The Lived Experience of Chronic Pain and the Impact of Brief Emotional Freedom Techniques (EFT) Group Therapy on Coping

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Abstract

Chronic pain is associated with a range of physical, psychological, and social risk factors, and successful treatment aims to reduce pain and improve function and quality of life for patients. In order to explore the impact, challenges, and current experience of chronic pain sufferers, an anonymous online open-ended qualitative survey was developed and analyzed for manifest and latent content. This then informed a brief 4-hour therapy session using Emotional Freedom Techniques (EFT), a brief cognitive intervention with a somatic component. The qualitative study highlighted issues sufferers had with employment, interpersonal relationships, and emotions. An overwhelming 82% discussed the stigma they experienced from health professionals not believing the extent of their pain, and only 4% indicated they received any pain relief from psychological treatment. Paired samples *t*-tests revealed a significant decrease in the severity (–12.04%, $p = 0.044$) and impact (–17.62%, $p = 0.008$) of participants' pain from pretest to posttest, and a significant improvement in their overall psychological distress from pretest to posttest (–36.67%, $p < 0.001$). There was also a significant improvement in participants' depression (–29.86%, $p = 0.007$), anxiety (–41.69%, $p < 0.001$), and stress (–38.48%, $p = 0.001$), from pretest to posttest. A significant association was found between pain and psychological distress. Finally, a significant overall main effect of time was found at 6-months' follow-up, although pairwise comparisons did not indicate any significant results across all time points. Findings are consistent with other research indicating the effectiveness of brief and group-delivered EFT and are discussed in terms of psychological treatment for chronic pain. Future research is proposed.

Keywords: chronic pain, Emotional Freedom Techniques, tapping, coping

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One in five adults worldwide suffers from chronic pain (National Academies Press, 2011), and psychosocial stress is often associated with the onset of chronic pain. For most sufferers chronic pain is experienced as both a physical and a psychosocial stressor. Gaskin and Richard (2012) report the annual cost of chronic pain is as high as $635 billion a year, which is more than the yearly costs for cancer, heart disease, and diabetes. Injury is the most common cause of chronic pain (38%), though a further third of all people who experience chronic pain are unable

to identify the original cause (National Institutes of Health, 2015). The impact extends beyond the physical dimension, though, with research suggesting many patients who experience chronic pain tend to be also diagnosed with depression (Australian Bureau of Statistics, 2011).

Mindfulness-based interventions are receiving growing attention in the area of chronic pain. One of these modalities, a cognitive and exposure technique that uses the stimulation of acupuncture points on the body, is called Emotional Freedom Techniques (EFT). Because it is well established that chronic pain is a multidimensional experience comprised of sensory, affective, and cognitive components and that psychological interventions can potentially impact all three of these areas, establishing the effectiveness of techniques such as EFT may add to the paucity of suitable and long-lasting treatments for chronic pain sufferers. To date, studies of EFT for pain indicate war veterans achieve significant decreases in physical pain after EFT, as do fibromyalgia sufferers (Church, 2013; Feinstein, 2012).

Overview of EFT

EFT is an evidenced-based practice and combines psychological methods (e.g., cognitive and exposure techniques) with a somatic element. Stimulation of the body's acupuncture points is done through a tapping technique (with two fingers) while a person focuses on the present moment, engaged with the problem they are addressing. This is achieved by stating the problem aloud with an acceptance statement that acknowledges the problem, while the individual taps on acupressure points on the face and upper body. EFT appears to impact physiological systems in the body that regulate stress and this treatment reduces the strength of emotional intensity and associated neural frequencies in the brain (Diepold Jr. & Goldstein, 2009; Feinstein, 2010). The physiological mechanisms of action of EFT have been explored in a number of studies, which show reductions of stress hormones such as cortisol and regulation of the autonomic nervous system.

To date, over 100 research studies, review articles and meta-analyses of EFT have been published in professional, peer-reviewed journals (Research.EFTuniverse.com). Of the 43 randomized controlled trials, 39 have been outcome studies and 98% of these 82 studies show positive results for the effects of EFT. EFT has been successful in treating a range of psychological conditions including generalized and specific anxiety, phobias, depression, posttraumatic stress disorder (PTSD), chronic pain, addiction, and emotional eating/obesity/food cravings (Chatwin, Stapleton, Porter, Devine, S., & Sheldon, 2016; Church, 2013; Feinstein, 2012; Stapleton, Sheldon, & Porter, 2012; Stapleton, Bannatyne, Porter, Urzi, & Sheldon, 2016). Treatment length for EFT has typically varied between one and ten sessions, with phobias effectively treated within one EFT session and PTSD requiring between four and ten. This makes this type of intervention potentially more cost effective for sufferers and easier to deliver in groups than individual treatment. Research has also indicated treatment gains persist over time (Church, Geronilla, & Dinter, 2009; Church, 2010; Rowe, 2005; Stapleton et al., 2016; Stapleton, Sheldon, & Porter, 2012; Wells, Polglase, Andrews, Carrington, & Baker, 2003).

EFT for Pain

Brattberg (2008) reported significant reductions in a range of variables for a sample of women diagnosed with fibromyalgia following EFT treatment. Eighty-six women, who were on sick leave for at least 3 months, were randomly assigned to a treatment group or a wait-list group. The treatment group received an 8-week Internet program and, at posttest, significant improvements were observed in the intervention group (n = 26) in comparison with the wait-listed group (n = 36) for pain, anxiety, depression, vitality, social function, mental health, performance problems involving work or other activities due to physical as well as emotional reasons, and stress symptoms. Other improvements for the EFT group included reduction in pain-catastrophizing measures (e.g., helplessness, rumination, and magnification) and an increase in activity level when compared to the wait-listed group.

Church and Nelms (2016) assessed 37 participants with "frozen shoulder" and randomized them into a wait list or one of two treatment groups (EFT or an identical cognitive/exposure protocol but with diaphragmatic breathing, DB, substituted for acupoint stimulation). After a 30-minute session and 30-day follow-up, both groups maintained their gains regarding pain, with the EFT group superior to DB. Only the EFT group maintained

gains for psychological symptoms ($p < 0.001$). Results showed that reductions in psychological distress were associated with reduced pain as well as with improved range of movement. Ortner, Palmer-Hoffman, and Clond (2014) found a reduction in pain and improvement in coping ability after three days of group EFT. A randomized controlled trial of hospital patients with tension headaches found a significant decrease in both the frequency and the severity of pain after EFT (Bougea et al., 2013).

Significant improvements were also found for anxiety, depression, pain, and cravings in 216 healthcare workers who received 2 hours of self-applied EFT at five professional conferences. The severity and range of psychological symptoms were reduced following the interventions, with these gains maintained at follow-up. Greater subsequent use of EFT was associated with a greater decrease in symptoms, but not in symptom range/breadth (Church & Brooks, 2010). More recently, Church and Brooks (2014) reported significant reductions in pain, depression, and anxiety in 59 veterans suffering from PTSD following six sessions of EFT coaching.

With the potential of EFT being a suitable intervention for chronic pain in general, and the option of delivering it as a brief intervention, the objectives of the current study were twofold. The first was to understand qualitatively the psychological and physical impact of chronic pain in sufferers. The second was to develop a brief clinical protocol for EFT and determine the efficacy of the intervention by assessing its results over a 6-month follow-up period.

Method

This study had a two-pronged approach. Initially, to explore the impact, challenges, and current experience of chronic pain sufferers, an anonymous online open-ended qualitative survey (Psychdata) was developed and analyzed for manifest and latent content. This was examined for the psychological impact of chronic pain and aimed to add to the literature on stigma and distress, as well as inform components of the treatment program. Advertisements were shared across social media sites and online forums for this survey and participants consented online before completing the survey in their own time. All resulting data were de-identified and analyzed.

The second study evaluated the brief EFT group treatment program. A sample of chronic pain sufferers was recruited through a local clinic specializing in the condition. Participants received a 4-hour group EFT Intervention. A registered clinical psychologist who was a certified EFT trainer facilitated the group and was assisted by a registered generalist psychologist and a specialist pain nurse, both trained in EFT. The Bond University Human Research Ethics Committee provided ethical approval, as did Medicare Local. Additionally, the trial was registered in the Australia New Zealand Clinical Trials Registry. A standard process was used for informed consent. Participants completed a battery of measures prior to the intervention and at the end, and were contacted via e-mail 6 months post intervention to complete the same questionnaire.

Participants

In Study 1, the majority of participants were female (86%), over the age of 40 years (80%), married (52%), living with more than one person (80%), had some form of tertiary education (58%), were employed (70%), and had an annual household income of above $40,000 (54%). A total of 50 participants completed this study.

In Study 2, the majority of intervention group participants were women (84%), over 50 years of age (72%), married (44%), did not live alone (75%), had completed some form of tertiary education (56%), were retired (44%), and had a household income above $50,000 (51%). A total of 24 participants completed the intervention.

The EFT Intervention

The EFT treatment was based on standardized protocols and with fidelity to the manual (Church, 2013). Checklists were used to ensure compliance to the EFT protocol. An overview of the technique was provided at the beginning of the intervention and information presented on how it might be utilized for chronic pain. Group responses were collected as to the lived experience of chronic pain and the qualitative responses previously collected through Study 1 were shared. These formed the basis of the cognitive setup statements for the group tapping exercises (e.g., "Even though I have this sharp, stabbing pain in the back of my neck, I accept this anyway"). Participants also formed small groups of six (with a practitioner in each

as a support person and guide) during the 4-hour intervention, in order to engage in more specific tapping statements. They engaged in these small group sessions designed to practice the technique for a 2-hour period and focused on more personal experiences of pain (e.g., one participant tapped on pain related to a motor vehicle accident, and another tapped on sciatic pain that resulted from the position of her baby in utero during pregnancy). A common group delivery method in EFT known as "borrowing benefits" (Church, 2013), in which a single participant taps with the practitioner while the rest of the group simultaneously self-applies the technique, was used at the start of the small group sessions.

The process of EFT involved participants focusing on a distressing thought (e.g., "I can't cope with this pain") or pain symptom (e.g., a dull achy pain or a sharp throbbing pain), depending on the participant's choice. They generated an intensity rating (0 representing no pain/distress, and 10 indicating the most pain/distress) for each symptom or thought they tapped on. This thought or symptom was put into a "setup statement" such as "Even though I have this pain, I accept myself anyway." Participants then completed the tapping sequence on the acupressure points (Figure 1). As participants tapped, they focused on the pain/thought being experienced and this was called the reminder phrase (e.g., they may have repeated a phrase such as "this pain" rather than the setup statement used in the beginning). At the end of the intervention, participants were given a printed handout outlining all the steps for the EFT process and encouraged to continue the technique at home on a daily basis.

Measures

Demographic questions. For both studies, participants were asked to provide information regarding age, gender, marital status, number of people in their household, country of birth, income, and highest level of completed education.

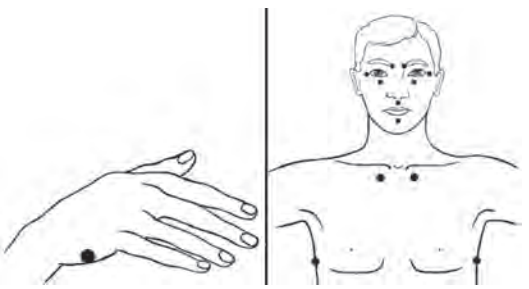

Figure 1. EFT tapping points.

Depression, Anxiety, and Stress Scales–21 (DASS-21). The DASS-21 (Lovibond & Lovibond, 1995) is made up of 21 self-report items to be completed over 5 to 10 minutes, each reflecting a negative emotional symptom. Each of these is rated on a four-point Likert scale grading the frequency or severity of the participants' experiences over the last week with the intention of emphasizing states over traits. These scores ranged from 0, meaning that the client believed the item "did not apply to them at all," to 3, meaning that the client considered the item to "apply to them very much, or most of the time." The DASS-21 has been found to possess excellent reliability and validity, adequate construct validity, and good convergent validity across racial groups and clinical versus nonclinical samples (Brown, Chorpita, Korotitsch, & Barlow, 1997; Szabo, 2010).

Brief Pain Inventory–short form (BPI). The BPI is a widely used measure of pain, and has been shown to be an appropriate measure for a wide range of clinical conditions (Cleeland, 1991). The BPI assesses pain at its "worst," "least," "average," and "now" (current) state. It also measures how much pain has interfered with seven daily activities: general activity, walking, work, mood, enjoyment of life, relations with others, and sleep pain. Reliability has been established with cancer patients (Daut, Cleeland, & Flanery, 1983), outpatients (Radbruch et al., 1999), osteoarthritis (Mendoza, Mayne, Rublee, & Cleeland, 2006), and postsurgery pain (Mendoza et al., 2004).

Qualitative survey. Participants in Study 1 completed the same demographic survey, DASS-21, and BPI as Study 2 participants, but in addition they completed an open-ended qualitative survey. This survey asked about the nature of their chronic pain; length of time suffering; experiences with chronic pain, how it had impacted their life and treatment journey; what they believed was the likely cause of their pain; what they believed was the best treatment option for them; whether physical, occupational, or behavioral therapy helped; whether alternative therapies such as yoga, massage, or acupuncture helped relieve their pain; whether they had to make any lifestyle changes as a result of their pain; whether they had experienced any stigma within the healthcare system as a result of their pain; and, finally, if they were to

pass on any knowledge or advice to health professionals, what would it be and why.

Results

Study 1: Qualitative Study of Impact of Chronic Pain upon Sufferers' Lives

Study 1 responses were analyzed for major themes using nVivo software.

A large proportion (41.0%) of participants focused upon limitations in their ability to engage in purposeful employment. Sufferers described temporary resignation from employment and forced retirement as a result of their chronic pain condition, leading to considerable financial strain. A typical comment from a participant was: "I had to give up work I loved, leading to a feeling of isolation and insignificance."

Several participants (25.6%) revealed that chronic pain was associated with reduced ability to engage in interpersonal relationships (e.g., "I was unable to be as involved with my children as much as I would have liked; snappy and bad-tempered with them in spite of best efforts; unable to participate in family holidays; then a broken marriage"). Sufferers also reported experiences of impaired day-to-day functioning in terms of minor routine tasks (i.e., moving, cooking, and driving) (n = 13), limited ability to engage in pleasurable activities ("The pain limits my mobility and my ability to enjoy life") (n = 5), and, in some cases, clinical diagnoses of depression and anxiety (n = 3).

Treatment journey characterized by very limited improvements. Sufferers generally described limited to no relief as a result of traditional therapies (30.8%) and alternative therapies (15.4%). In fact, some participants reported that they were "made worse" by the treatment offered to them (7.7%). Constant changes to medication regimes and treating practitioners were evident among the sample (n = 5), with sufferers describing persistence of pain despite ongoing trial-and-error with medications and health care professionals. One participant expressed it this way: "I have had several different types of antiepileptic drugs, several types of antidepressant drugs, and several different forms of pain relief. I have tried various health care professionals (physio, acupuncture, naturopath, osteopath, energy healer), but pain persists."

Discrepancies in sufferers' reports were observed when comparing responses to qualitative items regarding perceived causes of pain and factors maintaining pain. Findings indicated that 28.2% of the sample described emotional factors as the sole cause of their chronic pain condition. One participant said, "I believe it is a type of PTSD from the shock of finding myself in a bad marriage and sticking with it for sake of the children."

Further, 23.1% of the sample reported that emotional difficulties were the most significant variable preventing their pain from "going away." Sufferers described difficulties with stress, anxiety, unhealthy interpersonal relationships, and unhelpful cognitions (e.g., "The suffering arises from thinking 'How do I get rid of it?' 'Poor me,' 'Why me?' and 'If only,' etc.").

Despite these factors, only eight sufferers described psychological intervention as the "best treatment option for them" and only two sufferers reported relief from psychology-based treatment. These findings reveal incongruity between patients' beliefs and needs for psychological support and the availability and effectiveness of treatment to target the emotional difficulties that overlaps with chronic pain.

Strong endorsement of alternative therapies. Relief from chronic pain and associated difficulties as a result of alternative therapies was strongly evident (endorsed by 84.6%). In fact, when sufferers were asked about their belief in the best treatment option for their difficulties, 30.8% of the sample reported that they rated complementary and alternative therapies (CAM) as the most effective. One participant described a treatment regime based solely on CAM. She stated, "I do yoga several evenings a week and attend classes weekly, which is helpful in maintaining flexibility. Massage was great when my body was really tight. My massage therapist was also a Reiki healer. Had useful acupuncture as part of a Tibetan medicine course a friend gave me. EFT was useful for permanently letting go of past traumas and resentments, and works for temporary pain control. Meditation helped for anxiety and worry."

More specifically, the most effective alternative therapies reported by sufferers in the current study included massage (n = 18), yoga and pilates (n = 12), acupuncture (n = 10), and EFT (n = 5). Other promising alternative therapies that were suggested as providing relief included meditation and mindfulness, hydrotherapy, Feldenkrais, and chiropractic adjustments.

Treatment as stigmatizing. A majority of sufferers reported experiencing stigma from health

professionals, including devaluation, a lack of empathy and understanding, dismissal, blame, and generally feeling as if they were not being believed (82.1%). One participant put it this way: "You are either branded a malingerer or just to hard to deal with."

Participants identified a distinct lack of understanding and education among medical practitioners with whom they had contact during the treatment period (n = 5). Sufferers reported comments by medical practitioners inferring that the pain was "in their head," resulting in patients feeling guilty and ashamed, and believing that it was "their fault they got this way." Some sufferers explained that they had observed conflict between health care professionals (i.e., "specialists bagging each other out") and miscommunications among treating practitioners in relation to their treatment, which caused significant distress for patients.

It is also important to note that some sufferers denied experiences of stigma throughout treatment of their chronic pain (n = 13). In fact, two sufferers stated that treatment led to significant positive self-development, including experiences of having "become more philosophical, changing from a boisterous extrovert to a thoughtful introvert, and beginning on my spiritual journey."

Suggestions to health professionals. Sufferers were asked what knowledge or advice they would pass on to health professionals, if given the opportunity. Analysis revealed that the most common suggestions among the sample involved listening to and believing the patient's complaints (59.0%). One said, "Don't dismiss a person's pain experience. Listen to your patients. They live with the pain."

In line with sufferers' reports of practitioners' poor understanding of chronic pain–related difficulties, another common suggestion was for health professionals to develop understanding through education and consideration of emotional variables (n = 7). According to one participant, "Many times I have been in hospitals and told doctors, nurses, etc. that I have CRPS, and they have no idea what the disease is. Education is the key."

Other suggestions included ensuring that the treatment approach is individualized (e.g., "Each case must be dealt with and not grouped into a perceived idea. Patients need to be treated and heard on a case-by-case basis"), make referrals for a second opinion, and to consider and make available alternative therapies (e.g., "I would love to see more doctors treating people with natural therapies").

Study 2: EFT Intervention for Adult Chronic Pain Sufferers

To test the effect of the EFT intervention on outcome measures over time, repeated paired samples t-tests were performed for 18 participants. The six outcome variables were severity of pain (severity subscale of the BPI), impact of pain (impact subscale of the BPI), overall psychological distress (total DASS-21 scores), depression (DASS-21 depression subscale scores), anxiety (DASS-21 anxiety subscale scores), and stress (DASS-21 stress subscale scores). Table 1 shows the descriptive statistics of outcome variables at each time point.

Pain. Results revealed a significant decrease in the severity of participants' pain from pretest (M = 5.73, SD = 1.76) to posttest (M = 5.03, SD = 1.59), t(17) = 2.18, p = .044. Moreover, findings indicated a significant decrease in the impact of participants' pain from pretest (M = 5.62, SD = 2.23) to posttest (M = 4.63, SD = 4.63), t(17) = 3.01, p = .008.

Table 1. *Means and Standard Deviations for the EFT Participants (*N*=18) at Pre and Posttreatment*

Variable	Pretreatment		Posttreatment		Difference from pre to post	% change	p
	M	SD	M	SD			
Severity of pain	5.73	1.76	5.03	1.59	–0.69	–12.04%	.044
Impact of pain	5.62	2.23	5.63	2.38	–0.99	–17.62%	.008
Overall psychological distress	48.29	30.99	30.57	25.87	–17.71	–36.67%	<.001
Depression	14.67	13.08	10.29	10.47	–4.38	–29.86%	.007
Anxiety	12.57	10.74	7.33	8.42	–5.24	–41.69%	<.001
Stress	21.05	10.67	12.95	9.35	–8.10	–38.48%	.001

Psychological distress. Findings indicated a significant improvement in participants' overall psychological distress from pretest (M = 48.29, SD = 30.99) to posttest (M = 30.57, SD = 25.87), t(20) = 4.52, $p < .001$. There was also a significant improvement in participants' depression, t(20) = 3.02, $p = .007$; anxiety, t(20) = 4.66, $p < .001$; and stress, t(20) = 3.89, $p = .001$.

Relationship between variables. To explore whether there was a link between emotional and physical conditions, analyses were performed to examine the bivariate correlations between dependent variables (Table 2). Correlational analysis indicated that, at pretest, each of the psychological variables (i.e., depression, anxiety, stress, and overall psychological distress) was significantly related to greater impact of pain scores. However, none of the psychological variables were significantly related to participants' reported severity of pain at pre-intervention. At posttest, participants' pre- and post-intervention anxiety scores were significantly related to severity of pain. Moreover, participants' post-intervention psychological scores (i.e., depression, anxiety, stress, and overall psychological distress) were significantly associated with greater impact of pain scores. Overall, these findings may indicate that reductions in pain may be associated with mental health improvements, and may require further research to investigate these relationships.

To test whether the effect of the EFT intervention was sustained over time, six repeated measures analyses of variance (ANOVAs) were performed. Analysis was based on 11 participants, due to attrition across time (i.e., from pre-intervention to 6-month follow-up points).

Mauchly's test indicated that the assumption of sphericity had not been violated for any of the outcome measures. There was a significant overall main effect of Time, F (10, 32) = 2.18, $p = .046$, n2 = .41, power = .81.

Pain. Results revealed a significant main effect of Time on the severity of participants' pain, F (2, 20) = 3.45, $p = .052$, n2 = .26, power = .58. However, pairwise comparisons indicated no statistically significant changes from pre- to post-intervention ($p = .130$) or 6-month follow-up ($p = .181$). (See Table 3 for all post hoc paired comparisons). Results revealed no significant main effect of Time on the impact of participants' pain, $p = .073$.

Psychological distress. Findings indicated a significant main effect of Time on participants' overall psychological distress, F (2, 20) = 4.77, $p = .020$, n2 = .32, power = .73. Pairwise comparisons revealed participants' psychological distress scores significantly decreased from pre-intervention to post-intervention ($p = .017$), an effect that was not maintained at 6-month follow-up ($p = .170$).

Results revealed a significant main effect of Time on participants' anxiety scores, F (2, 20) = 5.04, $p = .017$, n2 = .34, power = .75. Pairwise comparisons indicated participants' anxiety scores significantly decreased from pre-intervention to post-intervention ($p = .022$), an effect that was not maintained at 6-month follow-up ($p = .120$). Results revealed a significant main effect of Time on participants' stress scores, F (2, 20) = 3.61, $p = .046$, n2 = .27, power = .60. However, pairwise comparisons indicated no statistically significant changes from pre- to post-intervention ($p = .078$) or 6-month follow-up ($p = .078$). Results revealed no significant main effect of Time on participants' depression scores, $p = .166$.

Discussion

The lived experience of the chronic pain sufferer is often traumatic, distressing, and endured alone. The qualitative exploration in the present study highlighted the employment and interpersonal relationship issues that sufferers face. Though many of the participants discussed emotional factors impacting their pain experience, only 4% reported any relief with psychological intervention. They also described suffering stigma with their health professionals, highlighting issues such as not being believed (the extent of their pain) and feeling dismissed or misunderstood. Finally, while relief from chronic pain and associated difficulties as a result of alternative therapies was emphasized (84.6%), only 30.8% of the sample reported that they rated complementary and alternative therapies (CAM) as being effective.

With these comments and thoughts in mind, Study 2 aimed to deliver a brief intervention focused on EFT to a group of patients from a local persistent pain program. In the course of the 4-hour intervention, participants rated their impact and severity of pain to be significantly reduced, and their overall psychological distress (depression, anxiety, and stress) was significantly improved. Similar research has found that after a 4-hour workshop (followed by 2 hours of

Table 2. *Relationships Between Psychological and Physical Variables*

		Pretest						Posttest					
		Depression	**Anxiety**	**Stress**	**Total**	**Severity**	**Impact**	**Depression**	**Anxiety**	**Stress**	**Total**	**Severity**	**Impact**
Pretest	Depression	–											
	Anxiety	.677**	–										
	Stress	.688**	.801**	–									
	Total	.888**	.908**	.911**	–								
	Severity	.267	.281	.193	.276	–							
	Impact	.585**	.341**	.540**	.653**	.729**	–						
Posttest	Depression	.864**	.648**	.645**	.811**	.034	.501*	–					
	Anxiety	.657**	.883**	.629**	.800**	.185	.643**	.769**	–				
	Stress	.553**	.586**	.553**	.627**	–.172	.392	.759**	.742**	–			
	Total	.763**	.761**	.666**	.815**	.012	.554**	.929**	.905**	.910**	–		
	Severity	.300	.535*	.355	.433	.677**	.662**	.240	.474*	.409	.393	–	
	Impact	.555*	.695**	.523*	.655**	.304	.817**	.644**	.765**	.668**	.741**	.594**	–

Note: *$p > .050$; **$p > .010$.

Table 3. *Post Hoc Paired Comparisons, with Sidak Adjustments, for Repeated Measures Analyses of Variance (*N = *11)*

Variable	6-month vs. pretreatment			6-month vs. posttreatment			Posttreatment vs. pretreatment		
	Mean difference	*p*	% change	Mean difference	*p*	% change	Mean difference	*p*	% change
Severity of pain	1.03	.181	17.27%	0.01	1.00	0.20%	1.02	.130	17.09%
Impact of pain	0.71	.523	12.51%	–0.69	.704	–16.13%	1.40	.043	24.67%
Overall psychological distress	18.82	.170	39.74%	–3.46	.964	–13.79%	22.27	.017	47.02%
Depression	6.09	.505	39.64%	–0.91	.993	–10.88%	7.00	.036	45.56%
Anxiety	6.55	.120	57.18%	0.73	.982	12.95%	5.82	.022	50.81%
Stress	6.18	.274	30.08%	–3.27	.774	–29.48%	9.46	.078	46.97%

self-application), pain and emotional distress were significantly reduced (Church & Brooks, 2010), and a 3-day EFT intervention has been shown to immediately reduce pain severity while also improving participants' ability to live with their pain (Ortner, Palmer-Hoffman, & Clond, 2014).

In the current study, each of the psychological variables (i.e., depression, anxiety, stress, and overall psychological distress) was significantly related to greater impact of pain scores. Participants' pre- and post-intervention anxiety scores were significantly related to their severity of pain and their psychological scores (i.e., depression, anxiety, stress, and overall psychological distress) were significantly associated with greater impact of pain scores. It is important to consider that reductions in pain may be associated with mental health improvements.

Despite the evidently small sample size of the final intervention group at 6-month follow-up, and thus reduced statistical power, the quantitative analyses revealed noteworthy findings. The EFT-based intervention appeared to produce significant improvements over time for severity of pain, as well as anxiety, stress, and overall psychological distress. These findings are comparable to those found in studies of larger samples, in which EFT is shown to be an effective intervention for chronic pain sufferers (Church & Nelms, 2016; Church & Brooks, 2010; Rowe, 2005). The effectiveness of brief EFT (ranging from 15 to 45 minutes for an intervention) has been previously demonstrated (Baker & Siegel, 2010; Church & Nelms, 2016; Salas, Brooks, & Rowe, 2011; Wells et al., 2003) and, as a brief group-delivered intervention, EFT has the promise of being cost effective and it appears results are achievable in fewer treatment sessions than traditional therapies.

This study is not without its limitations: It lacked a comparison group, the sample size was small and lacked power at 6-month follow-up, and a longer follow-up period may have been beneficial. Power analysis was performed to ascertain the size required to increase significance, especially at follow-up points. G*Power 3 (Faul, Erdfelder, Lang, & Buchner, 2007) indicated 118 participants across two groups (e.g., treatment versus control) would be needed to achieve 80% power for a moderate effect ($p < 0.05$). Furthermore, participants did not self-select to the intervention; thus this may have avoided any biases about the technique and results may be indicative of how EFT results in decreases in pain for any individual. Though we requested that participants continue to self-apply the technique after the workshop, only half the sample indicated they were still using it at 6-months' follow-up. Church and Brooks (2010) found that those who applied EFT after a workshop were more likely to maintain their gains, though on follow-up that study also found less than half using it. Future studies should include larger sample sizes, a longer treatment time frame, a randomized control group, and measurement of whether participants self-apply EFT after intervention.

In sum, the brief application of EFT for chronic pain sufferers may assist with self-management of pain and in a low-cost manner. The economic cost of chronic pain is as high as $635 billion a year, which is more than the yearly costs for cancer, heart disease, and diabetes (Gaskin & Richard, 2012). The ability

to offer an effective and time-efficient psychological intervention is paramount. With improved research trials, EFT may be part of that solution.

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