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PSYCHOLOGY of TRAUMA

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Chapter 11

ENERGY PSYCHOLOGY IN THE TREATMENT OF PTSD: PSYCHOBIOLOGY AND CLINICAL PRINCIPLES

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ABSTRACT

Energy Psychology (EP) protocols use elements of established therapies such as exposure and cognitive processing and combine them with the stimulation of acupuncture points. EP methods such as EFT (Emotional Freedom Techniques) and TFT (Thought Field Therapy) have been extensively tested in the treatment of post-traumatic stress disorder (PTSD). Randomized controlled trials (RCTs) and outcome studies assessing PTSD and co-morbid conditions have demonstrated the efficacy of EP in populations ranging from war veterans to disaster survivors to institutionalized orphans. Studies investigating the neurobiological mechanisms of action of EP suggest that it quickly and permanently mediates the brain's fear response to traumatic memories and environmental cues. This review examines the published trials of EP for PTSD and the physiological underpinnings of the method. It concludes by describing seven clinical implications for the professional community. These are: (1) the limited number of treatment sessions usually required to remediate PTSD; (2) the depth, breadth, and longevity of treatment effects; (3) the low risk of adverse events; (4) the limited commitment to training required for basic application of the method; (5) its efficacy when delivered in group format; (6) its simultaneous effect on a wide range of psychological and physiological symptoms, and (7) its suitability for non-traditional delivery methods such as online and telephone sessions.

Keywords: PTSD, EFT, Emotional Freedom Techniques, TFT, Thought Field Therapy, telemedicine, anxiety, depression, pain, training, group therapy

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INTRODUCTION

Posttraumatic stress disorder (PTSD) was first conferred legitimacy as a clinical condition more than three decades ago with its adoption by the *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.; American Psychiatric Association, 1980). Yet despite considerable research evaluating outcomes for treatment approaches that run the gamut from psychological to the pharmaceutical protocols, recent reviews find that the research has yet to fully conceptualize the disorder [Zoellner, Eftekhari, and Bedard-Gilligan, 2008] or to “form a cohesive body of evidence about what works and what does not” [Institute of Medicine, 2008, p. 10]. Collectively the existing studies on PTSD treatment fail to conclude satisfactorily in favor of any one intervention over another. The consequence has been that PTSD is often perceived of as “a treatment-resistant and refractory condition” [Gallo, 2009, p. 65]. Others have argued that it is actually an incurable condition which, in the best-case scenario, one can hope merely to manage [Johnson, Fontana, Lubin, Corn, and Rosenheck, 2004].

A comprehensive assessment of the evidence on psychological and pharmaceutical treatment outcomes by the Institute of Medicine (IOM) of the National Academy of Sciences found that a single treatment element, psychological exposure, was present across the most successful studies [IOM, 2008, p. 10]. The IOM’s conclusions regarding the singular effectiveness of exposure in the psychological treatment of PTSD were corroborated in a follow-up review conducted for the American Psychiatric Association [Benedek, Friedman, Zatzick, and Ursano, 2009], and the use of exposure has become a standard component in practice guidelines for treating PTSD [Benedek, Friedman, Zatzick, and Ursano, 2009].

Exposure techniques vary, but the principle underlying all exposure therapies is that by exposing the individual to anxiety-producing memories or cues in a controlled setting, the therapy can mitigate or even extinguish the effects of those cues. Therapies may incorporate imaginal exposure, where images and narratives are used to elicit the feared memory or stressor in the individual; in vivo exposure, where the individual is placed in the actual anxiety-inducing environment; or virtual reality, where the patient is exposed to the stressor through computer simulation [Feinstein, 2010]. Gradation of exposure also varies by approach. Implosion places the patient in a highly stressful imagined situation. Flooding also utilizes highly stressful circumstances, but in actual, in vivo, settings. Both aim to expose the individual to the stressor in a controlled environment until the individual’s anxiety decreases. Graduated exposure, in contrast, exposes the patient to increasing degrees of stressors. Once the patient’s fear or anxiety has been attenuated in response to one stressor, he or she is exposed to an intensified stressor until that stressor, too, no longer elicits the patient’s anxiety—continuing until the patient progresses up the ladder of exposure to increasingly stressful cues, which eventually cease to provoke an adverse response. Santini, Muller, and Quirk [2001] described the process whereby temporary cessation of that response will lead to consolidation in long-term memory, which will eventually extinguish the negative response altogether.

Some exposure therapies pair exposure to the stressor with mechanisms designed to target the individual’s physiological response. Wolpe [1973], for example, used deep muscle relaxation concurrently with graduated imaginal exposure to help inhibit patients’ anxiety. Diaphragmatic breathing, bilateral stimulation, relaxation techniques, biofeedback, and interoceptive exposure (a type of mindfulness meditation that shifts the patient’s attention

from the stressor to the physiological responses to the stressor; Barlow, 2007) have all been used in tandem with exposure therapy. They share as a premise the idea that incompatible physiological states cannot occur simultaneously, and so patients learn to replace their anxiety responses with calm when exposed to the stressor [Feinstein, 2010; Lane, 2009].

A relative newcomer to the field of exposure therapies, notable for its often very rapid reductions in PTSD induced in diverse populations, is energy psychology (EP). EP techniques pair psychological exposure with the physical stimulation of designated pressure points on the body, generally the same as those targeted in acupuncture. Though premised on the same combination of exposure and physiological counterconditioning mechanisms as described above, EP presents an enormously simplified version of this model. The exposure is briefer, the physiological inhibition produced by the stimulation of acupuncture points (acupoints) is faster, the intervention can be self-administered or delivered in diverse environments—including in groups or electronically—and reductions in patients' anxiety often occur quickly and, moreover, are sustained. All these trends have considerable implications for the treatment of PTSD.

This chapter considers the physiological mechanisms underpinning EP therapies, reviews the research on EP efficacy in PTSD, and argues that characteristics unique to EP recommend its adoption and application in diverse clinical settings—particularly in the treatment of PTSD.

PRINCIPLES OF EP: EAST MEETS WEST

Energy psychology draws on techniques long associated with the healing traditions of Eastern cultures, in particular, Chinese medicine's practice of acupuncture. In use for thousands of years in Asian countries, acupuncture is increasingly being taught in Western medical schools with evidence of efficacy accumulating in scientific journals [World Health Organization, 2003]. Acupuncture is designed to activate any of the 2,000 points on the human body that connect with 12 main and 8 secondary pathways, or meridians [Wilkinson and Faleiro, 2007]. By targeting these meridians through the insertion and manipulation of needles, acupuncturists believe that they can resolve imbalances in the recipient's *chi* energy, imbalances that can manifest as illness and other physical maladies. Practitioners further believe that specific meridians correspond with specific organs and ailments. Pressure placed on an acupoint located on the inner wrist, for example, has been shown to be effective in treating various forms of nausea [McMillan, 1998].

In place of acupuncture's needles, EP uses manual stimulation of the acupoints by tapping, holding, or massaging specific acupoints in a specific sequence, which will vary depending on the particular method, practitioner, and clinical context [Feinstein, 2010]. EP protocols pair psychological exposure with acupoint stimulation: first the participant is exposed to the anxiety-inducing stressor and then the acupressure is applied. For treatments involving participants with PTSD, exposure typically involves using words or imagery to trigger a traumatic memory. Participants repeat a self-acceptance statement as they activate the prescribed acupoints, based on cognitive restructuring principles [Lane, 2009]. Before and after each round, they self-rate their level of distress. The process is repeated until participants' ratings of distress have decreased, ideally to zero [Craig, 2009; Craig, 2011]. Karatzias et al. [2011] conducted a randomized controlled trial (RCT) comparing EFT to

EMDR and found that both effectively remediated PTSD within an average of less than five sessions.

How does EP work? While the mechanisms in EP are still being investigated, the effects reported in systematic investigations are often striking [reviewed in Feinstein, in press]. The power of the approach likely derives from its two-pronged nature: a) its incorporation of elements of exposure therapy, which, as noted earlier, has been found to be the most efficacious of approaches in the treatment of PTSD, and b) its use of acupoint stimulation.

Explanations of the efficacy of adding the stimulation of acupoints to exposure techniques began with an extrapolation from acupuncture research [Feinstein, 2010]. In a study using functional MRI, Hui et al. [2000, 2005] reported that the activation, via acupuncture needling, of what is known as the “Large Intestine 4” acupoint on the hand, led to significant decreases in signals in the amygdala, hippocampus, and other areas of the brain associated with fear and pain. Fang et al. [2009] reported additional evidence that acupuncture produces “extensive deactivation of the limbic-paralimbic-neocortical system.” In other words, the areas of the brain responsible for heightened affect, anxiety, and the fight/flight/freeze response are attenuated by the activation of specific acupuncture points [reviewed by Lane, 2009, p. 31]. Other researchers have found that acupuncture can produce endogenous opioids, increase production of serotonin and other neurotransmitters, and reduce the stress hormone cortisol [Akimoto et al., 2003; Lee, Yin, Lee, Tsai, and Sim, 1982; Ulett, 1992], all of which have implications for the regulation of mood, anxiety, and pain.

The method by which EP therapies activate acupoints is different from that of acupuncture’s use of needles, but the effect is hypothesized to be the same [Feinstein, 2010; Lane, 2009]. One double blind study comparing penetration by acupuncture needling with non-penetrating pressure that simulated the sensation of penetration found equivalent clinical improvements for each intervention [Takakura and Yajima, 2009]. Informal studies have suggested that tapping may even be superior to needling in the treatment of anxiety disorders [reported in Feinstein, 2004].

EFFICACY OF COMBINING ACUPOINT STIMULATION WITH IMAGINAL EXPOSURE

The effectiveness of tapping on acupuncture points during brief imaginal exposure has been validated in 36 outcome studies, including 18 RCTs [Feinstein, in press]. For instance, Church, Yount, and Brooks [2011] compared cortisol levels pre- and posttreatment in groups receiving either an hour-long psychotherapy intervention with supportive interview, no therapy, or Emotional Freedom Techniques (EFT), one of the more widely practiced EP methods, which stimulates the acupoints through tapping. Only those in the EFT group were found to show significant reductions on a salivary cortisol test. Moreover, reductions in cortisol were significantly correlated with the attenuation of depression, anxiety, and symptoms of other psychological conditions.

The effects of EP have also been mapped using electroencephalograms. Diepold and Goldstein [2009] reported that a patient exposed to a traumatic memory showed brain wave patterns consistent with a fear response prior to EP application and normalized patterns following treatment. Lambrou, Pratt, and Chevalier [2003] showed an analogous pattern of change in the theta waves in patients being treated with EP for claustrophobia. Swingle,

Pulos, and Swingle [2004] found that EP could reduce arousal in the right frontal cortex of participants being treated for traumatic memories related to motor vehicle accidents. All of these changes in brain function have likely ramifications for individuals' fear responses. EP researchers, like their counterparts in acupuncture research, hypothesize that EP can effect changes not only at the neurological level but also at the chemical and genetic: boosting serotonin production [Ruden, 2010], reducing cortisol [Church et al., 2011], and activating stress-reducing genes, including EGR-1 and C-fos [Davis, Bozon, and Laroche, 2003; Sabban and Kvetnansky, 2001] in the hippocampus and hypothalamus. This and other evidence for energy psychology as an epigenetic physiological intervention is reviewed by Church [2009a].

As a body, the research into the physiological underpinnings of EP suggests that the intervention has the potential to mitigate the following maladaptations: "(a) exaggerated limbic system responses to innocuous stimuli, (b) distortions in learning and memory, (c) imbalances between sympathetic and parasympathetic nervous system activity, (d) elevated levels of cortisol and other stress hormones, and (e) impaired immune functioning" [Feinstein and Church, 2010, p. 283]. By pairing acupoint stimulation with the mental activation of stress-producing cues, the cue can be counterconditioned. When that cue triggers a traumatic memory, as in the case of PTSD, EP reconsolidates the memory in a manner that eliminates its ability to trigger limbic hyperarousal [Feinstein, 2010; Lane, 2009].

APPLICATIONS OF EP

EP techniques have broad application. Published studies have found evidence for the efficacy of EFT in the long-term reduction of psychological distress [Church and Brooks, 2010; Palmer-Hoffman and Brooks, 2011; Rowe, 2005], phobias [Baker and Siegel, 2010; Salas, Brooks, and Rowe, 2011; Wells, Polglase, Andrews, Carrington, and Baker, 2003], test anxiety [Benor, Ledger, Touissant, Hett, and Zaccaro, 2009; Rubino, in press; Sezgin and Özcan, 2009], and physical conditions such fibromyalgia [Brattberg, 2008] and psoriasis [Hodge and Jurgens, 2011]. Furthermore, EFT can be used not only to reduce negative symptoms and responses, such as stress, anxiety, and pain, but also to accentuate positive affect. Church and Downs [2012] used EFT to simultaneously reduce distress associated with traumatic memories related to sports performance and improve confidence in college athletes.

Significantly, evidence is accumulating that EP techniques can also be effective in reducing symptoms of PTSD, which is notable in itself given PTSD's reputation as a treatment-resistant condition. Even more surprising, progress is often rapid and reductions long-lasting. A review of the research shows the diversity of populations and settings in which EP has been used to treat PTSD.

Thought Field Therapy (TFT) was the the first psychotherapeutic approach to introduce acupoint tapping [Callahan, 2000], and the earliest reports of EP with PTSD examined the use of TFT following disasters [Feinstein, 2008]. Johnson, Mustafe, Sejdijaj, Odell, and Dabishevc [2001] reported strong improvement in 103 of 105 survivors of the Kosovo genocide based on subjects' verbal reports. Gains were sustained on 18-month follow-up. Folkes [2002] explored the effect of TFT in a sample of low-income immigrants and refugees who were exhibiting symptoms of clinical PTSD. Following the use of one to three

therapeutic sessions, participants' avoidance behaviors, intrusive thoughts, and hypervigilance were all significantly reduced on a standardized self-report inventory.

In four studies conducted by two independent teams applying TFT with genocide survivors in Rwanda, strong symptom relief was found using standardized self-report or caregiver inventories [Connolly and Sakai, 2011; Sakai, Connolly, and Oas, 2010; Stone, Leyden, and Fellows, 2009, 2010]. In the two studies in which follow-up was conducted, gains held at one year [Sakai et al, 2010] and two years [Connolly and Sakai, 2011]. Church, Piña, Reategui, and Brooks [2011] tested EFT in a sample of abused boys, ages 12 to 17, living in a group home setting. They observed similar reductions to the experimental group's PTSD symptoms and found that the boys' traumatic stress remained at normal levels at a 1-month follow-up.

EFT has also been found to dramatically reduce the PTSD levels of war veterans. Church [2009b] investigated the use of EFT in an intensive 5-day format with 11 veterans and their family members., Church, Geronilla, and Dinter [2009] examined outcomes with seven veterans who each received six EFT sessions. In both studies, participants' PTSD symptoms dropped from clinical to subclinical levels following the intervention, as did their other psychological symptoms, including phobias, anxiety, depression, psychoticism, and hostility. Follow-ups at 3, 6, and 12 months showed that these gains had been maintained at highly significant levels. Church, Hawk, et al. [in press] built upon these findings in their RCT of 59 military veterans. As in Church et al. [2009], participants in the experimental group of received six hour-long sessions of EFT. Again, both breadth and severity of participants' psychological distress were diminished significantly when measured at the end of treatment and at 3 and 6-month follow-ups.

CLINICAL IMPLICATIONS FOR PTSD TREATMENT

From this summary of findings of the effects of EP on PTSD, a number of distinguishing features start to emerge. Each holds salient implications for the treatment of PTSD.

EP Requires Few Treatment Sessions to Reduce PTSD

Clinical reports of EP therapies in highly traumatized populations reveal the parsimony of application required to obtain reductions in symptoms. Church and colleagues' studies of veterans yielded significant reductions in traumatic stress following just six 1-hour sessions of EFT [Church et al., 2009; Church, Hawk, et al., in press]. Surprising and strikingly strong outcomes following single-session interventions were found in three studies [Connolly and Sakai, 2011; Sakai et al., 2010, Church, Piña, et al., 2011]. Connolly and Sakai, for instance, randomly assigned 145 adults who had survived the 1994 Rwanda genocide to a single-session TFT treatment or a wait-list control condition. Pre/post-treatment scores on two standardized PTSD self-inventories were significant beyond the .001 level on all scales (e.g., anxious arousal, depression, irritability, intrusive experiences, defensive avoidance, dissociation, et cetera), and the improvements held on 2-year follow-up. When EP is used to treat refugees and adults in disaster zones it often, by necessity, employs a single-session protocol [e.g., Connolly and Sakai, 2011; Folkes, 2002; Green, 2002; Johnson et al., 2001;

Sakai et al., 2010]. Feinstein's [2008] review of the use of EP in survivors of natural and human-caused disasters confirmed the frequency of success with single-session protocols. More generally, Carbonell and Figley [1999] reviewed recently developed therapies for trauma and found EP interventions efficacious in attenuated time frames.

EP Effects Have Depth, Breadth, and Longevity

Studies reporting treatment effects for the use of EP in PTSD typically observe highly significant reductions in symptoms, impact on an array of symptoms, and improvements that last. A more detailed examination of studies introduced earlier supports these assertions. Sakai et al. [2010] drew their sample from a pool of 188 orphaned survivors of the Rwandan ethnic cleansing. Caretakers completed a standardized PTSD inventory structured around *DSM-IV* [American Psychiatric Association, 1994] criteria for PTSD, and the 50 children scoring highest on the inventory were selected for the TFT intervention. Inventory scores were corroborated by staff observations of enduring PTSD symptoms in the sample. The children's PTSD was characterized by intrusive flashbacks, nightmares, difficulty concentrating, aggressiveness, bed-wetting, and withdrawal during the 12-year period following the ethnic cleansing. After a single TFT session and brief relaxation training, only 6% of the adolescents scored within the PTSD range ($p < .0001$), and staff reported dramatic observed decreases in PTSD symptoms. Moreover, these decreases were maintained, by and large, at the 1-year follow-up. Only 8% scored within the PTSD range on the caregiver inventory. A companion inventory administered directly to the orphans found that 72% scored within the PTSD range prior to treatment; only 18% scored within this range immediately after treatment ($p < .0001$); and the number had diminished even further, to 16% within the PTSD range, at the 1-year follow-up. Stone et al. [2009] corroborated these findings using a standardized self-inventory to assess PTSD symptoms in the same population. Decreases in symptoms were significant at the $p < .0001$ level.

The Rwanda outcomes are supported by RCTs testing EFT with both traumatized combat veterans and adolescent boys. In Church, Hawk, et al. [in press], for instance, all 49 veterans in the treatment group exceeded the PTSD cutoff on the military version of the Post-Traumatic Stress Checklist prior to treatment, while only 7 (14%) exceeded the cutoff after six 1-hour sessions. In Church et al.'s (in press) intervention with 16 abused boys living in a group home in Peru, which like the Rwanda studies used only a single treatment session, 100% in the treatment group ($n = 8$) went from above to below PTSD thresholds 30 days after treatment while none in the wait-list control group ($n = 8$) showed significant change.

EP Has a Low Incidence of Adverse Events

Because of the affect-reduction properties of EP, therapists report preferring it over other methods when dealing with emotionally charged memories [Flint, Lammers and Mitnick, 2005; Mollon, 2007]. A survey of therapists found that they also preferred EP when treating adult survivors of childhood sexual abuse (Schulz, 2009). Reduced affect is noted with EFT

even when highly traumatized clients recall memories so emotionally evocative that they have been reluctant to access them before [Church, 2009b; Mollon, 2007]. An examination of the published literature on EP finds that, in the studies in which adverse events are discussed, none have been found. Existing evidence suggests that EP can be safely used for PTSD.

EP Requires Only Minimal Training for Basic Application

In contrast to many of the clinical interventions tested in populations with PTSD, EP practitioners applied the protocols effectively following relatively brief training periods. EP training and certification courses can typically be completed in a few weeks, and several of the above studies used life coaches rather than licensed mental health professionals to deliver the intervention. Connolly and Sakai (2011) provided a two-day TFT training program and supervision to the 28 volunteers (none were mental health professionals) who provided the single-session treatments that produced dramatic symptom reduction. Another study compared the PTSD symptom levels of veterans who received EFT life coaching with those receiving EFT from a licensed mental health provider [Stein and Brooks, 2011]. It found that, at 6 month follow-up, 76% of participants receiving EFT from a life coach exhibited sub-clinical symptom levels, compared to 83% treated by a licensed provider. Though the symptom reductions were greater in the group treated by a licensed practitioner, the difference was not statistically significant.

This is not to claim or advocate that this minimal level of training is sufficient for the treatment of mental health disorders, since in these studies the life coaches provided EP as a supplement to, and explicitly supportive of, the therapeutic alliance with the patient's primary care provider. However, it does suggest that EP can be used successfully as a frontline mental health intervention by occupational categories with a limited amount of training, such as medics and physician's assistants. Such training would increase the resources available to stressed emergency response teams following a natural or human-caused disaster. For instance, a relatively brief TFT training program allowed volunteers to provide effective care, according to anecdotal reports, following the 2010 Haiti earthquake [Robson and Robson, 2012], corroborating outcomes of interventions in other areas.

Use of paraprofessionals, allied life coaches, and allied health care providers would also increase the treatment capacity of over-stretched agencies responsible for mental health. The Veterans Administration alone is now attempting to deal with the estimated 500,000 new PTSD cases following the Iraq and Afghanistan wars (Operation Warrior Wellness, 2012).

EP Is Effective in Group Format

In several studies, EP treatment has been found to successfully remediate psychological symptoms when delivered in large group formats [Church and Brooks, 2010; Rowe, 2005; Palmer-Hoffman and Brooks, 2011]. Unlike psychotherapy methods that require one-on-one sessions, EP can be efficacious when delivered to groups of participants. This makes it suitable for application, for instance, to combat battalions returning from deployment, to refugees assembled in camps, to children in classrooms, to caregivers returning from humanitarian missions, and other settings in which individual counseling might be beyond the

resources of the supporting organizations. By having teams of practitioners available for individuals needing special attention, group treatment is proving to be an efficient and responsible means of delivering EP.

EP Can Impact Both Psychological and Physiological Symptoms

EP simultaneously reduces a wide range of symptoms, both psychological and physiological. The link between psychological trauma and organic disease has been extensively documented [Felliti, Koss, and Marks, 1998]. If PTSD is not successfully treated, it produces changes in the brain over time [Felmington, Kemp, and Williams, 2006]. If PTSD symptoms persist, the published evidence indicates sequelae such as increased lifetime hospitalization, disease burden, and medical costs [Tanielian and Jaycox, 2008]. The impact extends beyond the patient and his or her family, affecting the surrounding community [McFarlane and van der Kolk, 1996/2007]. By rehabilitating patients with PTSD, EP treatment has a positive impact on both patient quality of life and society's medical costs.

EP Can Be Delivered Effectively via Electronic Communication Media

Finally, EP's utility is such that it is also adaptable to the burgeoning telemedicine field. In a study of EFT delivered by phone versus in-office sessions, six phone treatment sessions were able to effectively remediate clinical PTSD symptoms in 67% of patients [Hartung and Stein, 2012]. Twenty-six women diagnosed with fibromyalgia showed significant improvement in measures including pain, anxiety, depression, vitality, social function, activity level, and performance problems following participation in an internet-based EFT treatment program (Brattberg, 2008). Reports by practitioners indicate increased utilization of low-cost audio and video conferencing services such as Google Voice and Skype (www.EFTuniverse.com). This makes EP treatment feasible in settings beyond the reach of conventional therapy. Examples include forward bases in combat zones and veterans living in rural areas.

CONCLUSION

PTSD presents significant treatment challenges to individuals and to society. Interventions that are capable of reaching large numbers of patients quickly, that are efficacious in abridged time frames, and that produce large symptom reductions, are urgently required. EP brings special strengths to meeting these challenges and, if widely utilized, could make a large contribution to the remediation of this condition.

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