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The Emergence of Energy Psychology: An Appraisal

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Abstract

Energy psychology, as most commonly practiced, combines cognitive and exposure techniques with the stimulation of prescribed acupuncture points (acupoints) by tapping on them. Most psychotherapists who utilize acupoint tapping protocols integrate them within their existing clinical frameworks. The approach has been highly controversial, with its efficacy, purported speed, and explanatory models all questioned. Nonetheless, its utilization within clinical settings and as a self-help method has continued to expand since it was introduced more than three decades ago. This paper reviews the most salient criticisms of the method and presents research and empirically-based theoretical constructs that address them. More than 100 peer-reviewed outcome studies—49 of which are randomized controlled trials—provide an evidential base for evaluating the claims and criticisms surrounding the approach. The mechanisms by which acupoint tapping might bring about reported treatment outcomes are discussed in terms of two testable hypotheses which are consistent with current neurological understanding: (a) acupoint tapping sends regulating signals to brain areas aroused by the imaginal exposure component of the protocol, and (b) acupoint tapping protocols can, with unusual efficiency, disrupt and revise or replace old learnings that are no longer adaptive. These mechanisms could plausibly account for existing evidence showing that integrating the stimulation of acupoints with more conventional treatment approaches accelerates symptom relief and introduces an unusual facility—augmented by the protocol’s somatic interventions—for modifying the neural pathways that maintain maladaptive learnings.

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Introduction

A set of clinical and self-help approaches that integrate cognitive and exposure techniques with methods drawn from ancient healing and spiritual traditions, such as acupuncture and yoga, are collectively known as “energy psychology” (Gallo, 2004). Most energy psychology protocols incorporate the stimulation of acupuncture points (acupoints) by having the client tap on them. The earliest formulation of the approach, Thought Field Therapy (TFT), and a popular derivative, Emotional Freedom Techniques (EFT), are its most widely known variations. While

these methods have been investigated primarily in their manualized forms and can be applied in that manner, most licensed psychotherapists who identified themselves with energy psychology indicated, in a survey, that they integrated acupoint tapping into more conventional clinical frameworks rather than using it as a stand-alone approach (Feinstein, 2016).

Since tapping on acupoints to address psychological issues was first introduced in the 1980s, the technique has generated intense controversy and even ridicule. A commentary by Harvard psychologist Richard McNally began: “After obtaining a TFT protocol for treating phobic fear . . . we wondered whether TFT was a hoax, concocted by some clever prankster to spoof ‘fringe’ therapies” (2001, p. 1171). A critique in a prominent clinical journal characterized a paper written by a pioneer of the method as “a disjointed series of unsubstantiated assertions, ill-defined neologisms, and far-fetched case reports that blur boundaries between farce and expository prose” (Kline, 2001). Subsequent highly critical journal reviews of the approach have also appeared (Bakker, 2103, 2014; Devilly, 2005; Gaudiano, Brown, & Miller, 2012; McCaslin, 2009; Pignotti & Thyer, 2009).

Proponents, on the other hand, describe acupoint tapping protocols as representing a “4th Wave” of psychotherapy, purportedly more effective than psychodynamic, behavioral, or cognitive approaches because of its reported speed and alleged strengths (augmented by the protocol’s somatic interventions) for facilitating targeted shifts in the neural pathways that underlie psychological difficulties (Stapleton, in press). While no one knows how widely the method is practiced, an informed estimate placed the number of psychotherapists using acupoint tapping as being in the “tens of thousands” (Leskowitz, 2016, p. 182). A survey submitted to licensed psychotherapists on listservs—such as those for the Association of Behavioral and Cognitive Therapies and the Society for the Science of Clinical Psychology—found that 42 percent of 149 respondents reported that they were using or inclined to use an energy psychotherapy modality (Gaudiano et al., 2012). A professional organization, the Association for Comprehensive Energy Psychology, was established in 1999 and has more than 1200 members.¹

While popularity is not a measure of validity or effectiveness, the public’s interest in the approach has been unusually strong. In March 2018, a week-long online teleseminar series about acupoint tapping for personal development attracted more than 700,000 participants (personal communication, Nick Ortner, May 18, 2018). An online *EFT Manual* has been downloaded nearly three million times, and the approach has frequently been featured in national media, including the Dr. Oz Show, Larry King Live, Good Morning America, the View, the Katie Couric Show, ESPN, the *Wall Street Journal*, *Reuters*, the *Washington Post*, and the *New York Times*. The public has, however, been known to be drawn to approaches that have subsequently proven to offer little benefit except to those promoting them, and the popularity of acupoint tapping in both its therapist-administered and self-help formats begs for an informed response and guidance from the clinical community.

However, coming to terms with the fervent criticisms energy psychology has garnered from well-informed mental health professionals, the enthusiasm for the method by an expanding

¹ <https://www.energypsych.org/?AboutACEPv2>, retrieved June 25, 2018.

number of clinicians, and the growing public interest has posed a challenge to the mental health field, as can be seen in the American Psychological Association's (APA) wavering response to the approach. In 1999, the APA banned its continuing education (CE) sponsors from offering CE credits to psychologists for courses on acupoint therapies (Murray, 1999). In 2011, the APA reversed this ban by granting CE sponsorship status to the Association for Comprehensive Energy Psychology after being presented with a list of peer-reviewed randomized controlled trials (RCTs) that substantially exceeded the APA's established requirements. In 2017, the APA released guidelines for the treatment of PTSD (APA, 2017) that do not mention energy psychology as one of its recommended or even conditionally recommended treatments, despite numerous RCTs (e.g., Church et al., 2013; Connolly & Sakai, 2011; Geronilla, Minewiser, Mollon, McWilliams, & Clond, 2016; Karatzias et al., 2011) and a meta-analysis (Sebastian & Nelms, 2017) showing strong effects when acupoint tapping protocols were used in treating PTSD. Meanwhile, an internal memo that was circulated to the APA task force that was establishing its PTSD guidelines, written by one of the architects of APA's standards for psychotherapy research, warned about "pseudo-scientific therapies like energy field therapy or acupressure therapy," suggesting that the public needs to be protected from the "scam artists" who use them.

This report describes the most salient criticisms of the approach and reviews research and empirically-based theoretical constructs that address them. These criticisms and counter-points are organized around the technique's efficacy, alleged speed, and the ostensible mechanisms of its actions, which are discussed in terms of two testable hypotheses. First, a brief overview of how energy psychology protocols are most commonly practiced and discussion of their most distinctive feature, acupoint tapping.

The Approach

In a typical energy psychology treatment session, the client mentally attunes to a scene, an emotion, a sensation, or a statement related to a target issue and taps on a prescribed set of acupoints (Church, 2013c). The mental focus might be, for instance, a difficult memory, an unwanted response to a trigger, a self-defeating belief, a problematic emotion, or a sensation such as tightness in one's throat. The operating assumption is that the tapping will methodically reduce the client's sense of distress or arousal in relation to the area of mental focus. Before and following each round of tapping, the client rates emotional upset about the problem or a facet of it on a 0-to-10 "Subjective Units of Distress" scale (after Wolpe, 1958). Based on this quick assessment of the immediate effects of the tapping, another round of tapping is done with the therapist guiding the client to keep the same focus or to move to a new focus. This new focus may highlight any of numerous aspects of a given problem (e.g., memories, self-assessments, safety assessments, beliefs, emotions, sensations). Each is identified and addressed via additional rounds of tapping (which require only a minute or two each) until no subjective distress is reported regarding that aspect of the problem. Additional somatic techniques, designed to have a centering effect and facilitate information processing, may be introduced at various points during a session.

The protocol appears to be safe, with more than a thousand subjects having participated

in reviewed clinical trials “without a single adverse event being reported,” and therapists working with survivors of childhood sexual abuse noting that they preferred an energy psychology approach “because they found the risk of abreaction” to be unusually low (Church, 2013a, p. 650). A brief video illustrating acupoint tapping in the treatment of a height phobia is available.²

Body-Based Treatments for Intervening at the Biological Level of Psychological Problems

Discussing how he came to utilize somatic interventions in treating trauma, Eric Leskowitz reflected:

I began my career as a psychiatrist in 1983 at the Veterans Administration (VA) Outpatient Clinic in Boston, MA. At that time, psychiatric treatment of PTSD largely consisted of supportive listening as veterans retold their war stories, either one-on-one or in peer groups. The hope was that, somehow, the inevitable emotional catharsis of sharing long-forgotten stories would ease the veterans' emotional burdens. Mild anxiolytics such as Valium® (diazepam) were also part of the picture, but the Freudian psychoanalytic model still held sway: Make the unconscious conscious, and all would be well. . . . However, that is not how things worked out. Telling and retelling war stories actually made things worse because it reactivated the original trauma response again and again. (2016, p. 181).

Bessel van der Kolk's (1994) seminal paper, “The Body Keeps the Score: Approaches to the Psychobiology of Posttraumatic Stress Disorder,” proposed a biological basis for Leskowitz' experience that “talk therapy is not enough.” Van der Kolk pointed to evidence that “trauma is stored in somatic memory and expressed as changes in the biological stress response [that are subsequently] relatively impervious to change” (p. 253). Therapies have, however, been emerging which build upon recent neurological findings and suggest the importance of non-verbal, body-oriented, “bottom-up” approaches to serious emotional disorders (Minton, Ogden, & Pain, 2006). Nonetheless, treatments that are effective in directly targeting the somatic underpinnings of trauma have not – beyond cursory somatic interventions such as breath control, muscle relaxation, and focusing on bodily sensations – been widely utilized. While the “standard of care” therapies for PTSD—cognitive processing therapy and prolonged exposure—are proving to be more effective than talk-therapy alone, an authoritative review of the two approaches with military and veteran populations, conducted between 1980 and 2015, found that while many patients received some benefit, approximately two-thirds still retained their PTSD diagnosis after completing treatment (Steenkamp et al., 2015).

The physiological dimensions of trauma-based disorders can be directly addressed by therapies that include explicit somatic components. *The Handbook of Body Psychotherapy and Somatic Psychology* (Marlock, Weiss, Young, & Soth, 2015) provides a comprehensive overview of

² <http://www.innersource.net/ep/articlespublished/height-phobia-clip.html>, retrieved June 25, 2018.

psychotherapies that build upon the potential role of the body for overcoming psychological distress and mental illness. Body-mind therapies date back to the work of Elsa Gindler and Wilhelm Reich (Marlock et al., 2015) and extend to modern iterations such as “somatic experiencing” (Paynel, Levine, & Crane-Godreau, 2015) and “sensory-motor processing” (Gene-Cos, Fisher, Ogden, & Cantrell, 2016). Each represents a unified body-mind perspective, based on the complementary premises that physical conditions affect mental health and mental conditions affect physical health. Acupoint tapping is a gentle somatic intervention which generates electrical signals that have been shown to rapidly disrupt the neurological underpinnings of psychological symptoms (Stapleton et al., 2018).

Established Therapeutic Effects of Acupoint Stimulation

Energy psychology protocols borrow from the ancient Chinese healing system of acupuncture. The reception of acupuncture in the West has been mixed, with strong detractors (see, for instance, the opinion-setting anthology edited by Ernst and White, 1999, and an influential editorial by Hall, 2011). On the other hand, 1,300 physicians are members of the American Academy of Medical Acupuncture and hundreds of scientific papers are published in English each year in more than a dozen peer-reviewed journals devoted to acupuncture and related topics. Interpretations of this vast literature regarding the effectiveness of the method have been equivocal. One of the most comprehensive and stringent reviews to date is the report of the Acupuncture Evidence Project (McDonald & Janz, 2017). It drew upon 136 systematic reviews and meta-analyses (including extensive investigations by the World Health Organization and the United States Department of Veterans Affairs as well as 27 Cochrane reviews) in examining pooled data from more than 1,000 RCTs. While the report was published as a monograph and thus was not peer-reviewed, the studies it assesses were peer-reviewed, and the authors evaluated them according to the National Health and Medical Research Council criteria for assessing “levels of evidence” and the Cochrane GRADE criteria for assessing risk of study bias.

Applying these criteria, the quality of evidence for the efficacy of 122 medical conditions across 14 broad clinical areas that had been investigated in the various reviews was evaluated. “Moderate” to “high quality” evidence of beneficial effects of acupuncture was found with 46 conditions, including several psychiatric disorders, such as anxiety, insomnia, and the use of acupuncture as an adjunct to medication in the treatment of depression, schizophrenia, and hypertension. At least some supportive evidence was found for 117 of the 122 conditions. The studies included in the various reviews were all conducted between 2005 and 2016. The reviewers noted a trend that during the 11-year period that was considered, the quality of evidence had increased significantly for 24 of the conditions.

The Mechanics of Acupoint Tapping

The process by which the stimulation of acupoints produces electrical signals involves a well-established mechanism called “mechanosensory transduction,” by which cells are able to convert a mechanical stimulus (e.g., tapping or needling) into electrical activity (Gillespie & Walker, 2001). At least some acupuncture points have also been shown to have less electrical resistance, and thus greater electrical conductivity, than adjacent points (Li et al., 2012). The path by which the signals generated by acupoint stimulation move through the body has been mapped, based on

imaging studies, as being along the fascia, the soft tissue component of connective tissue, which forms a whole-body matrix of structural support (Bai et al., 2011; Finando & Finando, 2012). A strong correspondence has, in fact, been found between the pathways on which acupuncture points are purportedly situated (described as “meridians” in acupuncture theory) and the body’s interstitial connective tissue (Langevin & Yandow, 2002). While a major criticism of acupuncture has been based in difficulties establishing correspondences between these meridian pathways and anatomical structures (e.g., McCaslin, 2009), these imaging studies are beginning to resolve that question (Langevin & Wayne, 2018) while shedding light on others. For instance, because of the semiconductive properties of the collagen that comprises much of the connective tissue, the signals produced by acupuncture stimulation can plausibly be sent to specific areas of the body more rapidly and directly than if they needed to travel through the nervous system, neuron-to-synapse-to-neuron (Oschman, 2003).

Acupuncture vs. Tapping on Acupuncture Points

Energy psychology protocols stimulate acupuncture points by percussing the fingertips on the skin (tapping), a form of acupressure. In *acupressure*, traditional *acupuncture* points are manually stimulated for therapeutic effects (Lee & Frazier, 2011). A double-blind study comparing penetration by acupuncture needles with non-penetrating pressure found equivalent clinical improvements for each intervention (Takakura & Yajima, 2009). Informal studies have actually shown tapping to be superior to needling in the treatment of anxiety disorders, presumably because of the flexibility of tapping compared to needling in being able to make quick adjustments that are attuned to the client’s emerging experiences as the session progresses (Andrade & Feinstein, 2004). Although the term “acupressure” might give the impression that continual pressure is being applied, tapping on acupuncture points is another established form of acupressure. While substantially more research has been published studying acupuncture than acupressure, a growing literature is showing acupressure to also be effective with a range of physical as well as emotional conditions (e.g., Au et al., 2015; Chen, Chien, & Liu, 2013; Gach & Henning, 2004; Helmreich, Shiao, & Dune, 2006). Differing from the conventional uses of acupressure, energy psychology protocols also utilize imaginal exposure and cognitive restructuring within a context oriented toward emotional healing and psychological development.

Efficacy

Seventeen years after *The Five Minute Phobia Cure* (Callahan, 1985) provocatively introduced acupoint tapping as a psychological treatment, not a single peer-reviewed clinical trial showed acupoint tapping to be effective in helping overcome phobias or, for that matter, any other psychological problem. With enthusiastic proclamations but no scientific backing, the view that a hoax was being perpetrated on the public spread throughout the clinical community (Feinstein, 2005). The first RCT investigating the approach was not published until 2003. Wells, Polgase, Andrews, Carrington, and Baker (2003) reported that a 30-minute treatment using an acupoint tapping protocol reduced fear to a significantly greater degree than a non-tapping comparison. For the next several years, additional high-quality peer-reviewed clinical trials were slow to come. The past decade has, however, seen a spate of studies of the approach for treating a variety of disorders. Their reception by the clinical community has been mixed. The existing efficacy evidence is briefly surveyed next.

Clinical Trials

As of June 2018, 101 clinical trials investigating the application of acupoint tapping protocols had been published in peer-reviewed journals and were listed in the research area of the Association for Comprehensive Energy Psychology's website (www.energypsych.org). The compilation, containing studies originating in more than a dozen countries, builds upon systematic literature searches conducted for reviews assessing the approach (sources typically included MEDLINE/PubMed, PsycINFO, Google Scholar, and references from retrieved papers) as well as continual updates from interested researchers. Beyond the journal reports, an additional 24 studies or commentaries are listed that were retrieved from the "grey literature" (doctoral dissertations, conference proceedings, et cetera). Of the 101 published outcome studies, 49 were RCTs examining the use of the method with a wide range of conditions, including anxiety, PTSD, specific phobias, depression, weight issues, sleep disorders, physical pain, fibromyalgia, and athletic performance.

Standardized written instruments or other evaluations such as structured clinical interviews or observed behavioral changes showed significant pre-/post treatment improvements in all of the studies reported in the grey literature and all but one of the 101 published clinical trials. In the study with null results, Moritz et al. (2011) offered individuals already participating in online OCD (obsessive-compulsive disorder) support groups a self-help manual for using acupoint tapping with OCD as well as access to two video demonstrations, but no face-to-face or other contact with a therapist. While 39 percent of participants credited the tutorial for decreased OCD symptoms and 72 percent indicated that they would continue to use the approach in the future, improvement on standardized measures of OCD had not reached significance after four weeks of using the self-help material. It is of course possible that additional clinical trials with null or negative results were conducted but not reported, constituting undetected publication bias. Two investigations, consistent with the majority of the outcome studies, found statistically significant improvement following acupoint tapping, but the investigators attributed these outcomes to other factors than the tapping (Pignotti, 2005; Waite & Holder, 2003).

Meta-Analytic Reviews

Meta-analyses have been conducted on energy psychology treatments of anxiety, PTSD, and depression, respectively. Of 14 RCTs ($N = 658$) examining acupoint tapping in the treatment of anxiety disorders, a combined pre- to post-treatment effect size of 1.23 was found (.8 is considered a "large effect"). The combined pre- to post-treatment effect size for the comparison conditions was .41 (Clond, 2016). An even larger pre- to post-treatment effect, 2.96, was found in a meta-analysis of seven RCTs ($N = 247$) investigating the treatment of PTSD (Sebastian & Nelms, 2017). A meta-analysis of 12 RCTs ($N = 398$) investigating the approach with depression showed an overall effect size of 1.85 (Nelms & Castel, 2016). A fourth meta-analysis, reviewing 18 studies addressing a variety of conditions, found a moderate overall effect size of .66 (Gilomen & Lee, 2015). A fifth meta-analysis, though not an efficacy study per se (it was investigating active ingredients, a question we will turn to later), found large effect sizes in the studies it reviewed (Church, Stapleton, Yang, & Gallo, in press).

Design Quality

The conclusions that can be drawn from meta-analysis are, of course, only as reliable as the information being analyzed, and acupoint tapping studies have varied widely in quality. Many of the investigations lacked features of more robust designs, such as large Ns, precisely-defined diagnostic populations, systematic procedures for insuring compliance with treatment manuals, and diagnostic pre- and post-treatment interviews to augment validated written instruments. Also, the principal investigators were often proponents of the approach, a potential source of strong bias.

Nonetheless, an analysis of adherence to the standards set by Division 12 of the APA for “empirically supported treatments”—the standards that were in effect when the vast majority of the studies were conducted³—showed that 15 RCTs investigating acupoint tapping met all seven of the essential criteria of the Division 12 standards (Church, Feinstein, Palmer-Hoffman, Stein, & Tranguch, 2014). These essential criteria included (a) randomization, (b) sample sizes that are adequate for detecting statistically significant differences, (c) clearly defined treatment populations, (d) assessment tools with established reliability and validity, (e) blinded assessments, (f) use of treatment manuals or other means for ensuring uniform interventions, and (g) enough data provided in the paper reporting the clinical trial that the study’s conclusions can be reviewed for appropriateness. The 15 studies meeting these criteria represented nearly half of the energy psychology RCTs published at the time.

Beyond the variation in the quality of the studies being analyzed, another potential weakness in the meta-analytic reviews is that the comparison conditions were most frequently wait-lists, treatment-as-usual, or placebo interventions rather than evidence-based therapies. Most psychological treatments will show some positive effect based on factors shared by all therapies, such as a therapeutic alliance and the expectation that the process will result in improvement (Wampold, 2015). “Head-to-head” comparisons with therapies whose effectiveness has been empirically verified have become a standard for establishing the relative effectiveness of a new treatment.

Head-to-Head Comparisons

Nine studies have compared energy psychology treatments with an evidence-based comparison condition. Seven compared treatment outcomes between energy psychology and Cognitive Behavior Therapy (CBT) for conditions including agoraphobia (Irgens et al., 2017); anxiety in teens (Gaesser & Karan, 2017); depression/anxiety (Chatwin, Stapleton, Porter, Devine, & Sheldon, 2016); food cravings (Stapleton, Bannatyne, Porter, Urzi, & Sheldon, 2016); generalized anxiety disorder (Andrade & Feinstein, 2004); test-taking anxiety (Benor, Ledger, Toussaint, Hett, & Zaccaro, 2009), and trauma following gender violence (Nemiro & Papworth, 2015). In each of these studies, the energy psychology outcomes were at least equivalent to the CBT outcomes and some exceeded them in some measures, particularly in speed. In a comparison with Eye Movement Desensitization and Reprocessing (EMDR) in the treatment of PTSD, energy psychology protocols showed approximate equivalency (Karatzias et al., 2011). In

³ <http://www.div12.org/PsychologicalTreatments/index.html>, retrieved February 12, 2014.

a comparison with Narrative Exposure Therapy for the treatment of PTSD, EFT was significantly more effective in reducing hyperarousal, anxiety, and depression symptoms, with reductions remaining consistent at 12-month follow-up (Al-Hadethe, Hunt, Al-Qaysi, & Thomas, 2015).

Nonetheless, the principal investigators in six of these nine studies had some allegiance to energy psychology, and three of the studies were presented as pilot studies. Additional well-designed head-to-head studies conducted by impartial investigators are clearly needed to make informed comparisons of energy psychology with other treatments. Meanwhile, a meta-analysis of 32 interventions treating children and adolescents following human-made and natural disasters provided another basis for comparison of a tapping protocol with recognized treatments (Brown et al., 2017). Narrative Exposure Therapy, CBT, EMDR, and trauma-oriented classroom interventions constituted the vast majority of included treatments. Only one of the 32 studies investigated an energy psychology protocol (TFT). Effect sizes ranged from 0.09 to 4.19, with the average effect size across the groups being large (1.47). The strongest effect size of the 32 treatments was produced by TFT (4.19).

Active Ingredients

The question of whether acupoint tapping—the most distinctive yet most controversial feature of energy psychology protocols—is an essential or even active ingredient in the reported clinical outcomes has been a focus of critical reviews of the approach (e.g., Bakker, 2013; Gaudiano et al., 2012). In addition to the clinical ingredients shared by all psychotherapies, energy psychology protocols utilize exposure techniques and cognitive interventions. Of these various components, tapping on one's skin might seem the one that is the least likely to be a therapeutic agent. It is certainly the strangest-looking and least aligned with existing explanatory models about what makes psychotherapy effective. What is the evidence for the clinical efficacy of acupoint tapping independent of the protocol's other components?

This type of inquiry is generally addressed with *dismantling* or *component* studies which eliminate or replace elements of a treatment and compare outcomes with the standard treatment protocol (Papa & Follette, 2015). A review of six component studies involving EFT protocols with and without acupoint tapping concluded that acupoint tapping is an active ingredient, independent of placebo, nonspecific therapeutic effects, or other clinical features (Church et al., in press). Two of the comparative studies substituted tapping on acupoints with tapping on non-acupuncture ("sham") points in otherwise identical EFT protocols and found that tapping on the acupuncture points produced significantly stronger emotional benefits than tapping on the sham points (Reynolds, 2015; Rogers & Sears, 2014). Church and Nelms (2016) substituted diaphragmatic breathing for acupoint tapping in otherwise identical 30-minute EFT protocols and found the acupoint tapping condition to produce greater long-term emotional benefits as well as sustained improvements in a targeted physical condition.

The first attempt to isolate whether tapping is an active ingredient in an energy psychology protocol (Waite & Holder, 2003) has been interpreted both as demonstrating that tapping *is not* an active ingredient (Gaudiano et al., 2012; Pignotti & Thyer, 2009) and that it *is* an active ingredient (Baker, Carrington & Putilin, 2009; Pasahow, 2010). Three tapping variations—

tapping on acupoints, tapping on sham points, and tapping on a doll—each produced significant reductions in fear, while a no-tapping control group showed no change. A possible explanation for the conflicting interpretations is that all three tapping conditions inadvertently stimulated an acupuncture point on the forefinger (Large Intestine 1) that is used in the treatment of “mental restlessness” (Ross, 1995, p. 306). Reynolds (2015) was the first to devise a sham tapping research strategy that ensures that active acupoints (hundreds are identified in acupuncture texts) are not being stimulated.

Summary of Efficacy Evidence

While only a cursory overview of the efficacy research is presented above, substantial reviews of existing studies and their strengths and weaknesses can be found in the five meta-analytic reviews. At this point, a cautious deduction from existing meta-analyses, RCTs, other clinical trials, and research trends is that the current literature constitutes a limited but growing body of evidence that supports claims that acupoint tapping protocols are effective in producing beneficial outcomes in the treatment of anxiety, depression, PTSD, and possibly other conditions.

Purported Speed

Although the title of Callahan’s *Five Minute Phobia Cure* was highly provocative and overstated, evidence has since accumulated suggesting that the approach may be unusually rapid. After a single acupoint tapping session of 30 to 60 minutes, significant therapeutic changes – in relation to comparison conditions – have been measured in brainwave patterns (Swingle, 2010), cortisol levels (Church, Yount, & Brooks, 2012), the expression of genes involved in learning and emotional regulation (Maharaj, 2016), frozen shoulder (Church & Nelms, 2016), fear of small animals (Wells et al., 2001), agoraphobia (Lambrou, Pratt, & Chevalier., 2003), various other psychological conditions (Church, 2013b), and even PTSD (Connolly & Sakai, 2011).

For instance, sixteen abused male adolescents, all scoring above the PTSD range on a standardized symptom inventory, were randomly assigned to an EFT treatment group or a wait-list condition (Church, Piña, Reategui, & Brooks, 2011). Each of the eight participants in the treatment group no longer met the inventory’s PTSD criteria thirty days after a single treatment session. None in the wait list control group showed significant change. In a larger study, 145 traumatized adult survivors of the Rwanda genocide more than a decade earlier were randomly assigned to a single-session TFT group or a wait-list control (Connolly & Sakai, 2011). Pre/post-treatment scores on two standardized PTSD self-inventories showed improvements that 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. Participants in two other studies also showed significant relief of PTSD symptoms after a single tapping session (Connolly, Roe-Sepowitz, Sakai, & Edwards, 2013; Sakai, Connolly, & Oas, 2010).

Acupoint tapping practitioners are not, however, suggesting that a single-session format is adequate for treating PTSD. Investigators in all four single-session studies were limited by practical constraints, and when queried by the current author, each acknowledged that additional

sessions could have benefitted at least some if not most of the participants. Nonetheless, the number of sessions that have been required for successfully treating PTSD with energy psychology protocols in existing investigations is relatively low. A study of the use of EFT with PTSD that allowed subjects to receive up to eight treatment sessions within a public health service facility found voluntary termination of treatment after an average of 3.8 sessions, with a large overall effect size (1.0) on post-treatment measures (Karatzias et al., 2011). The first major study of energy psychology in the treatment of veterans with PTSD had a low drop-out rate and found that only 14 percent still had the disorder after six one-hour tapping sessions (Church et al., 2013), a study that has been replicated with similar findings (Geronilla et al., 2016).

By way of contrast, Cognitive Behavior Therapy (CBT) and its variations, which are the standards of care for treating PTSD (American Psychological Association, 2017), average 12 to 16 treatment sessions⁴, and as many as two-thirds of patients completing a course of CBT still met PTSD diagnostic criteria after treatment (Steenkamp et al., 2015). High drop-out rates have also been a problem in CBT treatments of PTSD, particularly in “real world” (as contrasted with clinical trial) conditions (Najavits, 2015). Meanwhile, three well-designed studies comparing acupoint tapping and CBT treatments showed at least equivalent outcomes but with fewer sessions required by tapping to achieve those outcomes (Gaesser & Karan, 2017; Irgens et al., 2017; Stapleton et al., 2016).

To summarize, three lines of evidence were briefly surveyed which bear upon the speed of energy psychology protocols: (a) after a single energy psychology session, significant health-associated changes were found in biological markers involving hormone levels, gene expression, and brain wave patterns as well as a variety of clinical symptoms; (b) unusually rapid amelioration of PTSD was found in several studies; and (c) comparisons with CBT treatments showed at least equivalent outcomes in fewer sessions. Taken together, these findings suggest that energy psychology treatments have produced rapid therapeutic effects with standard biological markers as well as several clinical conditions.

Mechanisms

Clinical outcomes following acupoint tapping have been explained in terms of “meridians,” “chakras,” “blocked chi,” “yin/yang imbalances,” and “thought field perturbations.” None of these concepts has been validated by standardized instrumentation, and they are generally not accepted by the scientific community. Their appearance in the early energy psychology literature led, in fact, to the approach being branded as a pseudoscience. A published commentary reviewing the first paper on energy psychology to appear in an APA journal asserted: “Nowhere in the history of psychology, medicine, anatomy, physiology, or biology is there any evidence that human beings have an energy field . . . Energy psychology advocates are not able to provide any evidence that the changes seen in any of their clients are related to acupressure, meridian points, or energy fields” (McCaslin, 2009, pp. 253 - 254).

With advances in neuroscience, however, the mechanisms of acupoint tapping protocols can be explained with no recourse to concepts from metaphysics or ancient healing traditions. A range

⁴ <http://www.apa.org/ptsd-guideline/treatments/cognitive-behavioral-therapy.aspx>, retrieved June 25, 2018.

of hormonal and neurological shifts reliably follow acupoint tapping sessions. For instance, reductions in cortisol production (Church et al., 2012), normalization of brain wave patterns (Lambrou et al., 2003; Swingle, 20010), shifts in blood flow within the brain (Stapleton et al., 2018), and changes in gene expression (Church, Yount, Rachlin, Fox, & Nelms, 2018; Maharaj, 2016) have all been measured following energy psychology treatments.

Biological changes that can be detected after a treatment may, however, be correlational rather than causal. For instance, changes in the production of hormones such as cortisol typically follow rather than cause the reduction of limbic system activation. The cause of the reduced arousal following acupoint stimulation has been shown, as discussed below, to be deactivation signals sent to the amygdala and other limbic regions. The decreased cortisol is secondary. The following discussion is organized around two testable hypotheses that are consistent with current neurological understanding.

Hypothesis 1: Acupoint Tapping Sends Regulating Signals to Brain Areas Aroused by the Imaginal Exposure Component of the Protocol

One of the earliest neurological explanations of how acupoint tapping might produce therapeutic change was based on the findings of a 10-year research program at Harvard Medical School investigating the effects of acupuncture. Among the research team's conclusions was that stimulating selected acupoints generates extensive deactivation in the amygdala and other areas of the limbic system: "Functional MRI and PET studies on acupuncture at commonly used acupuncture points have demonstrated significant modulatory effects on the limbic system, paralimbic, and subcortical gray structures" (Hui et al., 2005, p. 496). The premise based on these findings, as applied to energy psychology, was that "manually stimulating a set of acupuncture points . . . decreases activation signals in areas of the amygdala and other brain structures involved with fear" (Feinstein, 2008). These effects, as shown by the fMRI (functional magnetic resonance imaging) and PET (positron-emission tomography) studies, are virtually instantaneous.

Combining psychological exposure with acupoint tapping. The imaging studies offered a plausible explanation for one of the most puzzling features of acupoint tapping, which is why it seems to work so quickly. As with other forms of psychological exposure, the client mentally activates a feared situation, an unresolved traumatic memory, or other emotional trigger. Simply bringing to mind a stressful scene will produce a threat response in the amygdala and related areas of the limbic system (Phelps & LeDoux, 2005). But unlike other exposure techniques, acupoint tapping is also performed, so the limbic system is simultaneously receiving opposing messages: activating signals produced by the psychological exposure and deactivating signals produced by the tapping. The activating signals are responses to old learnings. The deactivating signals provide new information. In acupoint tapping protocols, the new information introduced by the continual influx of deactivating signals begins to dominate, so the image can be held without the emotional response it previously evoked. This may also account for the low risk of abreaction associated with the method (Church, 2013a). Arousal is quickly reduced while the trigger is still active. This is usually a vivid moment in the client's experience. The expected aversive emotional charge does not accompany the visualized scene, and therapists who use the approach are accustomed to witnessing the surprised sense of relief that often occurs during

acupoint tapping sessions. A brief video illustrating such surprise in four combat veterans as their PTSD-based responses recede is available.⁵

Changes in neural arousal. Comparisons of fMRI images prior to and following energy psychology treatments support the premise that acupoint tapping can send signals which directly influence brain activity in targeted ways. Stapleton et al. (2018) compared pre-treatment with post-treatment brain scans of ten obese participants from a four-week (two hours per week) EFT program designed to reduce food cravings. Photos of high calorie foods such as pizza, hamburgers with fries, chocolate chip cookies, and ice cream sundaes were shown while participants were in the fMRI scanner and asked to “think” about eating the food. The areas of the participants’ brains that were activated (i.e., increased blood flow) were recorded. Following the treatment, the same photos were again shown and areas of brain activation recorded. Significant decreases between the first and second scans were found in the activation of the lateral orbitofrontal cortex, a part of the brain’s reward system that is associated with food cravings. Decreases were also found in the superior temporal gyrus, which among other functions is associated with food recognition. For some participants, there was no post-treatment activation in these areas at all. Participants experienced corresponding decreases in their actual cravings for carbohydrates and fast foods. No changes in brain activation or subjective food cravings were found in a no-treatment control group over the four-week period.

Sending regulating signals to targeted brain areas. Regulating signals may give instructions to increase or decrease activity in a particular region of the brain. Some acupoints, called “sedation points,” are used for their deactivating or calming effects. Others, called “tonification points,” are used for their activating or stimulating effects (Moncayo & Moncayo, 2009). The actions of such points have not been differentiated in energy psychology studies, but even if “sedation” and “tonification” points only serve as metaphors, either type of action may be required, depending on the targeted outcome. Deactivating signals are needed when a decreased response is desired in brain areas involved with, for instance, fear or food cravings. Activating signals are needed when an intensified response is desired, such as in areas of the brain having to do with self-confidence or discernment. Laboratory investigations following energy psychology treatments correspond with both types of outcomes. For instance, magnetoencephalography images (which map brain activity) before and after an EFT session that successfully treated a fear of flying showed that the treatment downregulated activity in limbic and cerebellar regions implicated in the fear response while increasing activity in executive regions that mediate limbic responses to stressful stimuli (Di Rienzo et al., 2017).

The imaging studies showing that acupoint tapping changes arousal levels in areas of the brain related to targeted problems (Di Rienzo et al., 2017; Stapleton et al., 2018) also correspond with clinical experience. In energy psychology protocols, the client brings to mind situations that evoke unwanted psychological responses (such as anger or anxiety) or desired responses (such as enhanced executive ability to manage intense emotion). The acupoint tapping appears to send regulating signals to brain regions that have been aroused by this brief exposure. By the selection of scenes for the client’s attention during the tapping, energy psychology practitioners are able to

⁵ http://www.innersource.net/ep/index.php?option=com_content&view=article&id=60, retrieved June 25, 2018.

“aim” the regulating signals at targeted issues with considerable precision. This is consistent with the hypothesis stated in the above heading: *acupoint tapping sends regulating signals to brain areas aroused by the imaginal exposure component of the protocol*. Imaging studies using energy psychology with additional conditions are underway and will lend confirming or disconfirming evidence to this premise.

Hypothesis 2: Acupoint Tapping Protocols Can, With Unusual Efficiency, Disrupt and Revise or Replace Old Learnings That Are No Longer Adaptive.

While evidence that acupoint tapping rapidly modulates activity in targeted brain areas is appearing, the question remains: why would these changes persist? Even if, for instance, applying acupoint tapping while bringing to mind a stimulus that evokes irrational fear reduces limbic system arousal in the moment, why would the person’s fear not return the next time the stimulus is encountered? Yet follow-up investigations of energy psychology treatments have consistently shown symptomatic improvements to be durable (Church, 2013a).

The neural pathways that maintain maladaptive feelings, thoughts, and behavior. Up until the 1990s, neuroscientists agreed that once a deep emotional learning was acquired, it was “forever” (Grecucci1, Frederickson, & Job, 2017). The concept of neuroplasticity did not even emerge until the second half of the 20th century (e.g., Bennett, Diamond, Krech, Rosenzweig, 1964), and studies of the brain mechanisms that have evolved for decisively countering entrenched maladaptive learnings only began appearing in the 1990s (e.g., Nader, Schafe, & LeDoux, 2000). The “forever” assumption was based on the observation that after a remembered experience or an old learning has been mentally accessed, it becomes re-integrated into the cognitive system unchanged. This notion had to be revised with the discovery that if an experience that vividly contradicts what the old learning expects or predicts occurs shortly after the old learning was accessed, the old learning may be revised to accommodate the new information before being re-integrated.

Memory reconsolidation. This process—by which the neural pathways that underlie outdated learnings can be transformed, or completely eliminated and replaced—is called “memory reconsolidation” (Ecker, 2018; Nader, Schafe, & LeDoux, 2000). While still a provocative concept, a growing number of researchers consider memory reconsolidation critical for “understanding how memories are formed, stored, retrieved, modified, updated and used” (Alberini & LeDoux, 2013, p. 746). Memory reconsolidation has been shown to be more durable than extinction training (Schiller et al., 2010). Extinction does not actually eradicate the old learning. Rather, extinction (or “inhibitory learning”) *overwrites* the old learning with a neurologically distinct new learning that competes with the old one. As a result, the symptoms that were extinguished are subject to return (Schiller et al., 2010). Memory reconsolidation, on the other hand, transforms or completely “depotentiates” (eradicates at the synaptic level) the neural pathways supporting outdated learnings, allowing for the “prompt dissolution of . . . retrieved learnings at their emotional and neural roots” (Ecker, Ticic, & Hulley, 2012, p. 8).

For memory reconsolidation to occur, a vivid experience that contradicts the old learning must be generated during a brief period following the memory retrieval, called the “reconsolidation window” (Ecker et al., 2012, p. 18). This unlocks the related synapses so it becomes possible for

the retrieved memory to be reintegrated into the cognitive system (reconsolidated) in a manner that updates or replaces the old learning. The *content* of the memory does not necessarily change after memory reconsolidation, but the memory may no longer trigger bodily reactions, emotions, interpretive frameworks, or behavioral strategies that had been associated with it. A person will be able, for instance, to recall a traumatic event, and while it will still likely be an unpleasant memory, the original sensations, emotions, or impulses to act will not be evoked.

Ecker et al. (2012) go so far as to propose that regardless of the form of psychotherapy being applied, its effectiveness with deeply rooted symptoms depends on the therapist creating the sequence of experiences that result in memory reconsolidation. While new learning of any kind of course creates fresh neural connections, “it is only when new learning also unwires old learning” that “major, longstanding symptoms can cease [because] their very basis no longer exists” (p. 4). The primary ways memory reconsolidation is facilitated in psychotherapy (whether through the therapist’s insight, intuition, or a clinical framework that expedites the process) are by (a) activating a contradictory experience from the client’s past that was not being accessed, (b) creating or highlighting a situation within the therapeutic relationship that contradicts the old learning, (c) vividly accessing more recent experiences that contradict the old learning, or (d) facilitating new experiences that are inconsistent with the old learning.

How energy psychology protocols facilitate memory reconsolidation. Energy psychology protocols show their greatest strength in their facility for generating experiences that disconfirm earlier learnings (Feinstein, 2012, 2015). Because, as discussed earlier, stimulating selected acupoints can almost instantly reduce limbic arousal, the expected feelings do not occur. A traumatic memory or trigger that produced a physiological threat response is vividly imagined, but after a few rounds of acupoint tapping, the disturbing physiological and emotional responses that were expected are not experienced. The memory or trigger created a visceral expectation that an intense negatively charged emotional reaction would be evoked, but this does not happen because the acupoint stimulation deactivated the limbic system arousal. This is the necessary ingredient for the reconsolidation of old learnings. The scene that was mentally activated is reintegrated into the cognitive system in a manner that incorporates the new, unexpected experience, untethered from feelings, beliefs, and strategies that are inconsistent with the new experience.

Case illustration. For example, using a hypothetical case to keep the focus on the pertinent treatment steps, a girl who was frequently and severely criticized by her father develops a guiding schema (Schmidt, 2018) that includes an unconscious core belief that she is unworthy along with an interpersonal strategy that requires her to do things so meticulously that they are beyond criticism; a perceptual filter that scans for any hint of criticism; a propensity for such criticism to evoke the same feelings of shame and being unlovable that she felt in the face of her father’s criticism; and an impulse, as an adult, to react to new criticism with strong counter-attacks. Because deep emotional learnings are generalizations—perceptual filters, patterns of assessment, and propensities for action based on one or more experiences—a direct way of altering an outdated learning is by focusing on memories that reflect or were instrumental in forming the learning. After assessing the woman’s presenting complaints, associated emotional and behavioral patterns, and relevant history, the first round of tapping might be done while she brings to mind an incident in which her father’s admonishments were particularly severe. She

would be asked to evoke the memory, focus on the most upsetting moment, and give it a 0-to-10 SUD (“subjective units of distress”) rating. This would be followed by a brief sequence designed to help her accept her feelings about the incident and address any self-judgment regarding her overwhelming response to it. Then the first round of tapping, in which she might repeat a brief reminder phrase (such as “Daddy yelled at me in front of my whole class”) as she taps on a sequence of about a dozen acupoints for several seconds each.

Another SUD rating might be taken after one or several rounds of tapping. If the intensity of subjective distress has decreased but is not yet down to zero, another round of tapping might be initiated using the same or similar wording. If the SUD rating has not decreased, the woman might be asked to describe her thoughts and feelings as she brings the incident to mind. The therapist would listen for aspects of her experience or for cognitions that warrant special focus, such as her humiliation, her sense of unworthiness, her belief that everyone is poised to criticize her, the sadness she feels behind her eyes, the queasiness in her stomach. By persistently tracking and tapping on every aspect of the incident that emerges into her awareness until each can be rated at zero, the entire memory may be neutralized in the sense that she will be able to activate it with no emotional upset or self-defeating thoughts. This is a “juxtaposition” moment (after Ecker et al., 2012), an experience that contradicts what her old learning predicts. It is the ingredient that allows the old learning to be reconsolidated in a new way. At this point, another early incident might be addressed, using the same basic protocol. And another. Eventually, a “generalization effect” takes hold so that similar incidents no longer evoke similar responses. When related early experience are no longer initiating emotional arousal, the schema has changed substantially and a more recent experience or an imagined experience where the old schema would have triggered her into shame or anger might be identified, with additional tapping applied as needed.

Because (according to “Hypothesis 1”) acupoint tapping sends almost instantaneous regulating signals to areas of the brain aroused by the memory, the imaginal exposure that initially generated threat or distress no longer provokes the elevated response. Because the imaginal exposure no longer provokes the expected response, the old learning (according to “Hypothesis 2”) is disrupted due to the physiological and emotional responses being different from what the schema predicted. This results in the memory and the associated schema being reconsolidated in a manner that is independent of the maladaptive learnings (e.g., unwarranted fear, anger, self-doubt). Because a round of tapping takes only a minute or two, multiple scenes and their numerous aspects may be neutralized in a single session. Conveniently, neither the energy psychology practitioner nor the client need focus on or even be aware that a “contradictory experience” must be generated if reconsolidation is to occur. The creation of the juxtaposition experience is, as shown above, inherent in the acupoint tapping protocol itself.

Contrasts between exposure treatment and acupoint tapping protocols. Similarities between graduated exposure and acupoint tapping protocols include that, in both, a problem-generating trigger is evoked and an intervention is introduced that changes the person’s response to the trigger by contradicting what the brain expects or predicts when the trigger is present. In exposure therapy for treating the fear of flying, for instance, the client might first be shown a photo of an airplane. Despite any anxiety that may arise, the instructions are to stay with the experience. Simultaneous diaphragmatic breathing, mindfulness, or other relaxation techniques may be introduced. The brain had associated an aversive external consequence with the trigger,

and when nothing harmful occurs as the body relaxes, the threat response gradually diminishes. Another scene is selected which includes a measured increase in the arousal value of the trigger, such as imagining boarding a plane. The same procedure is applied, and scenes whose evocative power gradually increases are presented, up to in vivo experiences, until each element of flying can be tolerated. With acupoint tapping, the initial scene might be more aversive, such as recalling a panic response on a recent flight. But the memory is paired with acupoint tapping, which quickly reduces the limbic system activation. While in exposure treatment the expectation of an *external* event (such as something bad happening) is contradicted, with acupoint tapping protocols, the expectation of an *internal* event (e.g., panic or rage) is contradicted. The fear that was experienced in the earlier event, and that was briefly re-experienced when the event was recalled, is no longer experienced in the presence of the memory after the tapping has been applied. The juxtaposition experience that leads to memory reconsolidation has occurred. This produces shifts that are more rapid and durable than those generated by graduated exposure.

Other Mechanisms

Other causal mechanisms for acupoint tapping have also been proposed. Harper (2012) and Carletto, Borsato, & Pagani (2017) have reported that repetitive sensory stimulation can generate large increases in the amplitude of delta waves in areas of the brain involved in fear memories, as detected by EEG readings. After several minutes of stimulation, these amplified delta waves disrupted activated memory networks, reminiscent of the “natural memory editing system” found in delta wave sleep (Harper, 2012, p. 61). Specifically, glutamate receptors on synapses that mediate a fear memory may be “depotentiated by these powerful waves of neuronal firing” (p. 61). When the neural circuits in the amygdala that maintain the threat response are deactivated in this manner (during virtually *any* exposure therapy protocol that also employs repetitive stimulation on upper parts of the body, such as acupoint tapping, according to Harper’s findings), “the material basis of the fear memory has been removed” (p. 64). Ruden (2005, 2010) has incorporated brain imaging and related neurological findings into a sophisticated biochemical model of the actions of acupoint tapping and other forms of psychosensory stimulation (2005, 2010). Schwarz (2018) has suggested that acupoint tapping mediates the vagal system, restoring a sense of safety in traumatized individuals.

While further research is needed to evaluate these formulations, the two mechanisms postulated above—the roles of acupoint tapping in the rapid modulation of activity in targeted brain areas and in facilitating durable changes in outmoded learnings—are core processes that interact in a reciprocal manner and are consistent with existing clinical and neurological evidence.

Discussion

This review has presented the primary tenets of energy psychology, salient criticisms of the approach, and research-based responses to those criticisms. Three challenges in pursuing these aims have involved (a) providing a concise yet trustworthy review of the efficacy literature, (b) formulating a coherent explanation of the mechanisms by which the counter-intuitive observation that tapping on the skin seems to play an instrumental role in bringing about positive clinical outcomes, and (c) a balanced presentation given the author’s identification with the approach, as disclosed in the “Conflict of Interest Statement” accompanying the paper.

Regarding efficacy, with more than 100 clinical trials, a comprehensive review of existing research would rightfully adhere to formal guidelines such as the PRISMA criteria for reporting systematic reviews and meta-analyses (Liberati et al., 2009). Given space limitations and the broader objectives of this review, adequately addressing each point in the PRISMA checklist was not feasible. However, the assessment of research pertinent to the efficacy and speed of energy psychology protocols was informed by PRISMA's most essential principles concerning transparency in relation to the review's objectives, study selection and appraisal methods, measures taken to address publication bias, client safety, and the conclusions reached.

Regarding mechanisms of action, the two hypothesized neurological processes by which energy psychology protocols bring about rapid and lasting clinical change are built upon existing empirical knowledge, but they have not been tested as such. While two recent brain imaging studies of acupoint tapping treatments (Di Rienzo et al., 2017; Stapleton et al., 2018) have produced findings that are consistent with these hypotheses, additional imaging studies are needed and are underway.

Regarding author bias, disclosure is a start. The author has provided clinical services as a licensed psychologist for some 45 years, since the early 1970s. Around 2001, he began to integrate energy psychology protocols into his practice. Based upon the immediate, marked decreases in treatment time required to achieve desired outcomes, he became an advocate of the approach. To counter the bias that is inevitably involved in such a shift of clinical allegiance, this appraisal has endeavored to faithfully describe the most salient criticisms of the method and to address each with a balanced, evidence-based account. While the paper's assertions should be read with due caution, they are provided in a manner that invites scrutiny from interested clinicians and researchers.

Conclusion

Energy psychology is a controversial modality that integrates contemporary clinical methods with concepts and techniques derived from ancient healing systems, particularly acupuncture and acupressure. While claims of rapid benefits with a range of conditions were widely publicized before any research backing had been established, the past decade has seen a stream of efficacy studies that show strong outcomes. Two testable hypotheses for explaining the brain mechanisms that might produce such outcomes, based on current neurological understanding, were presented. Potential advantages of integrating the stimulation of acupoints within more conventional treatment approaches, based on existing evidence, include enhanced speed and a facility for efficiently modifying learnings that are no longer adaptive.

Author Contribution Statement

The author confirms being the sole contributor of this work.

Conflict of Interest Statement

The author conducts trainings, provides clinical services, and has written books related to the approach examined in this paper.

References

- Alberini, C.M., & LeDoux, J. E. (2013). Memory reconsolidation. *Current Biology*, 23(17):R746-50. doi: 10.1016/j.cub.2013.06.046.
- Al-Hadethe, A., Hunt, N., Al-Qaysi, G., & Thomas, S. (2015). Randomised controlled study comparing two psychological therapies for posttraumatic stress disorder (PTSD): Emotional Freedom Techniques (EFT) vs. Narrative Exposure Therapy (NET). *Journal of Traumatic Stress Disorders and Treatment*, 4(4). doi:10.4172/2324-8947.1000145
- American Psychological Association. 2017. *Clinical practice guideline for the treatment of posttraumatic stress disorder (PTSD) in adults*. Washington, D.C.: Author.
- Andrade, J., & Feinstein, D. (2004). Energy psychology: Theory, indications, evidence. In D. Feinstein, *Energy psychology interactive* (pp. 199–214). Ashland, OR: Innersource.
- Au, D. W., Tsang, H. W., Ling, P. P., Leung, C. H., Ip, P. K., & Cheung, W. M. (2015). Effects of acupressure on anxiety: a systematic review and meta-analysis. *Acupuncture in Medicine*, 33(5), 353. doi:10.1136/acupmed-2014-010720
- Bai, Y., Wang, J., Wu, J., Dai, J., Sha, O., Yew, D., & Liang, Q. (2011). Review of evidence suggesting that the fascia network could be the anatomical basis for acupoints and meridians in the human body. *Evidence-Based Complementary and Alternative Medicine*. Online publication. <http://dx.doi.org/10.1155/2011/260510>
- Baker, A.H., Carrington, P., & Putilin, D. (2009). Theoretical and methodological problems in research on emotional freedom techniques (EFT) and other meridian based therapies. *Psychology Journal*, 6(2), 34–46.
- Bakker, G. M. (2013). The current status of energy psychology: Extraordinary claims with less than ordinary evidence. *Clinical Psychologist*, 17(3), 91–99. doi:10.1111/cp.12020
- Bakker, G.M. (2014). *A bigger swamp is still a swamp: Comments on Feinstein. (2014). Energy Psychology: Theory, Research, and Treatment*, 6(1), 44-47. doi:10.9769/EPJ.2014.6.1.GB
- Bennett, E. L., Diamond, M. C., Krech, D., Rosenzweig, M. R. (1964). Chemical and anatomical plasticity of the brain. *Science*, 146, 610–619. doi:10.1126/science.146.3644.610.
- Benor, D. J., Ledger, K., Toussaint, L., Hett, G., & Zaccaro, D. (2009). Pilot study of Emotional Freedom Techniques, wholistic hybrid derived from Eye Movement Desensitization And Reprocessing and Emotional Freedom Technique, and Cognitive Behavioral Therapy for treatment of test anxiety in university students. *Explore*, 5, 338 - 40. doi: 10.1016/j.explore.2009.08.001
- Brown, R. C., Witt, A., Fegert, J. M., Keller, F., Rassenhofer, M., & Plener, P. L. (2017). Psychosocial interventions for children and adolescents after man-made and natural disasters: a meta-analysis and systematic review. *Psychological Medicine*, 47, 1893–1905. doi:10.1017/S0033291717000496
- Callahan, R. (1985). *Five minute phobia cure*. Wilmington, DE: Enterprise Publishing.
- Carletto, S., Borsato, T., & Pagani, M. (2017). The role of slow wave sleep in memory pathophysiology: Focus on post-traumatic stress disorder and Eye Movement Desensitization and Reprocessing. *Frontiers in Psychology*. doi.org/10.3389/fpsyg.2017.02050
- Chatwin, H., Stapleton, P., Porter, B., Devine, S., & Sheldon, T. (2016). The effectiveness of Cognitive Behavioral Therapy and Emotional Freedom Techniques in reducing depression

- and anxiety among adults: A pilot study. *Integrative Medicine: A Clinician's Journal*, 15(2), 27–34.
- Chen, M. N., Chien, L. W., & Liu, C. F. (2013). Acupuncture or acupressure at the sanyinjiao (SP6) acupoint for the treatment of primary dysmenorrhea: A meta-analysis. *Evidence-Based Complementary and Alternative Medicine*, doi: 10.1155/2013/493038. Epub 2013 Feb 28.
- Church, D. (2013a). Clinical EFT as an evidence-based practice for the treatment of psychological and physiological conditions. *Psychology*, 4(8), 645-654. doi:10.4236/psych.2013.48092
- Church, D. (2013b). Clinical EFT (Emotional Freedom Techniques) as single session therapy: cases, research, indications, and cautions. In M. Hoyt & M. Talmon (Eds.), *Capturing the moment: Single session therapy and walk-in service*. (). Bethel, CT: Crown House.
- Church, D. (2013c). *The EFT manual* (3rd ed.). Santa Rosa, CA: Energy Psychology Press.
- Church, D., Feinstein, D., Palmer-Hoffman, J., Stein, P. K., & Tranguch, A. (2014). Empirically supported psychological treatments: The challenge of evaluating clinical innovations. *Journal of Nervous and Mental Disease*, 202(10), 699–709. doi:10.1097/NMD.0000000000000188
- Church, D., Hawk, C., Brooks, A., Toukolehto, O., Wren, M., Dinter, I., & Stein, P. (2013). Psychological trauma in veterans using EFT (Emotional Freedom Techniques): A randomized controlled trial. *Journal of Nervous and Mental Disease*, 201, 153-60. doi:10.1097/NMD.0b013e31827f6351
- Church, D., & Nelms, J. (2016). Pain, Range of Motion, and Psychological Symptoms in a Population with Frozen Shoulder: A Randomized Controlled Dismantling Study of Clinical EFT (Emotional Freedom Techniques). *Archives of Scientific Psychology*, 4, 38–48. doi:http://dx.doi.org/10.1037/arc0000028
- Church, D., Piña, O., Reategui, C., & Brooks, A. (2011). Single session reduction of the intensity of traumatic memories in abused adolescents after EFT: A randomized controlled pilot study. *Traumatology*, 32(1), 112-122. doi:10.1177/1534765611426788
- Church, D., Stapleton, P., Yang, A., & Gallo, F. (in press). Is tapping on acupuncture points an active ingredient in Emotional Freedom Techniques (EFT)? A review and meta-analysis of comparative studies. *Journal of Nervous and Mental Disease*.
- Church, D., Yount, G., & Brooks, A. J. (2012). The effect of Emotional Freedom Techniques (EFT) on stress biochemistry: A randomized controlled trial. *Journal of Nervous and Mental Disease*, 200, 891–896. doi:10.1097/NMD.0b013e31826b9fc1
- Church, D., Yount, G., Rachlin, K., Fox, L., & Nelms, J. (2018). Epigenetic effects of PTSD remediation in veterans using Clinical EFT (Emotional Freedom Techniques): A randomized controlled trial. *American Journal of Health Promotion*, 32, 112-122. doi:10.1177/089011711666115
- Clond, M. (2016). Emotional Freedom Techniques for anxiety: A systematic review with meta-analysis. *Journal of Nervous and Mental Disease*, 204, 388-395. doi:10.1097/NMD.0000000000000483
- Connolly, S. M., Roe-Sepowitz, D., Sakai, C. E., & Edwards, J. (2013). Utilizing community resources to treat PTSD: A randomized controlled study using Thought Field Therapy. *African Journal of Traumatic Stress*, 3(1), 24-32.
- Connolly, S., & Sakai, C. (2011). Brief trauma intervention with Rwandan genocide survivors using Thought Field Therapy. *International Journal of Emergency Mental Health*. 13(3), 161-172.

- Deville, G. J. (2005). Power therapies and possible threats to the science of psychology and psychiatry. *Australian and New Zealand Journal of Psychiatry*, 39, 437–445. doi: 10.1080/j.1440-1614.2005.01601.x
- Di Rienzo, F., Saruco, E., Daligault, S., Delpuech, C., Church, D., Gurret, J.-M., . . . Guillot, A. (2017, March 19). Neuropsychological correlates of an energy psychology intervention on flight phobia: A MEG single-case study. Paper presented at the First French Energy Psychology Conference, Lyon, March 18 - 19, 2017. [[Note: This paper has been submitted for publication and, if it is “in press” by the time the current paper goes to press, this reference will be replaced with the journal information]].
- Ecker, B. (2018). Clinical translation of memory reconsolidation research: Therapeutic methodology for transformational change by erasing implicit emotional learnings driving symptom production. *International Journal of Neuropsychotherapy*, 6(1), 1–92. doi: 10.12744/ijnpt.2018.0001-0092
- Ecker, B., Ticic, R., & Hulley, L. (2012). *Unlocking the emotional brain: Eliminating symptoms at their roots using memory reconsolidation*. New York: Routledge.
- Ernst, E., & White, A. (Eds.). (1999). *Acupuncture: A scientific appraisal*. Atlanta: Butterworth-Heinemann.
- Feinstein, D. (2005, January). Examining the controversy over energy psychology. *Psychotherapy Networker*, 29(1), 77-82.
- Feinstein, D. (2008). Energy psychology: A review of the preliminary evidence. *Psychotherapy: Theory, Research, Practice, Training*, 45(2), 199-213. doi:10.1037/0033-3204.45.2.199
- Feinstein, D. (2012). Acupoint stimulation in treating psychological disorders: Evidence of efficacy. *Review of General Psychology*, 16, 364-380. doi:10.1037/a0028602
- Feinstein, D. (2015). How energy psychology changes deep emotional learnings. *The Neuropsychologist*, #10, 38-49.
- Feinstein, D. (2016). A survey of energy psychology practitioners: Who they are, what they do, who they help. *Energy Psychology: Theory, Research, and Treatment*, 8(1), 33-39. doi:10.9769/EPJ.2016.08.1.DF
- Finando, S., & Finando, D. (2012). Qi, acupuncture, and the fascia: A reconsideration of the fundamental principles of acupuncture. *Journal of Alternative and Complementary Medicine*, 18, 880-886. doi:10.1089/acm.2011.0599
- Gach, M. R., & Henning, B. A. (2004). *Acupressure for emotional healing*. New York, Bantam.
- Gaesser, A. H., & Karan, O. C. (2017). A randomized controlled comparison of Emotional Freedom Technique and Cognitive-Behavioral Therapy to reduce adolescent anxiety: A pilot study. *Journal of Alternative and Complementary Medicine*, 23(2). doi:10.1089/acm.2015.0316.
- Gallo, F. P. (2004). *Energy psychology: Explorations at the interface of energy, cognition, behavior, and health* (2nd ed.). New York: CRC Press.
- Gaudiano, B. A., Brown, L. A., & Miller, I. W. (2012). Tapping their patients’ problems away? Characteristics of psychotherapists using energy meridian techniques. *Research on Social Work Practice*, 22, 647–655. doi:10.1177/1049731512448468
- Gene-Cos, N., Fisher, J., Ogden, P., & Cantrell, A. (2016). Sensorimotor psychotherapy group therapy in the treatment of complex PTSD. *Annals of Psychiatry and Mental Health*, 4(6), 1080.
- Geronilla, L., Minewiser, L., Mollon, P., McWilliams, M., & Clond, M. (2016). EFT (Emotional Freedom Techniques) remediates PTSD and psychological symptoms in veterans: A

- randomized controlled replication trial. *Energy Psychology*, 8(2), 29 - 41.
doi:10.9769/EPJ.2016.8.2.LG
- Gillespie, P. G., & Walker, R. G. (2001). Molecular basis of mechanosensory transduction. *Nature*, 413, 194–202. doi:10.1038/35093011
- Gilomen, S. A., & Lee, C. W. (2015). The efficacy of acupoint stimulation in the treatment of psychological distress: A meta-analysis. *Journal of Behavior Therapy and Experimental Psychiatry*, 48, 140-148. doi:10.1016/j.jbtep.2015.03.012
- Grecucci1, A., Frederickson, J., & Job, R. (2017). Editorial: Advances in emotion regulation: From neuroscience to psychotherapy. *Frontiers in Psychology*. doi:10.3389/fpsyg.2017.00985
- Harper, M. (2012). Taming the amygdala: An EEG analysis of exposure therapy for the traumatized. *Traumatology*, 18(2), 61–74.
- Hall, H. (2011). Acupuncture's claims punctured: not proven effective for pain, not harmless. *Pain*, 4, 711-712. doi: 10.1016/j.pain.2011.01.039.
- Helmreich, R. J., Shiao, S. Y. P. K., & Dune, L. S. (2006). Meta-analysis of acustimulation effects on nausea and vomiting in pregnant women. *Explore: The Journal of Science and Healing*, 2(5), 412-421.
- Hui, K. K.-S., Liu, J., Marina, O., Napadow, V., Haselgrove, C., Kwong, K. K., Makris, N. (2005). The integrated response of the human cerebro-cerebellar and limbic systems to acupuncture stimulation at ST 36 as evidenced by fMRI. *NeuroImage*, 27, 479–496. doi:10.1016/j.neuroimage.2005.04.037
- Irgens, A. C., Hoffart, A., Nysæter, T. E., Haaland, V. Ø., Borge, F.-M., Pripp, A. H., ... Dammen, T. (2017). Thought Field Therapy Compared to Cognitive Behavioral Therapy and Wait-List for Agoraphobia: A Randomized, Controlled Study with a 12-Month Follow-up. *Frontiers in Psychology*, 8, 1027. <http://doi.org/10.3389/fpsyg.2017.01027>
- Karatzias, T., Power, K., Brown, K., McGoldrick, T., Begum, M., Young, J. . . . & Adams, S. (2011). A controlled comparison of the effectiveness and efficiency of two psychological therapies for posttraumatic stress disorder: Eye Movement Desensitization and Reprocessing vs. Emotional Freedom Techniques. *Journal of Nervous & Mental Disease*, 199, 372-378. doi: 10.1097/MD.0b013e31821cd262
- Kline, J. P. (2001). Heart rate variability does not tap putative efficacy of Thought Field Therapy. *Journal of Clinical Psychology*, 57, 1187–1192. <https://doi.org/10.1002/jclp.1085>
- Lambrou, P. T., Pratt, G. J., & Chevalier, G. (2003). Physiological and psychological effects of a mind/body therapy on claustrophobia. *Subtle Energies & Energy Medicine*, 14, 239-251.
- Langevin, H. M., & Wayne, P. M. (2018). What is the point? The problem with acupuncture research that no one wants to talk about. *Journal of Alternative and Complementary Medicine*, 24, 200–207. doi:10.1089/acm.2017.0366
- Langevin H. M., & Yandow J. A. (2002). Relationship of acupuncture points and meridians to connective tissue planes. *Anatomical Record*, 269, 257-265.
- Lee, E. J., & Frazier, S. K. (2011). The efficacy of acupressure for symptom management: A systematic review. *Journal of Pain and Symptom Management*. 42, 589–603. doi:10.1016/j.jpainsymman.2011.01.007
- Leskowitz, E. (2016). Integrative medicine for PTSD and TBI: Two innovative approaches. *Medical Acupuncture*, 28(4), 181-183. <http://doi.org/10.1089/acu.2016.1168>
- Li, J., Wang, Q., Liang, H., Dong, H. Li, Y., Ng, E., & Wu, X. (2012). Biophysical characteristics of meridians and acupoints: A systematic review. *Evidence-based Complementary and Alternative Medicine*. Published online. doi:10.1155/2012/793841

- Liberati, A., Altman, D. G., Tetzlaff, J., Mulrow, C., Gøtzsche, P.C., Ioannidis, J. P. A., . . . Moher, D. (2009). The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate health care interventions: Explanation and elaboration. *PLoS Med* 6(7): e1000097. doi:10.1371/journal.pmed1000097
- Maharaj, M. E. (2016). Differential gene expression after Emotional Freedom Techniques (EFT) treatment: A novel pilot protocol for salivary mRNA assessment. *Energy Psychology: Theory, Research, and Treatment*, 8(1), 17–32. doi:10.9769/EPJ.2016.8.1.MM
- Marlock, G., Weiss, H., Young, C., & Soth, M. (Eds.). (2015). *The handbook of body psychotherapy and somatic psychology*. Berkeley, CA: North Atlantic Books.
- Minton, K., Ogden, P., & Pain, C. (2006). *Trauma and the body: A sensorimotor approach to psychotherapy*. New York: W. W. Norton.
- McCaslin, D. (2009). A review of efficacy claims in energy psychology. *Psychotherapy: Research, Practice, Training*, 46, 249–256. doi:10.1037/a0016025
- McDonald, J., & Janz, S. (2017). *The acupuncture evidence project: A comparative literature review* (revised ed.). Brisbane: Australian Acupuncture and Chinese Medicine Association.
- McNally, R. J. (2001). Tertullian's motto and Callahan's method. *Journal of Clinical Psychology*, 57, 1171–1174. doi:10.1002/jclp.1083
- Moncayo, R., & Moncayo, H. (2009). Evaluation of Applied Kinesiology meridian techniques by means of surface electromyography (sEMG): Demonstration of the regulatory influence of antique acupuncture points. *Chinese Medicine*, 4:9. doi:10.1186/1749-8546-4-9
- Moritz, S., Aravena, S. C., Guetzka, S. R., Schilling, L., Eichenberg, C., Raubart, G., . . . Jelinek, L. (2011). Knock, and it will be opened to you? An evaluation of meridian-tapping in obsessive-compulsive disorder (OCD). *Journal of Behavior Therapy and Experimental Psychiatry*, 42(1), 81–88. doi:10.1016/j.jbtep.2010.07.002
- Murray, B. (1999). APA no longer approves CE sponsorship for Thought Field Therapy. *APA Monitor on Psychology*, 30(11), 9.
- Nader, K., Schafe, G. E., & LeDoux, J. (2000). Fear memories require protein synthesis in the amygdala for reconsolidation after retrieval. *Nature*, 406, 722–726. doi:10.1038/35021052
- Najavits, L. M. (2015). The problem of dropout from “gold standard” PTSD therapies. *F1000Prime Reports*, 7, 43. <http://doi.org/10.12703/P7-43>
- Nelms, J. & Castel, D. (2016). A systematic review and meta-analysis of randomized and non-randomized trials of Emotional Freedom Techniques (EFT) for the treatment of depression. *Explore: The Journal of Science and Healing*, 12, 416–426. doi: 10.1016/j.explore.2016.08.001
- Nemiro, A., & Papworth, S. (2015). Efficacy of two evidence-based therapies, Emotional Freedom Techniques (EFT) and Cognitive Behavioral Therapy (CBT) for the treatment of gender violence in the Congo: A randomized controlled trial. *Energy Psychology: Theory, Research, & Treatment*, 7(2), 13–25. doi:10.9769/EPJ.2015.11.1.AN
- Oschman, J. L. (2003). *Energy medicine in therapeutics and human performance*. New York: Elsevier.
- Papa, A., & Follette, W. C. (2015). Dismantling studies of psychotherapy. *The Encyclopedia of Clinical Psychology*, online. doi: 10.1002/9781118625392.wbecp523
- Pasahow, R. (2010). Methodological problems in Waite and Holder (2003) preclude meaningful interpretations about Emotional Freedom Techniques (EFT). *Energy Psychology: Theory, Research, & Treatment*, 2(2), 57–72. doi:10.9769/EPJ.2010.2.2.RP

- Paynel, P., Levine, P. A., & Crane-Godreau, M. A. (2015). Somatic experiencing: Using interoception and proprioception as core elements of trauma therapy. *Frontiers in Psychology*. doi:10.3389/fpsyg.2015.00093
- Phelps, E. A., & LeDoux, J. E. (2005). Contributions of the amygdala to emotion processing: From animal models to human behavior. *Neuron*, 48, 175-87. doi: 10.1016/j.neuron.2005.09.025
- Pignotti, M. (2005). Thought Field Therapy voice technology vs. random meridian point sequences: A single-blind controlled experiment. *Scientific Review of Mental Health Practice*, 4(1), 2005, 38-47.
- Pignotti, M., & Thyer, B. (2009). Some comments on "Energy Psychology: A Review of the Evidence." Premature conclusions based on incomplete evidence? *Psychotherapy: Research, Practice, Training*, 46, 257-261. doi:10.1006/ccog.1999.0393
- Reynolds, A. (2015). Is acupoint stimulation an active ingredient in Emotional Freedom Techniques (EFT)? A controlled trial of teacher burnout. *Energy Psychology: Theory, Research, and Treatment*, 7(1), 14-21. doi:10.9769/EPJ.2015.07.01.AR
- Rogers, R., & Sears, S. R. (2015). Emotional Freedom Techniques for stress in students: A randomized controlled dismantling study. *Energy Psychology: Theory, Research, and Treatment*, 7(2), 26-32.
- Ross, J. (1995). *Acupuncture point combinations: The key to clinical success*. Philadelphia: Churchill Livingstone.
- Ruden, R. A. (2005). A neurological basis for the observed peripheral sensory modulation of emotional responses. *Traumatology*, 11, 145-158. doi: 10.1177/153476560501100301
- Ruden, R. A. (2010). *When the past is always present: Emotional traumatization, causes, and cures*. New York: Routledge.
- Schiller, D., Monfils, M-H., Raio, C. M., Johnson, D. C., LeDoux, J. E., & Phelps, E. A. (2010). Preventing the return of fear in humans using reconsolidation update mechanisms. *Nature*, 463, 49-53.
- Sakai, C. S., Connolly, S. M., & Oas, P. (2010). Treatment of PTSD in Rwandan genocide survivors using Thought Field Therapy. *International Journal of Emergency Mental Health*, 12(1), 41-50.
- Schmidt, P. (2018). The relevance of explanatory first-person approaches (EFPA) for understanding psychopathological phenomena. The role of phenomenology. *Frontiers in Psychology*. doi:10.3389/fpsyg.2018.00694
- Schwarz, R. (2018). Energy psychology, polyvagal theory, and the treatment of trauma. In S. W. Porges & Dana, D. A. (Eds.). *Clinical applications of the Polyvagal theory: The emergence of polyvagal-informed therapies* (pp. 270-284). New York: Norton.
- Sebastian, B., & Nelms, J. (2017). The effectiveness of Emotional Freedom Techniques in the treatment of posttraumatic stress disorder: A meta-analysis. *Explore: The Journal of Science and Healing*, 13, 16-25. doi:10.1016/j.explore.2016.10.001
- Stapleton, P. (in press). *The science behind tapping*. Carlsbad, CA: Hay House.
- Stapleton, P., Bannatyne, A., Porter, B., Urzi, K.C., & Sheldon, T. (2016). Food for thought: A randomised controlled trial of Emotional Freedom Techniques and Cognitive Behavioural Therapy in the treatment of food cravings. *Applied Psychology: Health and Well-Being*, 8(2), 232-257. doi:10.1111/aphw.12070
- Stapleton, P., Buchan, C., Mitchell, I., McGrath, J., Gorton, P., & Carter, B. (2018, May 3). Neural changes in overweight adults with food cravings after Emotional Freedom

- Techniques treatment: Pilot data from a clinical trial. Paper presented at the 20th Annual International Energy Psychology Conference, Orlando, FL, May 3 - 7, 2018. [[Note: This paper has been submitted for publication and if it is "in press" by the time the current paper goes to press, this reference will be replaced with the journal information]].
- Steenkamp, M. M., Litz, B. T., Hoge, C. W., & Marmar, C. R. (2015). Psychotherapy for military-related PTSD: A review of randomized clinical trials. *Journal of the American Medical Association*, 314, 489–500. doi:10.1001/jama.2015.8370
- Swingle, P. (2010). Emotional Freedom Techniques (EFT) as an effective adjunctive treatment in the neurotherapeutic treatment of seizure disorders. *Energy Psychology: Theory, Research, & Treatment*, 2(1), 29-38. doi:10.9769/EPJ.2010.2.1.PGS
- Takakura, N., & Yajima, H. (2009). Analgesic effect of acupuncture needle penetration: a double-blind crossover study. *Open Medicine*, 3(2). Retrieved September 9, 2009, from <http://www.openmedicine.ca/article/view/189/235>
- van der Kolk, B. (1994). The body keeps the score: Approaches to the psychobiology of posttraumatic stress disorder. *Harvard Review of Psychiatry*, 1(5), 253-65.
- Waite, L. W., & Holder, M. D. (2003). Assessment of the emotional freedom technique: An alternative treatment for fear. *Scientific Review of Mental Health Practice*, 2(1), 20–26.
- Wampold, B. E. (2015). How important are the common factors in psychotherapy? An update. *World Psychiatry*, 14, 270-277. doi:10.1002/wps.20238
- Wells, S., Polglase, K., Andrews, H. B., Carrington, P. & Baker, A. H. (2003). Evaluation of a meridian-based intervention, Emotional Freedom Techniques (EFT), for reducing specific phobias of small animals. *Journal of Clinical Psychology*, 59, 943-966. doi: 10.1002/jclp.10189
- Wolpe, J. (1958). *Psychotherapy by Reciprocal Inhibition*. Stanford, CA: Stanford University Press.