

Reducing Anxiety in Dental Patients Using Emotional Freedom Techniques (EFT): A Pilot Study

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Abstract

Adult patients awaiting dental treatment were screened for self-reported anxiety using an 11-point Likert scale. Those in the higher half of the range ($n = 30$) received a 10-min intervention consisting of a 4-min Emotional Freedom Techniques (EFT) explanation and 6-min treatment. All patients reported a decrease in subjective anxiety, with a mean pretreatment score of 8.03 and a posttreatment score of 3.03. Paired t

tests revealed a statistically significant decrease ($p < .001$). These results are consistent with other published reports of EFTs efficacy for anxiety. They suggest that even a very brief EFT intervention can reduce anxiety and that an additional controlled trial with both observer- and participant-rated measures should be undertaken.

Keywords: anxiety, dental treatment, EFT, Emotional Freedom Techniques

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Despite the many advances in technology, materials, and techniques, dental anxiety remains common in the Western world, with between 10% and 33% of patients reporting anxiety related to dental treatment (Hackenberg, Beggren, & Carlsen, 1992; Nuttall, Bradnock, White, Morris, & Nunn, 2001). Various therapies have been used to successfully reduce anxiety, including cognitive behavioral therapy, eye movement desensitization and reprocessing, and hypnosis (Coelho, Canter, & Ernst, 2007; Seidler & Wagner, 2006). There is much evidence to demonstrate that such therapies may effectively remediate dental anxiety (Rudolph, Kraft, & Reilly, 1990; Corah, 1990). The efficacy of Emotional Freedom Techniques (EFT) in treating various other types of anxiety, such as public speaking anxiety (Jones, Thornton, & Andrews, 2011) and test anxiety (Sezgin & Ozcan, 2009), makes it a candidate for a study of its possible utility in treating dental anxiety.

EFT borrows elements of established therapies such as exposure therapy and approaches focusing on cognitions. To these, it adds the novel

element of stimulating acupuncture points gently with the fingertips. The addition of acupressure while someone experiences emotionally troubling events is believed to serve as a counterconditioning stimulus (Lane, 2009). Feinstein and Church (2010) reviewed the proposed EFT physiological mechanisms of action, including regulating the autonomic nervous system, increasing the production of inhibitory neurotransmitters, and silencing the expression of stress-promoting genes. Hoss and Hoss (2010) have traced the activation of limbic brain structures during the threat response and shown how EFT may provide a soothing signal through these pathways. EFT was developed by Gary Craig in the mid-1990s and based on earlier work by clinical psychologist Roger Callahan (2001; Mollon 2007). A manual was presented online in 1998 and subsequently made available in print (Craig, 2011).

Various studies have shown EFT to be efficacious for anxiety. A randomized controlled trial (RCT) of phobias (Wells, Polglase, Andrews, Carrington, & Baker, 2003) showed that phobic patients experienced a reduction in co-occurring anxiety. The Wells study was replicated by Salas, Brooks, and Rowe (2011) and extended by Baker and Siegel (2010). Baker and Siegel's RCT was carefully designed to determine whether the observed effects were due to experimental artifacts such as expectancy effects, nonspecific treatment effects, expectancy effects, or regression to the

mean. They found that after controlling for these factors, the EFT intervention itself was the active ingredient in treatment.

Church (2010) reviewed the evidence for EFT's efficacy for anxiety, depression, and other conditions and noted that several RCTs have shown significant symptom reductions in a variety of populations. These have included fibromyalgia patients (Brattberg, 2008), war veterans with PTSD (Stein & Brooks, 2011), university students (Benor, Hett, & Zaccaro, 2010), high school students (Sezgin & Ozcan, 2009), and subjects experiencing public speaking anxiety (Jones et al., 2011). A large open trial of healthcare practitioners found EFT to produce significant reductions in anxiety (Church & Brooks, in press). Follow-ups demonstrated that participant gains were maintained over time and that those subjects who used EFT more experienced significantly larger symptom reductions. This study was an extension of an earlier one of a general population (Rowe, 2005), which was later replicated with the same positive results (Palmer-Hoffman & Brooks, 2011).

Some studies have shown that EFT can be effective in very brief treatment times. Salas et al. (2011) used a 10-min application for phobias, with significant results. A study of basketball players treated for anxiety and other obstacles to performance used a 15-min application (Church, 2009). In the present pilot study, treatment was held to a maximum of 6 min, within an allocation of 10 min for explanation, assessment, and treatment, in order to fit within the schedule of a busy dental practice.

Design

The study was primarily undertaken as an audit of an anxiety reduction procedure within routine dental practice and used a simple repeated measure design.

Patients were asked to report their anxiety on an 11-point Likert scale, ranging from 0 (*no anxiety*) to 10 (*maximum possible anxiety*). This is called the Subjective Units of Distress, or SUD, Scale and was developed by psychiatrist Joseph Wolpe in the 1960s as a rapid way to evaluate patient-reported outcomes (Wolpe, 1973). Following a brief application of EFT, the SUD would be taken again.

Though SUD has the limitation of being a subjective report, it has been shown to correlate with other outcome measures. These include arousal of

the autonomic nervous system (Thyer, Papsdorf, Davis, & Vallecorsa, 1984) and other physiological indicators, such as vasoconstriction, respiration, heart rate, and galvanic skin response (Sheeringa, Zeanah, Myers, & Putnam, 2004). When SUD is reduced by successful therapy, these physiological signs are reversed (Wilson, Silver, Covi, & Foster, 1996). These physiological changes have been noted in the dental literature cited above.

Procedure

Any patients found to need dental treatment at their examination (i.e., fillings, extractions, root canal treatment) were asked to assess their level of anxiety on a 0–10 SUD scale.

Patients scoring six or more were invited to experience EFT. Their verbal consent was recorded. A very brief explanation was given and an appointment made for the dental treatment, with an extra 10 min allowed for further explanation and administration of EFT.

At that appointment, an initial SUD score was noted and followed by an explanation of the procedure. EFT was applied, first in its basic form, then with standard variations as required until

1. no more was needed (SUD 2 or less) or
2. 6 min had elapsed (this was the approximate time remaining of the 10 min allowed after the procedure was explained).

A final SUD score was then taken.

Patients were asked to describe briefly their anxiety in their own words. EFT's "setup statement" combines patient cognitions with a self-acceptance statement. An example might be, "Even though the sound of that drill scares me to death, I deeply and completely accept myself." The patient would then be guided to tap on 12 prescribed acupressure points while voicing brief phrases referring to the anxiety, along with other related phrases and statements suggested by the clinician.

Patients were encouraged to tap on any of the acupressure points they felt might help during the dental treatment, excluding those on the head for safety reasons.

The EFT was carried out by author Graham P. Temple, who was also the dentist. He is a Level 3 EFT practitioner and trainer certified with the Association for the Advancement of Meridian Energy Techniques, and he originally received training from Gary Craig.

Results

Data were obtained from 30 adult patients, 14 male, 16 female, the youngest being 18 years old and the oldest 70 years old. SUD pretest scores ranged from 6 to 10, while posttest scores ranged from 1 to 7. All patients experienced a decrease in their SUD following the intervention. The average decrease was 5 points, with a minimum decrease of 2 points and a maximum of 8 points. Eighty-three percent of the sample ($n = 25$) experienced a decrease of at least 4 points, whereas 73.3% ($n = 22$) had a SUD rating of 3 or less at posttest. Paired t tests were conducted on the pre–posttest SUD ratings. There was a statistically significant decrease in SUD at posttest (see Table 1).

Table 1: Paired t Test Subjective Units of Distress Results

Time point	M	SD	$t(29)$	p
Pretest	8.03	1.377	16.29	<.001
Posttest	3.03	1.847		

Note: p indicates significance. Value for pretest is value for difference between pre and posttest.

Discussion

This was a relatively small study, undertaken primarily as an audit, but the results suggest that EFT can reduce anxiety in dental patients rapidly and consistently. Some of the patients in this study would obviously benefit from a more intensive, prolonged course of treatment to reduce their anxiety to a comfortable level, but even in these cases, there was some change in the level of anxiety. Anxious patients do take more time and effort to treat, and that treatment can be an unpleasant experience for all concerned (ter Horst & de Wit, 1993). Therefore, techniques that alleviate that anxiety safely, quickly, and effectively benefit not only the patient but also the whole dental team (Simons, Potter, & Temple, 2007).

It is important to note that in this study, no patient reduced their score to zero, which is usually desirable with other issues. When having dental treatment, especially invasive treatment such as a local anesthetic injection, tooth extraction, or work with a dental drill, for example, it is natural to experience some activation of the Sympathetic nervous system and the resulting chemical changes. This is a normal response to threat (Selye,

1976). Consequently, a score of 2 signifies a level of arousal that allows the patient to be comfortable and perhaps be able to deal with the experience more effectively.

This study has limitations. There was no control group, and the number of subjects was small. There has been no follow-up data gathered. However, most of the subjects are still regular patients who appear to be more comfortable with dental treatment. Furthermore, personal experience in using EFT for a variety of issues and the evidence from studies of EFT where follow-up data are available suggest that these gains are maintained to a statistically significant degree (Feinstein, 2008). There was no test for any placebo effects, such as rapport, communication skills, or the like. There was also no comparison with other techniques, such as hypnosis. Finally, there was no objective assessment of the patients, with all scores coming from the patients' own subjective ratings; however, patient comments and staff observations tended to confirm the validity of the reduced scores.

Conclusion

This pilot study suggests that EFT reduces anxiety quickly and effectively; however, more research and more comprehensive studies are needed to verify whether these findings are indicative and long lasting. Additionally, comparative studies of EFT and other therapies, such as hypnosis or cognitive behavioral therapy, and a control group that is given normal preoperative attention only would be desirable. The use of observer-rated measures would further add to the evidence base.

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