment, and 3 month follow-up</p>	<p>N = 46</p> <p><u>EFT</u> randomized n = 23 follow-up completed n = 12 mean age (SD) = 39.7 (10.9) male = 11 (47.8%)</p> <p><u>EMDR</u> randomized n = 23 follow-up completed n = 11 mean age (SD) = 41.5 (10.8) male = 9 (39.1%)</p>	<p>CAPS total PCL-C total</p>

CAPS = Clinician-Administered PTSD Scale; EFT = emotional freedom technique; EMDR = eye movement desensitization and reprocessing; GSI = Global Severity Index; ITT = intention-to-treat; NHS = National Health Service; PCL-C = PTSD Checklist; PCL-M = PTSD Checklist-Military; PST = Positive Symptom Total; PTSD = post-traumatic stress disorder; RCT = randomized controlled trial; SD = standard deviation; SE = standard error; SF-45 = Symptom Assessment-45; SOC = standard of care; USA = United States of America; vs = versus; WL = waitlist



**Appendix 3: Summary of Critical Appraisal**

Author, Year, Study Design, Setting	Strengths	Limitations
Church et al. (2013) <sup>2</sup> RCT USA	<ul style="list-style-type: none"> <li>• objective and main outcomes clearly described</li> <li>• subjects were randomized to intervention groups (permutated block randomization)</li> <li>• actual probability values reported</li> <li>• provided reasons for drop out</li> <li>• appropriate statistical testing was used to assess the main outcomes</li> <li>• analysis was adjusted for confounders</li> <li>• adequate description of patients lost to follow-up</li> </ul>	<ul style="list-style-type: none"> <li>• patient characteristics varied between intervention and control groups</li> <li>• assessors were not blinded</li> <li>• small sample size</li> <li>• no power calculations described</li> <li>• no intention-to-treat analysis</li> </ul>
Karatzias et al. (2011) <sup>4</sup> RCT Scotland	<ul style="list-style-type: none"> <li>• computer-generated randomization schedule</li> <li>• a single assessor was used for all participants and was blinded to treatment groups</li> <li>• objective, methods, patients, and outcomes were adequately described</li> <li>• subjects adequately represent the population of interest</li> <li>• study staff and facilities representative of standard care for the condition</li> <li>• statistical testing was described and used to assess the main outcomes</li> <li>• intention-to-treat analysis</li> </ul>	<ul style="list-style-type: none"> <li>• one primary outcome relied on the use of self-report measures</li> <li>• small sample size</li> <li>• no power calculations described</li> <li>• high drop-out rates, but similar in both groups</li> <li>• no description of patients lost to follow-up</li> </ul>

**Appendix 4: Main Study Findings and Author Conclusions**

Author, Year, Study Design, Country	Findings	Author Conclusions
<p>Church et al. (2013)<sup>2</sup></p> <p>RCT</p> <p>USA</p>	<p>[mean score (SE)]</p> <p><u>PCL-M</u> EFT pre-test = 62.01 (2.1) after 6 sessions = 39.41 (2.7)</p> <p>SOC pre-test = 62.71 (2.3) after 30 days = 63.23 (2.0)</p> <p><u>SA-45 GSI</u> EFT pre-test = 74.79 (1.4) after 6 sessions = 58.51 (1.9)</p> <p>SOC pre-test = 72.39 (1.6) after 30 days = 69.98 (1.4)</p> <p><u>SA-45 PST</u> EFT pre-test = 73.74 (1.5) after 6 sessions = 57.61 (1.9)</p> <p>SOC pre-test = 72.72 (1.5) after 30 days = 70.42 (1.3)</p> <p>EFT post-test lower than SOC post-test <math>P &lt; 0.008</math></p> <p>EFT post-test lower than EFT pre-test <math>P &lt; 0.003</math></p> <p>EFT vs SOC post-test non-significant SOC post-test lower than SOC pre-test <math>P &lt; 0.003</math></p>	<p>The authors indicated the results were consistent with previous research studies showing the EFT's efficacy in treating PTSD and comorbid symptoms.</p>

Author, Year, Study Design, Country	Findings	Author Conclusions
Karatzias et al. (2011) <sup>4</sup>  RCT  Scotland	[mean score (SD)]  <u>CAPS total</u> EFT baseline = 66.1 (16.7) follow-up = 38.7 (28.6)  EMDR baseline = 70.7 (12.3) follow-up = 43.8 (30.5)  <u>PCL-C total</u> EFT baseline = 55.2 (12.5) follow-up = 41.0 (18.1)  EMDR baseline = 58.9 (9.0) follow-up = 43.1 (21.6)	The results indicated that both treatments produced therapeutic improvements. Similar treatment effect sizes were observed in both groups. Substantial clinical effect was observed more frequently in the EMDR group.

CAPS = Clinician-Administered PTSD Scale; EFT = emotional freedom technique; EMDR = eye movement desensitization and reprocessing; PCL-C = PTSD Checklist; PCL-M = PTSD Checklist-Military; RCT = randomized controlled trial; SD = standard deviation; SE = standard error; SF-45 = Symptom Assessment-45; SOC = standard of care; USA = United States of America; WL = waitlist

## Appendix 5: Additional Studies of Potential Interest

### *No control group*

Church D. The treatment of combat trauma in veterans using EFT (emotional freedom techniques): a pilot protocol. *Traumatology*. 2010;16(1):55-65.

Church D, Brooks AJ. The effect of a brief emotional freedom techniques self-intervention on anxiety, depression, pain, and cravings in healthcare workers. *Integr Med*. 2010;9(5).

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