A Meta-Analysis of Randomized and Non-Randomized Trials of Thought Field Therapy (TFT) for the Treatment of Posttraumatic Stress Disorder (PTSD): PRELIMINARY RESULTS

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Edwards, J., & Vanchu-Orosco, M. (2017). A meta-analysis of randomized and non-randomized trials of Thought Field Therapy (TFT) for the treatment of posttraumatic stress disorder (PTSD). Paper accepted at the Annual Meeting of the Association for Comprehensive Energy Psychology, San Antonio, Texas.

Abstract

Background: Thought Field therapy (TFT) is a method of tapping on the meridians of the body to treat posttraumatic stress. The purpose of the study was to determine whether participants, guided by TFT-trained professionals or paraprofessionals, demonstrate trauma symptom reduction greater than those receiving no treatment on measures of PTSD-specific trauma.

Method: A meta-analysis of studies (conducted between 2001 and 2016) evaluating TFT efficacy for individuals suffering from posttraumatic stress was conducted. Thirty-nine databases were searched. In addition, requests were sent to colleagues to share any studies that had not been published. Every attempt was made to obtain all studies that had been done on TFT and posttraumatic stress.

Five studies met the qualifications for inclusion in the preliminary meta-analysis: 1) Posttraumatic stress needed to be one of the identifiers or be separated out if other psychological problems were included; 2) Thought Field Therapy needed to be the treatment or be separated out if other treatments were involved; 3) assessment had to capture change from initial diagnosis to measuring the outcome after TFT treatment; and 4) the study needed to have means, standard deviations, and/or *p*-values, or it needed to have quantitative data so that pre and post measures could be compared. In two of the studies, a 1-10 Subjective Units of Distress (SUD) scale was used rather than a measure of posttraumatic stress.

Results: Publication bias, examined using plots of effect sizes by weighting, funnel plots, and Duval & Tweedie's Trim and Fill, did not appear to be an issue. The overall effect size for the pre- to post-TFT treatment in quasi-experiment conditions (-2.47) was large and statistically significant.

Conclusions: The results show that TFT is highly effective in reducing trauma symptoms in a variety of populations and settings. This meta-analysis extends the existing literature through facilitation of a better

understanding of the variability and clinical significance of PTSD improvement subsequent to TFT treatment.

This study was funded by the TFT Foundation, which is a charitable organization that sends therapists who are trained in TFT to assist people who are dealing with posttraumatic stress in other countries, as well as in the United States.

Purpose (Background)

Thought Field Therapy (TFT) is the foundational method of Energy Psychology (EP) developed by psychologist Roger Callahan (Callahan, 2001; Callahan & Callahan, 2000). TFT algorithms are rated as an effective evidence-based therapy for reducing trauma and stressor-related disorders by the National Registry of Evidence-Based Program and Practices (NREPP). Lacking is a recent quantitative meta-analysis that enhances understanding of the clinical significance of trauma symptom reduction outcomes after TFT treatment. To that end, this study provides a quantitative review of aggregate research that has been conducted using Thought Field Therapy to treat posttraumatic stress. While a systematic review of the research literature on Thought Field Therapy was published in 2014 (Dunnewold), and two meta-analyses on Emotional Freedom Techniques (EFT) have been published (Gilomen & Lee 2015; Sebastian & Nelms, 2017), no meta-analyses have been conducted specifically examining Thought Field Therapy and its effect on the treatment of posttraumatic stress.

The purpose of the current study was to determine whether Thought Field Therapy significantly reduces posttraumatic stress symptoms in participants. This study extends the work of Dunnewold (2014), Gilomen and Lee (2015), and Sebastian and Nelms (2017) by quantitatively examining research findings between 2001 and 2016 and specifically focusing on Thought Field Therapy and posttraumatic stress using meta-analytic methods.

Theoretical Framework

Dr. Roger Callahan, a clinical psychologist, began developing Thought Field Therapy in the 1970s. He had been searching for more rapid ways to assist his clients in eliminating their symptoms related to posttraumatic stress, anxiety, phobias, and other psychological problems (Callahan, 2001). He studied the Chinese Meridian System and discovered that different points on the body were related to different emotions. He started asking his clients to tap on various points using a causal diagnostic

procedure that involved pushing on their arms to test their muscles while they were thinking about the trauma or upset, called Applied Kinesiology. He found that when the client was not thinking about the problem, the client's arm would be strong. However, when the client was thinking about the problem, the client's arm would be weak. Callahan found that when his clients tapped on certain points in a certain order, their symptoms (e.g., trauma, anxiety, anger, stress, depression, physical pain, and other difficulties) dissipated. After a successful treatment, and the client was no longer feeling upset while thinking of or remembering the troubling event, the client's arm would then remain strong when thinking about the problem that was worked on. At this point, Callahan began to explore possible reasons for this phenomenon.

As Callahan developed his approach to working with posttraumatic stress, he suggested that people have a thought field that is invisible in the same way that a magnetic field or a gravitational field is invisible. Callahan and Callahan (2000) suggested that upsets in the thought field were perturbations and proposed that something that is in the thought field "generates and controls upset" (p. 138). Further, evidence for perturbations was demonstrated when people think about their trauma and become upset when they had not been upset before. According to Callahan and Callahan (2000) when clients have been successfully treated, they cannot become upset after they have tapped the points, as they have eliminated the perturbations in the thought field—"It seems clear that since the same thought can be tuned, one time with upset, and the next with no upset, that something is different in the thought field after successful therapy" (pp. 138-139). According to Callahan and Callahan (2000), the "perturbation . . . in the thought field . . . constitutes the most basic and fundamental cause in a hierarchical chain of multiple causes of *all* the negative emotions (such as fear, depression, anxiety, phobias, addictive urges, anger, trauma, pain, etc.)" (p. 144, italics in original). He observed that, "each perturbation in the

thought field is associated with a specific energy meridian" (p. 145), and he suggested that perturbations can enter the thought field through traumatic experiences or "through inheritance" (p. 151).

Based on a review of three of the studies that had been published in refereed journals (Connolly & Sakai, 2011; Irgens, Dammen, Nysaeter, & Hoffart, 2012; Robson, Robson, Ludwig, Mitabu, & Phillips, 2016), Thought Field Therapy was declared an effective evidence-based therapy for reducing trauma and stressor-related disorders by the National Registry of Evidence-Based Programs and Practices (NREPP) of the Substance Abuse and Mental Health Services Administration (SAMHSA) in 2016. According to the NREPP, TFT can be considered an effective therapy, which would then warrant further study, including our meta-analysis.

Method

Research Question

The following research question was addressed using meta-analysis:

> Do participants, guided by TFT-trained professionals or paraprofessionals, demonstrate trauma symptom reduction greater than those receiving no treatment on measures of PTSD-specific trauma?

The research design was based on Cooper and Hedges' (1994) stages of research synthesis and include: (i) problem formulation, (ii) data collection/literature searches, (iii) data evaluation/coding and evaluating research, (iv) analysis and interpretation/meta-analytic calculations of effect size(s), and (v) public presentation/meaningful interpretation and effective presentation of synthesis results (p. 7). Studies selected for analyses needed to align with the purpose and research questions for the current study. Extensively documented selection and exclusion criteria focusing on research that included individuals suffering from posttraumatic stress (PTS), Thought Field Therapy (TFT), and experimental/quasi-experimental research techniques aided in study selection.

Data Sources

Potential studies conducted between 2001 and 2016 evaluating TFT for posttraumatic stress were identified by electronic search. These included outcome studies and randomized controlled trials (RCTs). The focus of this study was trauma symptoms as measured by psychometric questionnaires and scales. Studies were located using a comprehensive search strategy that included searches of 39 electronic databases. In addition, colleagues were contacted in an attempt to locate any studies that had not been published. All studies that had been conducted on TFT were considered.

Data Coding

The codebook was developed iteratively as domain knowledge and statistical demands and biases needing to be addressed were determined. Further codebook refinement is currently underway.

Data Integrity

Potential studies evaluating TFT for posttraumatic stress sufferers were identified by electronic search. An initial search for TFT research yielded 2,200 articles and studies. Refinement to include post-traumatic stress and limit the date range to between 2001 and 2016 yielded 1366 articles. A further two studies were identified by colleagues. Titles, and in some cases abstracts, were scanned to ensure that the articles found related to TFT and PTSD, and were published and/or conducted between 2001 and 2016. Qualitative research and summary articles (e.g., systematic reviews of the literature, position papers…) were eliminated as potential candidates for the meta-analyses. Eventually, the total number of studies was weeded down to 34 studies that underwent further examination and included both outcome studies and randomized controlled trials (RCTs). Of the remaining 34 studies, those where multiple treatments or multiple types of trauma were aggregated and data could not be broken out were eliminated. This left 10 studies. Of these, 7 met the criteria for inclusion in the meta-analysis. During study coding, one was dropped from the current meta-analysis as it used a pass/fail criteria (Johnson, Shala, Sejdijaj, Odell, & Dabishevci, 2001), did not include a *p*-value, and of the 249 traumas identified,

there was no breakdown of type of trauma (e.g., anxiety, PTSD...). One additional study was dropped from the analyses at this point in time as post-treatment data presented were not useable for the meta-analysis (Connolly, Roe-Sepowitz, Sakai, & Edwards, 2013). There is a request for this data, and it will be included in the final analyses. The remaining five studies were subject to publication bias analyses (Connolly & Sakai, 2011; Folkes, 2002; Robson et al., 2016; Sakai et al., 2001; Sakai et al., 2010). Future work will include outlier and sensitivity analyses, as well as calculating inter-rater reliability of the coding process. It must also be noted that a comparison to the waitlist (WL) control group, a pseudo-control group who would receive treatment after collecting pre- and post-treatment data, could not be completed at this point, as only two of the five included studies provided WL information. Once data for the sixth study is included, the additional comparison will be completed.

Meta-analysis

Following coding, a suitable effect size statistic, Hedges' *g*, and appropriate statistical methods to combine effect sizes across studies provided in *Comprehensive Meta-Analysis V.2.2.050* (Borenstein, Hedges, Higgins, & Rothstein, 2009), were selected. Hedge's *g* was used to calculate the effect size for differences between pre- and post-treatment means. The effect size calculation used the pooled standard deviation. As all studies included in the meta-analysis reported pre- and post-test means, standard deviations, and sample size, there was no need for alternate data collection. In one case, where post-treatment means and standard deviations were not provided in the published article, the original authors provided a copy of the database. These were calculated by the current researchers.

While the random effects model, selected *a priori*, was employed as variation beyond sampling error had been expected, both the fixed effects and random effects models were run. Rationale for selecting the random effects model includes the fact that it does not produce the substantial Type I bias for mean effects significance tests and moderator variables (i.e., interactions, seen with fixed effects

models). Additionally, confidence intervals do not overstate the degree of precision for meta-analytic findings (Hunter & Schmidt, 2004). Outlier analysis and analysis of homogeneity of variance and the distribution of effect sizes will be conducted to provide a better understanding of the contribution of the effect sizes.

Data Integrity

The six studies included in the preliminary meta-analysis were subject to publication bias analyses. Publication bias analyses were run to detect issues with the number of studies collected by comparing the weights used in the random effects model, selected for the meta-analysis, and effect size estimates.

Publication bias was examined using plots of effect sizes by weighting, funnel plots, and Duval & Tweedie's Trim and Fill. There were no obvious patterns or shifts to the right of the mean effects size estimates on the plot displaying effect sizes by weighting; thus, there was no indication of bias as displayed effect sizes by weighting plot (Figure 1). However, the funnel plot (Figure 2) did show a possible issue with publication bias, as studies did not appear randomly distributed, and there may be a potential outlier. Duval & Tweedie's Trim and Fill analysis did not recommend trimming any studies from the current analysis, nor did it recommend any adjustments to the point estimates or Q-value. While the funnel plot did provide information that was worrisome, it was not considered an impediment to the current research study.

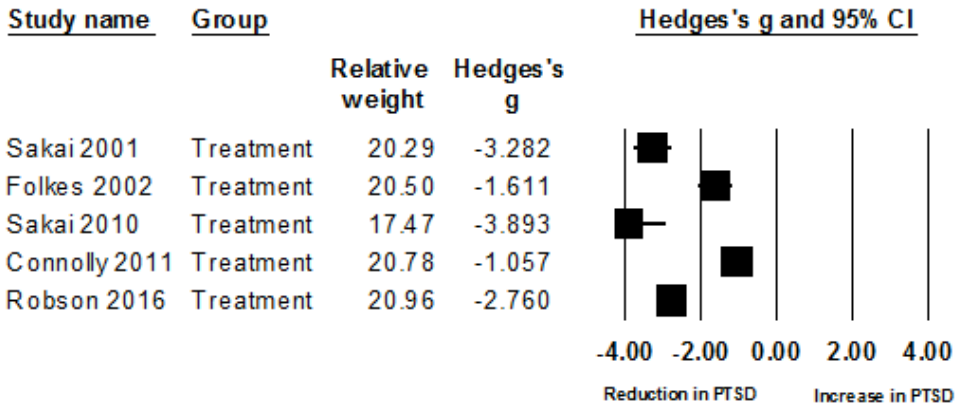

Figure 1: *Effect Sizes by Weights*

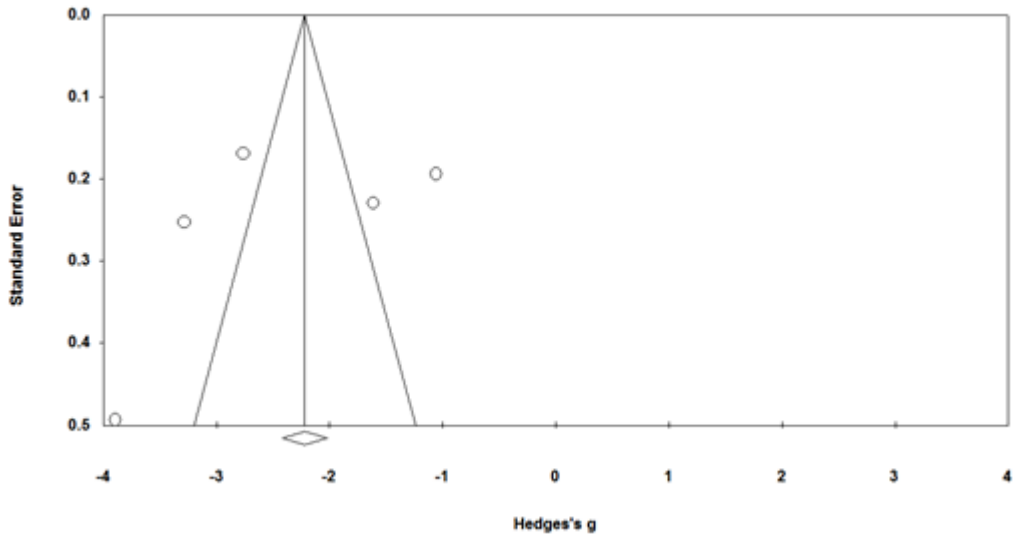

Figure 2: *Publication Bias for the Random Effects Model*

Future outlier and sensitivity analyses will be conducted, as including outlier studies and pooling variances when it is not warranted can cloud the results of a meta-analysis. It should be noted that outliers may produce spurious results, disproportionately affecting means, variances, and other statistics used in the meta-analysis. Additionally, inter-rater reliability of the coding will be assessed.

Table 1 provides information regarding publication and participants.

Table 1: *Study Demographics*

Study	Publication year	Publication type	Research Quality	Research Design	Population	Recruitment	Sample Size	Outcome Measure
1. Sakai et al.	2001	Journal	not peer-reviewed	quasi-experimental; no control	Clinical (Kaiser Permanente Hospital)	not described	142	SUD; Wolpe 1969
3. Folkes	2002	Journal	peer-reviewed	quasi-experimental; no control	area around a large urban elementary school in southern California; adults, children (5 - 48 yrs)	word of mouth, public workshops, home visits	29	PCL-Child
4. Sakai et al.	2010	Journal	peer-reviewed	quasi-experimental; no control	adolescents (13 - 18); Rwandan orphanage/Rwandan day school attendees	voluntary participation 188 students old enough to be Rwandan genocide survivors given PTSD checklist; most severe also rated by caregivers; 50 w/ highest score on caregiver checklist were selected	50	SUD; Wolpe 1969
5. Connolly & Sakai	2011	Journal	peer-reviewed	Randomized, waitlisted control group design (RCT)	adult survivors of Rwandan genocide (18 - 73); members of various orphanages, AIDs and widows' groups	voluntary participation recruited by leaders of Women's Foundation Ministries, participants were from Kigali & felt they suffered from trauma	71	MPSS; Falsetti, Resnick, Resnick, & Kilpatrick, 1993
7. Robson et al.	2016	Journal	peer-reviewed	Randomized, waitlisted control group design (RCT)	rural population in Uganda who had survived Uganda's violent conflicts (46; mean age)	Catholic Diocese - Brief information regarding the trial was promulgated throughout the Diocese, although any faith was welcome and also on local radio, including features of PTSD and invitations were extended to those with suggestive symptoms; Kasese District of Uganda	114	PCL-C; Weathers et al., 1991

Preliminary Results

Five studies qualified for inclusion for the preliminary meta-analysis, three RCTs and two outcome studies. TFT treatment showed a large effect size in the treatment of PTSD as demonstrated by pre- and post-treatment effect sizes.

Overall results, examining pre- and post-treatment scores on comparable PTSD measures with good reliability and validity, are presented in Table 2.

Table 2: *Results of Preliminary Meta-Analysis - Point Estimates, Confidence Intervals, & Q-statistics*

		Effect size & 95% CI for Hedge's g					Heterogeneity		
	K	**Pt Est[a]**	**Std Error[a]**	**LL[a]**	**UL[a]**	***p* (ES)**	**Q-value**	**df (Q)**	***p* (Q)**
Fixed effects									
Pre- Post-treatment	5	-2.22	0.1	-2.42	-2.02	0.00	82.23	4	**<0.001**
Random effects									
Pre- Post-treatment	5	**-2.47**	0.48	-3.41	-1.54	**0.00**			

[a] Pt Est is point estimate, Std Error is standard error, LL is lower limit, & UL is upper limit

The Q-test for the distribution of observed effect sizes for treated participants was statistically significant and suggests that there is heterogeneity in conditions, differences that are not readily accounted for by sampling variation. That is to say, the true effect size does vary from study to study due to heterogeneity in effect size and within study error. As Q-test values were statistically significant, the selection of the random-effects model for further discussion was deemed appropriate. Overall, the effect size for the pre- to post-TFT treatment in quasi-experiment conditions (-2.47) was large and statistically significant.

It is worth noting that TFT was demonstrably superior to WL in the two RCT studies; however, at this point in time, this cannot be confirmed via meta-analysis, as there are not enough WL groups to combine in order to conduct a separate meta-analysis.

Limitations

There are several limitations, or issues, with using a meta-analytic technique to explore the outcomes of Thought Field Therapy with people who have experienced posttraumatic stress. These

limitations include, but are not restricted to "the amount of effort and expertise it takes" (Lipsey & Wilson, 2001, p. 7), "mixing of study findings of different methodological quality in the same meta-analysis" (Lipsey & Wilson, 2001, p. 9), the file drawer problem whereby the sample of studies selected was biased and important studies were ignored (Borenstein et al., 2009), an unclear unit of analysis, and inclusion of studies with complex research designs. Extensive work and rework at each step of the meta-analytic process and regular consultation with researchers and experts in the field of TFT and meta-analysis were used to help counter the limitations described.

In addition, study level limitations include the small number of experienced and approved Thought Field Therapy trainers. Funding for conducting large-scale randomized controlled studies is difficult to obtain.

Conclusions

The results show that TFT is highly effective in reducing posttraumatic stress symptoms in a variety of populations and settings. TFT was equal or superior to WL controls. This meta-analysis extends the existing literature through facilitation of a better understanding of the variability and clinical significance of PTSD improvement subsequent to TFT treatment.

Significance of the Study

This was the first meta-analysis to be done solely on Thought Field Therapy. It is hoped that the present study will be used to extend research into the field of Thought Field Therapy, providing guidance into the selection of areas for further research and meta-analyses in areas such as anxiety, depression, self-regulation, addictive urge, generalized anxiety, personal resilience, and self-concept. It is also hoped that as more studies are done on trauma, an extension of the current meta-analyses will be conducted. In addition, it is hoped that this study can help inform those who are working in clinical settings to assist people in overcoming symptoms of posttraumatic stress. Further, as therapists around

the world use Thought Field Therapy more, we hope that this study will help advance the field and demonstrate the efficacy of this method.

References

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