

## Published Research – Lay Summary

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### College Students

#### *Test Anxiety*

Canadian Psychiatrist Dr Dan Benor and colleagues in 2009 conducted a pilot study of EFT and compared it to a Wholistic Hybrid derived from EMDR and EFT (called WHEE) and as well as Cognitive Behavioral Therapy (CBT). They were interested in how these three treatments would impact test anxiety in 15 university students (five students in each condition). This was a pilot study and while significant reductions in test anxiety were observed for all three treatments, more rapid benefits were observed in the experimental treatments (WHEE and EFT). Both WHEE and EFT achieved the same benefits as CBT did in five sessions, but they only took two sessions each to achieve it, potentially suggesting EFT and WHEE may have more rapid treatment effects. The students, who received the experimental treatments, were also observed to successfully utilize the skills learnt and apply them to other stressful areas of their lives<sup>1</sup>.

EFT has also been compared to diaphragmatic breathing with solid outcomes. This type of breathing is often taught to people for anxiety and stress (it is breathing that is done by contracting the diaphragm). Researchers in the USA randomly assigned 168 university students to three groups: Group 1 learnt EFT for test anxiety, Group 2 learnt diaphragmatic breathing, and Group 3 did not receive any treatment (control group)<sup>2</sup>.

The researchers measured psychological symptoms, test anxiety levels, and self-care behaviors before and after the 2-hour lesson they received. On a scale of one to five, where one was ‘not at all’, and five represented ‘extremely’, students were asked how well they did in:

1. Eating a healthy, nutritionally balanced diet?
2. Getting adequate rest on a regular basis?
3. Getting a healthy amount of exercise each week?
4. Practicing healthy forms of relaxation on a regular basis?

They were also asked to create a qualitative list of their particular issues that they believed contributed to their test anxiety, trouble studying, and less-than optimal test performance. This list was used in the treatment they received.

Students also completed some measures of their levels of test anxiety.

Groups 1 and 2 were asked to self-apply the technique they were taught for five minutes before any study session or exam, for a total of 4-weeks. They were followed up several weeks later at the end of the teaching semester.

The breathing group had a significantly higher increase in the self-care gain scores than did the tapping or control groups (there was no significant difference in the gain scores for these groups).

The breathing group also had a significantly higher decrease in the levels of test anxiety than the tapping or control groups. However, **the tapping group did report a significant decrease** in their levels of test anxiety, as compared to the control groups.

Overall, **both the EFT and breathing groups had significant reductions in their symptoms, and the gains they made were still present at the end of the semester.**

Anxiety actually increased in the participants of the control group.

### *A Comparison to Sham Tapping*

Another study of 56 American university students wanted to examine EFT for stress and compare to sham tapping<sup>3</sup>. The students were enrolled in a fourth year thesis psychology program. They were randomly assigned to either the EFT (26 students) or sham group where they tapped on non-EFT points (30 students). For both groups, 69.6% were female, and 28.6% male, with ages ranging from 20 to 50 years old (average 23.4 years).

They were all assessed for nine common stress symptoms before and after a single 15–20 minute group session (of five to 10 students).

They were asked to rate (within the past 6 months), if their sleeping or appetite had changed (more or less than usual). On the day of the group they were also asked to rate whether they were feeling physical tension, experiencing more emotional stress than normal, how worried or anxious they were about future events, whether they had difficulty taking deep breaths, concentrating on tasks, experiencing any physical pain, and whether today was a good day.

Participants in both groups then repeated statements from a script containing eight sets of stressful cognitions centred on feeling overwhelmed and hopeless, and ending with positive affirmations.

The EFT group tapped as per The EFT Manual points. The sham group used an identical procedure except that participants were taught to tap with their fingertips on sham points. These included the top of the hand, elbow, shoulder, forehead, stomach, knee, and thigh. Every effort was made to keep the two protocols identical with the exception of the body points.

Stress symptoms **declined significantly more in the EFT group** than they did in the sham tapping group. In the EFT group ( $n = 26$ ), **symptoms declined 39.3%** whereas the sham tapping group had an 8.1% reduction.

### *A Further Study on Performance Anxiety*

UK researchers<sup>4</sup> looked at 52 university students who were studying a research methods subject and had to give a presentation. It was known this always created anxiety amongst them. All the students attended a 15-minute EFT lesson where they applied tapping to their public speaking fear.

They had their worry assessed before and after the lesson (approximately 30 minutes), and were told they could use EFT anytime they wanted for their presentation, which was happening 8-weeks later. Immediately after their presentation piece, 46 students were interviewed to find out who had used EFT beyond the 15-minute lecture.

Nineteen had used EFT for their presentation anxiety and 27 had not. Reasons for not using EFT included forgetting, feeling ‘silly’ tapping it in public, and uncertainty that they were doing it right.

**Students who had used EFT actually received significantly higher grades** than those who had not ( $p < 0.01$ ). There was also a **significant reduction in their anxiety scores**. The average anxiety scores before EFT (10.22) were well over the clinical cut-off point for anxiety, however following the EFT intervention they reduced to 7.83 (a non-clinical level).

Depression was not affected at all as the baseline rates were normal.

The interviews indicated the students found EFT to be useful to enhance academic performance. Students found the skill calming and helped with focus:

*Yes. I did it [EFT] in the car. It helped. I didn't sleep well last night – got a dry mouth and feel shaky, but not as bad as I usually am when doing a presentation. My legs are normally going, but they are alright today. It definitely took the edge off. I would definitely use it again. Used it for helping me to sleep and will use it again in future. (Kelly)*

*Yes I usually go blank, I forget. And I used it to keep me focused today. I also used it when I first sat down and looked at the assignment. It did actually work. (Jacky)*

*Yes, I done it before I came in and yesterday. It really helped me actually. It helped me to calm down. Helped my emotions – my anxiety, nervousness. Helped me to calm down really. It took the edge off the presentation (Roberta)*

*I have done it a few times for other things, for example when I am feeling a little bit worried. ...It was something to do while waiting outside. Tapped in the corridor! (Anne)*

Limitations did include that the lead researcher was not blind to treatment group, the students were aware that the authors were highly experience advanced EFT practitioners and that all had a strong allegiance to EFT. This may have influenced students' responses. However, the results do suggest a potential role for EFT as a brief group intervention to reduce presentation anxiety and potential enhance academic performance.

## The Research on High School Students

While much research is focused on students reducing negative feelings, it can also be taught for overcoming things like limiting beliefs that may act as a mental block for goals being achieved.

### ***Australian Research***

Dr Stapleton has taught this type of thing to 16-17 year old high school students who are nearing the end of their schooling. Many of them have goals such as: wanting to achieve a certain grade to gain entry into college or university, to sporting goals.

One student we knew really wanted to be the School Captain and represent the school the following year. But he needed to be voted by his peers and teachers. He had a long list of reasons why this

'couldn't possibly' come true – from not being popular enough amongst his peers, to not being extroverted enough as a leader. We had him write down all the possible reasons that could be blocks to this goal coming true, he rated how strong they felt out of 10 (10 being the highest) and then we used the EFT technique to systematically tap through them and reduce their intensity, one by one.

His list of reasons that he might NOT become school captain were:

- *No one really knows me as I am quiet*
- *I haven't been at the school for the whole time (he came to the school the year before)*
- *I don't know if I can give a good enough speech at the assembly where potential students vied for the position (for voting)*
- *I have never really won anything before, so why would I win now*

We used those exact statements and put them in the formula (Even though...) – and tapped our way through them. We got to the end and he felt pretty relaxed. Peta asked what his BELIEF was now that he might become the school captain, and he said 10/10! He didn't feel like there was any doubt left in him.

Obviously he still had to give the speech at the assembly later that year and then be voted in. Peta suggested he use tapping leading into that event, in case he was nervous or doubtful.

A year later Peta was talking to the school principal, having completely forgotten about the tapping with that student many months ago. But she suddenly remembered and asked who was the School Captain that year. The Principal said "you know, this unknown student just stood out and he has been fantastic. It is xxxx". Of course, Peta started laughing and told the Principal he was one of the students we worked with in the course we ran for them a year later - on that very goal.

### ***American Research***

#### *Test Anxiety*

In a large study, American researchers examined 312 high school students and identified 70 of them with high-level test anxiety<sup>5</sup>. They randomly assigned the students to a control group who received progressive muscle relaxation techniques or EFT treatment. While both groups reported a significant decrease in student anxiety, **a greater decrease was observed for students who received EFT.**

### ***Nigerian Research***

A 2014 study investigated the effects of numerical cognition and EFT on mathematics anxiety among senior secondary students in three public secondary schools in Ibadan, Nigeria<sup>6</sup>. They had consistently records of low achievement in Mathematics and they researchers were able to obtain the academic records with school authority permission and cooperation.

There were 120 students included and a pseudo-dyscalculia scale was used to identify those with mathematics phobia. They also completed a Mathematics Anxiety Scale, Mathematics Efficacy Scale, and Mathematics Achievement Test.

Students were allocated to one of three groups: Numerical Cognition, EFT or a control group. Numerical Cognition proposes students are more likely to find a solution to a problem when they concentrate on their successes rather than their failures. The trial occurred over 10 weeks during the school term.

The results showed the **EFT intervention was more effective** than the Numerical Cognition approach. It reduced students' mathematics anxiety more at post-test, especially among students with high mathematics efficacy.

### **More on High Achieving Students**

Peta's own research in high school students came about as a result on media attention we gained because of our food craving trials. On the surface this doesn't seem related but one of the main factors affected when you use EFT for food cravings, is anxiety. We continually see a large reduction in anxiety when adults tap on wanting to eat a food they craved. So the media at the time was reporting this in stories.

A local school guidance officer saw this and made contact to see whether EFT would work just for anxiety in students. The answer was (of course): Yes. And so we conducted the largest trial of 15 year olds suffering academic stress to date<sup>7</sup>.

In total, 204 Year 10 (Freshman) students from two Australian high schools participated: 80 were allocated to the EFT intervention group from one school and 124 from the second school acted as a waitlist control (and they received the intervention at the end of the first group's course, and both groups were demographically similar).

The average age of the students was 14.8 years and more than 50% were female. All students were engaged in academically advanced streams, and all EFT treatment was delivered *in school time*, with parental and school permission (and ethical approval from the University and the Government Department of Education, Training, and Employment).

The students all received five weekly sessions of 75 minutes each, during normal school hours and a booster session one year later. All students completed questionnaires about self esteem, resilience, their perceived strengths and difficulties and their fear of failure at the start of the program, at the end of the program, and at 6-months and a year later.

What was interesting was that the baseline resilience scores of the students' indicated the presence of anxiety levels commonly found in populations suffering from generalised anxiety disorder. The students' self report measures indicated normal levels of self-esteem however, so this was not impacted in the study.

Overall what they did indicate as their main worries were: self perceived difficulties in life, and a strong fear of failure.

The largest statistically significant change was from the start of the program to a year later. *Fear of failure* was the most significantly affected variable, and students indicated in their survey 12-months later (compared to when they started the trial) that this was the most impacted area in their lives (the statistical difference indicates the results were not due to chance). **This means they did not feel any where near the same fear of failure than before they started the tapping.**

They concluded EFT had the potential to assist students' perceived difficulties and impact their fear of failure. The potential improvements in student functioning, the ease of teaching EFT in a group, and the cost-effectiveness suggest that further research is warranted, but EFT may offer students significant benefits with low risks and time demands, at relatively low financial cost to schools.

## ***EFT and Learning Concerns***

There has been a case study done on how EFT can be used for Dyslexia (a learning condition which is evident in reading, comprehension, spelling and writing). Often the condition causes the child emotional distress as well. While this study is a single case study (often useful as the basis for larger trials), it is a starting point to learn what works and what doesn't.

Fiona McCallion, a London therapist<sup>8</sup>, worked with a woman in her 20s who suffered dyslexia and had sequencing, disorientation and emotional feelings attached to it. They had three sessions and addressed all of these areas with EFT. They started with past memories of teachers who had ridiculed her in class when she was younger.

The second session focused on two specific incidents involving two teachers at school. One was a maths class where she was not given the marks for correct answers, because she couldn't explain the method she used to arrive at them. While she received marks for an incorrect answer (based on the method used), when she got the answer right, she got zero marks because she couldn't explain the method.

By the end of the three EFT sessions, **the client was able to read easily and fluently, and understand sentences. The disorientation associated with the client's dyslexia had also reduced significantly to a point where it was no longer an issue.**

## ***EFT for Sporting and Athletic Improvement***

### *Basketball*

Dr Dawson Church has done some work with 26 athletes using EFT<sup>9</sup>. The first was a randomized study with high performance men's and women's PAC-10 college basketball team members. A total of 14 males and 12 females participated.

Everyone engaged in a warm-up standard to the teams, lasting 10 minutes and consisting of stretches and running. They then performed 10 free throws, and two groups of three jumps (six jumps total). The vertical height of the jumps was measured using a Probotics jump pad, which electronically records and displays jump height in tenths of an inch.

The athletes were then randomized by an independent research assistant into two matched groups, based on the average height of the second group of three jumps. During the study they were instructed to practice free throws, run, dribble, do vertical jumps, and generally stay warmed up.

One group then received 15 minutes of EFT (one individual 10 minute session and then a follow up individual five minute session). A participant was taken into a private office, and taught EFT for 10 minutes on their own. They then went back to the court, performed three vertical jumps, and returned to the treatment room for an additional session lasting five minutes. After this, they returned to the court to perform three final jumps and a post-treatment set of ten free throws. Every athlete did this individually until the whole group was finished.

The control group received 15 minutes of inspirational basketball tips and techniques.

The EFT team members improved on average 20.8% in free throws, compared to the control group who *decreased* on average 16.6% in free throw ability. Interestingly, free throws increased an average of 2.6% for females in the EFT treatment group, while the control group *decreased* an average of 22.2%. There was no treatment group difference for males.

Vertical jump height wasn't affected at all, but given it was only a 15-minute EFT session, which still achieved significant results, it would be worth replicating this as a longer timeframe to see what could be achieved!

### *Volleyball*

Church and Downs<sup>10</sup> have also looked at sports confidence in athletes who had a traumatic memory related to their sports performance. Athletes were assessed on their level of distress when asked to recall either an emotionally troubling memory in which their "team did not win" or their "worst experience with a coach." They were excluded if their score was less than 3 on a Likert scale (ranging from 0 = *minimal distress* to 10 = *maximum distress*).

Participants were 10 female volleyball athletes (aged 19 years on average) who had academic scholarships based on their sports abilities. They had played volleyball for nine years on average.

All women completed the Subjective Units of Distress (SUD) scale, the State Sport Confidence Inventory, and the Critical Sport Incident Recall Survey. They were measured at 30 days before the intervention, 15 days before and just prior to the EFT session.

Athletes' pulse rates were measured at every time point as well, with the Instapulse 107, a portable handheld device that measures electrocardiogram rhythm and displays a four-heartbeat average. They also completed all assessments immediately after the EFT intervention, and 60 days later.

Participants received an individual 20-minute EFT session where they focused on her description of the traumatic memory (i.e., of her team not winning or of her worst experience with a coach).

**Significant improvements in both the emotional and physical components of sports performance were seen after the session, and all improvements were maintained 60 days later.** The pulse rate did not show significant reductions immediately after EFT but did show a significant reduction at follow-up.

While the sample size was small and all female, and there was no control group, the study still highlighted the possibility of EFT's ability to impact athletes' levels of confidence and distress, and possible future performance outcomes.

### *Soccer*

In soccer, two female English soccer teams (26 in total aged 15-30 years) were allocated to an EFT session to improve goal kicking ability or normal soccer coaching<sup>11</sup>. They all participated in warm up and completed a series of penalty goal attempts. The EFT group received a 10-minute session (designed to match the basketball study outlined above to try and verify the results of brief EFT), and then attempted an unchallenged soccer goal from 50 feet away.

The results revealed a **significant improvement in goal scoring ability from the dead ball situation following the brief EFT session.** The study also showed a statistically significant difference between the two groups that the authors hypothesized might have related to a decrease in associated anxiety levels for the EFT group.

## *Gifted Children*

Dr Amy Gaesser and colleagues<sup>12</sup> have examined gifted students. This is an area that is largely under-researched. It is suggested gifted children may experience additional stressors due to their unique characteristics and they may suffer from higher levels of stress due to perfectionistic tendencies, heightened sensitivity, social challenges, and additional external pressures.

This study took place in 10 schools (eight public/two private; four high schools/six middle schools) in two north-eastern states in America. There were 63 high-ability students (aged 10-18 years) who were identified as anxious. There were 18 males and 45 females, and were within the top 15%– 20% of their peer groups academically. Everyone completed the Revised Children's Manifest Anxiety Scale-2 and all scored at moderate to high anxiety levels.

Students were randomly allocated to an EFT group, a CBT group, or a waitlist control group (all groups had 21 students). Those students in the CBT or EFT treatment groups received three individual sessions of treatment. Sessions occurred over a 5-month period, with most occurring not less than one week or more than two weeks apart.

**The EFT group showed significant reductions in their anxiety levels** compared with the waitlist control group, and while the CBT students showed a reduction in anxiety too, they did not differ significantly from the EFT students. **What this meant was the EFT was comparable to a gold standard treatment like CBT and could achieve the same outcomes.** Larger trials are necessary but at least the evidence is promising.

<sup>1</sup> Benor, D. J., Ledger, K., Toussaint, L., Hett, G., & Zaccaro, D. (2009). Pilot study of Emotional Freedom Technique (EFT), Wholistic Hybrid derived from EMDR and EFT (WHEE) and Cognitive Behavioral Therapy (CBT) for treatment of test anxiety in university students. *Explore*, 5(6), 338-340.

<sup>2</sup> Jain, S., & Rubino, A. (2012). The effectiveness of Emotional Freedom Techniques (EFT) for optimal test performance: A randomized controlled trial. *Energy Psychology: Theory, Research, & Treatment*, 4, 13-24. doi:10.9769/EPJ.2012.4.2.SJ

<sup>3</sup> Rogers, R., & Sears, S. (2015). Emotional Freedom Techniques (EFT) for stress in students: A randomized controlled dismantling study. *Energy Psychology: Theory, Research, and Treatment*, 7(2), 26-32. doi:10.9769/EPJ.2015.11.1.RR

<sup>4</sup> Boath, E., Stewart, A., & Carryer, A. (2013). Tapping for success: A pilot study to explore if Emotional Freedom Techniques (EFT) can reduce anxiety and enhance academic performance in University students. *Innovative Practice in Higher Education*, 1.

<sup>5</sup> Sezgin, N., Ozcan, B., & Church, D. (2009). The effect of two psychophysiological techniques (Progressive Muscular Relaxation and Emotional Freedom Techniques) on test anxiety in high school students: A randomized blind controlled study. *International Journal of Healing and Caring*, 9.

<sup>6</sup> Aremu, A. O., & Taiwo, A. K. (2014). Reducing mathematics anxiety among students with pseudo-dyscalculia in Ibadan through numerical cognition and emotional freedom techniques: Moderating effect of mathematics efficacy. *African Journal for the Psychological Studies of Social Issues*, 17(1), 113–129.

<sup>7</sup> Stapleton, P.B., Murphy, D., Pidgeon, A.M., Porter, B., Thibault, S., & Sheldon, T. (2017). The Efficacy of Emotional Freedom Techniques for Improving Student Wellbeing: A Controlled Clinical Trial. *Adolescent Psychiatry*

<sup>8</sup> McCallion, F. (2012). Emotional Freedom Techniques for Dyslexia: A Case Study; *Energy Psychology: Theory, Research, & Treatment* 4(2). doi: 10.9769/EPJ.2012.4.2.FM

<sup>9</sup> Church, D. (2009). The Effect of EFT (Emotional Freedom Techniques) on Athletic Performance: A Randomized Controlled Blind Trial. *The Open Sports Sciences Journal*, 2, 94-99

<sup>10</sup> Church, D., & Downs, D. (2012). Sports confidence and critical incident intensity after a brief application of Emotional Freedom Techniques: A pilot study. *The Sport Journal*, 15,

<sup>11</sup> Llewellyn-Edwards, T., & Llewellyn-Edwards, M. (2012, Spring). The effect of EFT (emotional freedom techniques) on soccer performance. *Fidelity: Journal for the National Council of Psychotherapy*, 47, 14–19

<sup>12</sup> Amy H Gaesser, Orv C Karan (2017). A Randomized Controlled Comparison of Emotional Freedom Technique and Cognitive-Behavioral Therapy to Reduce Adolescent Anxiety: A Pilot Study. *J Altern Complement Med*. 23(2):102-108.