



Acupuncture as an adjunct therapy in the treatment of eating disorders: A randomised cross-over pilot study

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KEYWORDS

Acupuncture;
Eating disorders;
Anorexia Nervosa;
Bulimia Nervosa

Summary

Objective: This study examines the role of acupuncture as an adjunct therapy in the treatment of eating disorders in female patients.

Design: A randomised cross-over study was used in this study. The two treatments phases were the private multi-disciplinary outpatient eating disorder facility in Melbourne, Australia, only (referred to as their treatment as usual) and a continuation of their treatment as usual supplemented by acupuncture.

Participants: Patients receiving treatment at a private multi-disciplinary outpatient eating disorder facility in Melbourne, Australia were asked to participate in the study. Nine consenting women (5 with Anorexia Nervosa, 4 with Bulimia Nervosa), aged (mean and SD) 23.7 (9.6) years, participated in the study.

Main outcome measures: The main outcome measure was the Eating Disorder Inventory-3. Secondary outcome measures were the Becks Depression Inventory-2, State Trait Anxiety Inventory and the Eating Disorder Quality of Life Scale.

Results: There was evidence that acupuncture improved the participants' Quality of Life as measured by the physical/cognitive and psychological components of the Eating Disorder Quality of Life scale. There was also evidence of decreases in anxiety (both State and Trait as measured by the State Trait Anxiety Intervention) and perfectionism (as measured by the Eating Disorder Inventory-3).

Conclusion: This pilot study shows potential of the benefit of acupuncture as an adjunct therapy in the treatment of eating disorders particularly in the area of quality of life.

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Introduction

Eating disorders are a major health problem commonly affecting women of early teenage years to young adulthood.^{1–4} A multidisciplinary approach is the most commonly prescribed form of treatment for those with eating disorders, frequently involving psychologists, dietitians and general practitioners.^{5–7} Complementary therapies, such as art and dance therapy, are often used as an adjunct in eating disorder treatment⁸ and many treatment centres are offering a range of holistic services including acupuncture and yoga.^{9,10} Individuals with an eating disorder are known to seek help from complementary and alternative therapies (CAM).¹¹ Research into CAM, particularly within the field of acupuncture is limited and given that patients seek CAM treatment despite best practice medical intervention being available, more research into the effectiveness of alternative therapies seems warranted.

This paper reports on the results of a study investigating the effect of acupuncture as an adjunct therapy in treating patients with an eating disorder. Acupuncture is a commonly used CAM therapy that is purported to provide benefit in conditions such as depression, anxiety, insomnia and headache.^{12–16} The research on the benefits of acupuncture has been primarily evaluated in a non-eating disorder population, thus it is not known if its effectiveness extends to those with an eating disorder. The effect of acupuncture for the treatment of eating disorders, has not been previously researched, although one un-referred limited report by Apostolos and Miliades found some evidence of a beneficial effect from auricular acupuncture (a system of acupuncture practised on the ear) in Bulimia Nervosa.¹⁷

Method

Participants

Participants receiving psychological and nutritional treatment at a private Eating Disorder Treatment Facility in Melbourne, Australia, were invited, via mail, to enrol in the study. The multi-disciplinary outpatient facility provides best practice recovery programs for sufferers of eating disorders. For adults, each program is individually tailored, with most programs including psychological and nutritional advice. Participants were aged over 17 years who had received an initial diagnosis of either Anorexia Nervosa (AN) or Bulimia Nervosa (BN) (as diagnosed by clinical assessment by a senior psychologist), when commencing treatment at the clinic. Participants were permitted to be at various stages of recovery. Participants were excluded from the study if they were unable to give informed consent, sought other treatment outside the facility treatment or required hospitalisation during the study period.

Nine consenting women, aged (mean \pm SD) 23.7 \pm 9.6, participated in the study. Four participants had BN (three using vomiting, laxatives and exercise as a compensatory means and one using exercise and diet pills) and five had AN (four who had AN-R subtype and one AN-BP subtype). Four participants had their eating disorder for less than a year, three for two-to-five years and two for greater than six years. Seven participants had been undertaking their current

treatment for less than six months and two participants had been receiving treatment for greater than seven months. Researcher SF enrolled the participants into the study. The research protocol was approved by the Victoria University Human Research Ethics Committee prior to initiating the study.

Experimental design

An open label randomised cross-over study design was used. The two groups/phases were: (i) Treatment as usual (TAU) only which incorporated current best practice medical management at the eating disorder treatment facility and (ii) a continuation of the participants eating disorder treatment supplemented by acupuncture.

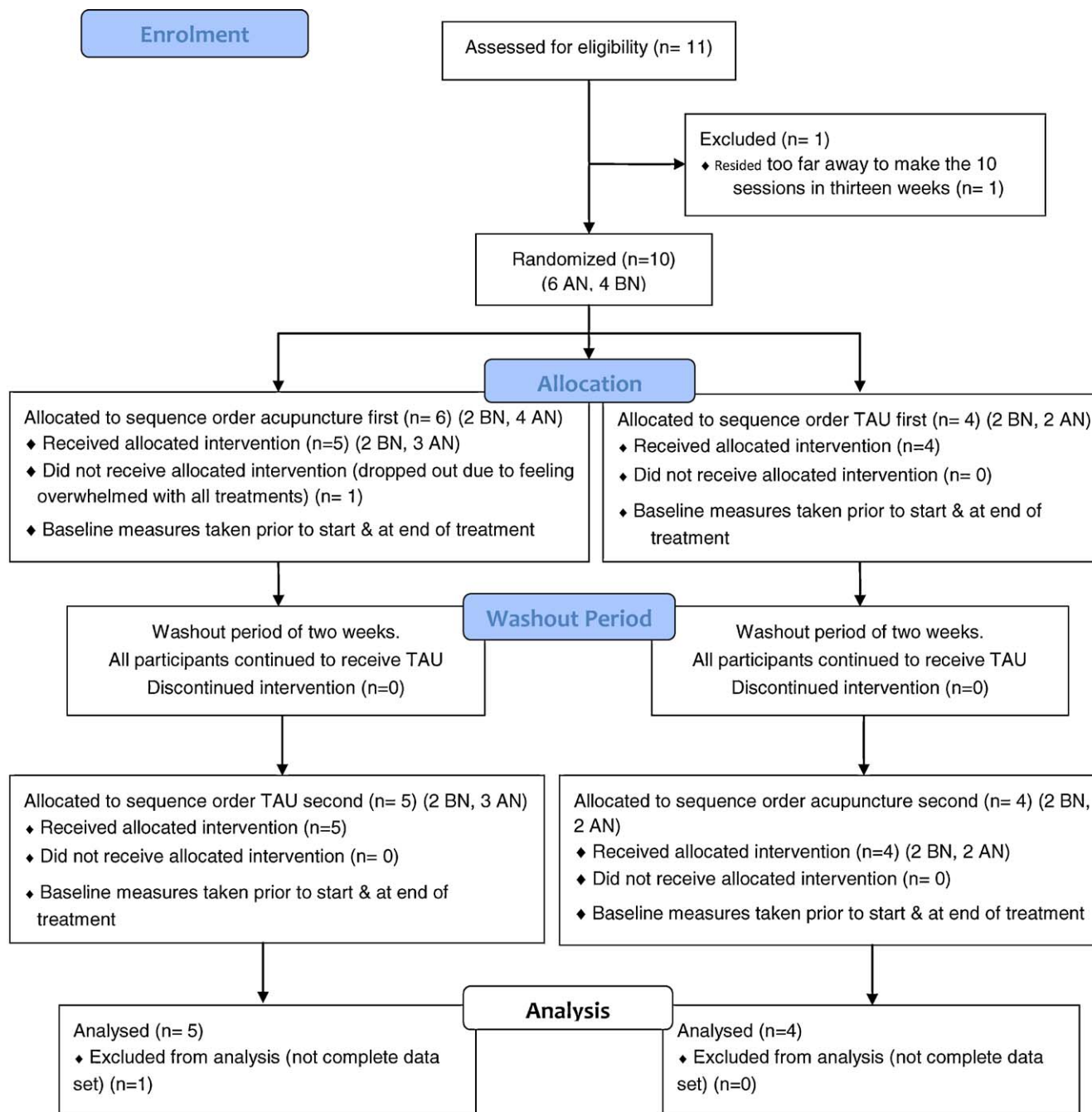
Two BN and three AN sufferers were randomly allocated to the acupuncture supplementation phase first, while two BN and two AN sufferers were randomly allocated to the best practice medical management phase. Participants were allocated to each group using a random number generator. The allocation sequence was not concealed from SF who enrolled the participants as it was felt it would be better for the participants to know which phase they were starting with when they enrolled. Following completion of the first phase participants were then reassigned to the other phase. While the existing eating disorder treatment was never halted, a two-week ‘‘wash-out period’’ occurred between the phases. This was to allow the treatment effect of the acupuncture to abate in those participants who received the acupuncture supplementation phase first and to obtain baseline measures for the eating disorder facility treatment phase (Fig. 1).

Treatment

Since eating disorder patients vary in their clinical presentation¹⁸ all treatments were pragmatic. That is both the acupuncture and the best practice medical management delivered at the eating disorder facility were individualised according to the participants’ medical condition and progress.

The frequency and type of treatment administered by the eating disorder facility staff was determined for each patient by their psychologist. The treatment involved dietary consultation and advice and psychological counselling. Treatment frequency varied for each individual ranging from two sessions a week to one session each fortnight.

Traditional Chinese Medicine (TCM) style acupuncture with diagnosis primarily based on Viscera and bowel pattern identification¹⁹ was used in the study. There is no peer reviewed research or historical context to guide the style of acupuncture in the treatment of eating disorders however TCM acupuncture is useful in the treatment of complex diseases.¹⁹ The method of examination to determine the viscera and bowel patterns involved included the techniques of inquiry and inspection.¹⁹ The treatment method and point selection for each individual is based on the identification of the viscera and bowel patterns most predominately involved each session. FMRI research conducted on a non-eating disorder population has shown evidence that acupuncture can decrease the signal limbic system which can be important in



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Figure 1 CONSORT 2010 flow diagram of the trial.

depression and mood disorders.^{20–24} These findings generally occurred with the generation of *de qi* (defined as a feeling of heaviness around the acupuncture point²⁵).^{21,22} While not disregarding the value of these neurological findings, it was decided that point selection be based on TCM principles as the sensation of *de qi* was not specifically sought. The practitioner administering the treatments (the author SF) was instructed to provide treatments she would normally in a clinical setting with the restriction of shallow and light needling.

The acupuncture supplementation treatment consisted of 10 sessions of acupuncture in a maximum of 13 weeks in addition to the best practice medical management at the facility. All participants who completed the study received the 10 sessions of acupuncture. The treatment was administered by an experienced and registered acupuncturist (the author SF-8 years). Fine disposable needles (Serin brand, either 0.20 or 0.25 gauge) were used. The average number of needles used per session was 11 (range 6–15) with the majority of the points being needled bilaterally. Shallow and

Table 1 Main patterns of disharmony treated for each participant over the duration of the 10 sessions.

Participant	Eating disorder	Points used over the duration of the 10 sessions
1	AN	<i>Liver Qi depression, Spleen Qi deficiency, Stomach Spleen Disharmony</i>
2	AN	<i>Spleen Yang deficiency, Liver Qi Depression, Stomach Spleen Disharmony</i>
3	BN	<i>Liver qi depression, Heart Yin deficiency, Heart Qi deficiency</i>
4	AN	<i>Heart Yang deficiency, Kidney Yang deficiency, Spleen and Stomach deficiency Cold</i>
5	BN	<i>Liver qi depression, Spleen Qi deficiency, Liver Qi Stagnation and Stomach Heat</i>
6	BN	<i>Liver qi depression, Spleen Qi deficiency, Liver Qi Stagnation and Stomach Heat</i>
7	AN	<i>Liver qi depression, Spleen Qi deficiency, Liver Qi Stagnation and Stomach Heat</i>
8	BN	<i>Stomach Heat, Stomach Yin deficiency, Heart Yin deficiency</i>
9	AN	<i>Liver qi depression, Spleen Yang deficiency, Liver Qi Stagnation and Stomach Heat</i>

light manual stimulation was used given the extreme thinness of the participants²⁶ and thus *de qi* was not obligatory. Following insertion, the needles were manipulated using a combination of lift and thrust and rotation, which according to Chinese acupuncture theory has a supplementing effect.²⁷ The needles were left *in situ* for 20 min after which they were removed. No other interventions were used by the acupuncturist. The main patterns of disharmony treated

over the duration of the 10 sessions for each patient are listed in Table 1. The points used over the course of the 10 sessions for each patient are listed in Table 2. There was only one adverse event encountered by one participant. She felt faint and nauseous on needle insertion, so the needles were removed and her legs elevated. She recovered quickly and was happy for treatment to recommence. There were no adverse effects when treatment resumed.

Table 2 Main patterns of disharmony treated for each participant over the duration of the 10 sessions.

Participant	Eating disorder	Points used over the duration of the 10 sessions
1	AN	<i>Hégǔ (LI 4), Qūchi (LI 11), Tiānshū (ST 25), Zúsānlǐ (ST 36), Gōngsūn (SP 4), Sānyīnjāo (SP 6), Shénmén (HT 7), Táixī (KI 3), Néiguān (PC 6), Táichōng (LR 3), Guānyuán (CY 4).</i>
2	AN	<i>Hégǔ (LI 4), Zúsānlǐ (ST 36), Fēnglóng (ST 40), Táibái (SP 3), Sānyīnjāo (SP 6), Xuéhǎi (SP 10), Táixī (KI 3), Zháohǎi (KI 6), Néiguān (PC 6), Táichōng (LR 3), Guānyuán (CY 4), Qihǎi (CY 6).</i>
3	BN	<i>Hégǔ (LI 4), Qūchi (LI 11), Tiānshū (ST 25), Zúsānlǐ (ST 36), Fēnglóng (ST 40), Néitíng (ST 44), Sānyīnjāo (SP 6), Chōngmén (SP 12), Dáhéng (SP 15), Zháohǎi (KI 6), Shéncáng (KI 25), Xíngjiān (LR 2), Táichōng (LR 3).</i>
4 ^a	AN	<i>Zúsānlǐ (ST 36), Sānyīnjāo (SP 6), Xuéhǎi (SP 10), Táixī (KI 3), Zháohǎi (KI 6), Táichōng (LR 3).</i>
5	BN	<i>Liéqūē (LU 7), Hégǔ (LI 4), Tiānshū (ST 25), Zúsānlǐ (ST 36), Sānyīnjāo (SP 6), Xuéhǎi (SP 10), Dáhéng (SP 15), Táixī (KI 3), Zháohǎi (KI 6), Zhīgōu (TE 6), Táichōng (LR 3), Qihǎi (CY 6).</i>
6	BN	<i>Liéqūē (LU 7), Hégǔ (LI 4), Qūchi (LI 11), Zúsānlǐ (ST 36), Sānyīnjāo (SP 6), Táixī (KI 3), Táichōng (LR 3). Ear points: Shenmen, Stomach and Hungry.</i>
7	AN	<i>Hégǔ (LI 4), Zúsānlǐ (ST 36), Tiáokǒu (ST 38), Sānyīnjāo (SP 6), Xuéhǎi (SP 10), Hóuxī (SI 3), Táixī (KI 3), Wáiguān (TE 5), Jiānjǐng (GB 21), Yánglíngquán (GB 34), Táichōng (LR 3). EX-1 (M-HN-3) Yíntāng.</i>
8	BN	<i>Hégǔ (LI 4), Zúsānlǐ (ST 36), Sānyīnjāo (SP 6), Shénmén (HT 7), Néiguān (PC 6), Wáiguān (TE 5), Zhīgōu (TE 6), Yánglíngquán (GB 34), Táichōng (LR 3). EX-1 (M-HN-3) Yíntāng.</i>
9	AN	<i>Hégǔ (LI 4), Zúsānlǐ (ST 36), Sānyīnjāo (SP 6), Hóuxī (SI 3), Táixī (KI 3), Néiguān (PC 6), Wáiguān (TE 5), Xíngjiān (LR 2), Táichōng (LR 3).</i>

^a Note this participant disliked needles so points were chosen where she could not see them when she was prone (e.g. below her waist).

Table 3 Mean scores for the individual domains of primary outcome measures (standard error in brackets) for the two treatment phases.

Measure	Acupuncture + treatment as usual (TAU)		Treatment as usual (TAU)		p values
	Baseline mean (n=9)	End of treatment mean (n=9)	Baseline mean (n=9)	End of treatment mean (n=9)	
EDI-3					
Drive for thinness	17.9 (2.9)	13.7 (3.1)	17.8 (3.1)	16.3 (3.1)	0.1891
Bulimia	8.2 (1.6)	4.7 (0.7)	7.7 (2.5)	6.7 (1.7)	0.1169
Body dissatisfaction	23.0 (2.2)	18.7 (2.9)	21.6 (2.7)	19.0 (2.1)	0.5814
Eating disorder risk composite	137.3 (6.8)	119.4 (10.7)	130.7 (9.4)	130.7 (7.9)	0.1122
Low self-esteem	11.2 (2.3)	8.3 (2.5)	10.9 (2.5)	8.8 (2.2)	0.5721
Personal alienation	11.3 (1.9)	8.4 (2.5)	10.8 (2.5)	9.9 (2.2)	0.2995
Interpersonal insecurity	11.3 (1.2)	9.9 (1.7)	9.6 (1.9)	9.1 (1.2)	0.7264
Interpersonal alienation	8.1 (1.2)	6.8 (1.5)	7.6 (1.5)	6.0 (1.1)	0.8933
Introspective deficits	14.4 (2.3)	12.1 (3.1)	13.2 (3.4)	11.3 (3.3)	0.8674
Emotional dysregulation	8.4 (1.2)	7.1 (2.3)	7.8 (1.6)	8.0 (1.8)	0.4057
Perfectionism	11.1 (1.6)	9.0 (1.9)	9.6 (1.7)	10.6 (1.7)	0.0597 [#]
Asceticism	9.2 (1.8)	7.8 (2.1)	8.2 (1.6)	9.8 (2.1)	0.1988
Maturity fears	10.6 (1.9)	8.3 (1.6)	10.4 (1.4)	9.7 (2.0)	0.3404
Ineffectiveness composite	89.4 (7.0)	79.1 (8.6)	88.0 (8.8)	81.9 (8.0)	0.4663
Interpersonal problems composite	91.1 (4.1)	85.9 (6.0)	86.9 (6.2)	82.9 (4.3)	0.8793
Affective problems composite	93.9 (4.2)	87.3 (8.3)	94.9 (8.3)	87.7 (6.1)	0.9325
Overcontrol composite	91.7 (5.4)	84.3 (6.3)	87.8 (5.4)	91.3 (5.8)	0.1023
General psychological maladjustment composite	413.7 (18.0)	376.4 (27.3)	403.9 (27.5)	382.3 (26.0)	0.4966

^{##}Strong evidence $p=0.01-0.05$ [33].

^{###}Very strong evidence $p<0.01$ [33].

[#]Weak evidence $p=0.05-0.1$.

Outcome measures

The primary outcome measure was the *Eating Disorder Inventory (EDI-3)*. The EDI-3 is a validated 91-item, 12 scaled self-reported measure of eating related behaviours and attitudes/traits that are relevant to eating disorders.¹⁸ In addition to the 12 scaled measures, an additional 6 aggregated measures were also calculated. The EDI-3 is a commonly used tool in research to assess improvement in an eating disorder, measuring both attitude to eating and physiological maintenance factors.¹⁸

Secondary outcome measures were the *Becks Depression Inventory (BDI-2)*, the *State-Trait Anxiety Inventory (STAI)* and the *Eating Disorder Quality of Life Scale (EDQoL)*. The BDI-2 is a 21-item, self-reported instrument for measuring the severity of depression in those aged 13 years and over.²⁸ The STAI consists of two separate 20-item self-report scales measuring STAI-State (an individual's current anxiety level) and STAI-Trait (an individual's general anxiety level).²⁹ The EDQoL scale is a 25-item, self-reported instrument for measuring the quality of life specifically in those with an eating disorder. It measures four domains: psychological, physical/cognitive, financial and work/school. The psychological domain covers aspects of how the eating disorder is mak-

ing the sufferer 'feel'. The physical/cognitive aspect covers physical symptoms such as cold hands and feet and also cognition in terms of concentration and thinking.³⁰

Each questionnaire was administered prior to randomisation, at the completion of the first phase of treatment and at the beginning and end of the second phase of treatment.

Due to the philosophy of the treatment facility, weight was only taken sporadically and when taken, concealed from the patients. As part of the collaborative undertaking of this study, weight was not to be self-reported nor taken by the researchers, thus weight was unable to be measured.

Statistical analysis

All data, except for the mean age of the participants, is expressed as the mean and standard error (SE). All analysis is carried out in the package E-views(Quantitative Micro Software).³¹ The approach detailed in Section 2.3 of Jones and Kenward was followed.³² This approach consists of first performing a *t*-test for the presence of a carry-over effect in those who received acupuncture in the first phase of the trial. This approach caters for random effects. If no significant carry-over is found, then, another *t*-test is performed

Table 4 Mean scores for the individual domains of secondary outcome measures (standard error in brackets) for the two treatment phases.

Measures	Acupuncture + treatment as usual (TAU)		Treatment as usual (TAU)		p values
	Baseline mean (n = 9)	End of treatment mean (n = 9)	Baseline mean (n = 9)	End of treatment mean (n = 9)	
EDQoL					
Psychological	22.3 (1.9)	16.6 (3.1)	19.2 (3.1)	19.3 (3.3)	0.0557 ^{##}
Physical/cognitive	14 (1.5)	8 (1.8)	9.7 (2.1)	9.7 (2.3)	0.0009 ^{###}
Financial	3.0 (1.6)	1.2 (0.7)	2.0 (1.2)	2.2 (1.2)	0.195
Work/school	3.7 (1.5)	2.3 (1.3)	3.1 (1.3)	1.7 (1.0)	0.9426
STAI					
State	47 (5.3)	37.6 (5.9)	42.7 (6.7)	46.3 (5.8)	0.0172 ^{##}
Trait	52.9 (5.2)	45.2 (5.2)	51.1 (5.9)	50.1 (5.9)	0.0920 [#]
BDI-2					
BDI-2 Score	20.9 (4.8)	15.2 (5.2)	19.6 (5.5)	17.6 (5.0)	0.4691

Weak evidence $p = 0.05-0.1$.

Strong evidence $p = 0.01-0.05$.

Very strong evidence $p = <0.01$.

for period effect. If no significant period effect is found then the effectiveness of the acupuncture can be tested using a paired *t*-test. If the period effect is significant then a two-sample *t*-test is used.

Analysis was undertaken for significant differences between the two treatments and was measured by the change in outcome after each phase.

Due to our small sample size in this pilot study, we make note of results that are statistically significant in the range $p < 0.10$. We adopt the commonly used terminology that p between 0.5 and 0.10 is *weakly* significant, p between 0.01 and 0.05 is *strongly* significant and p less than 0.01 is *very strongly* significant.³³ This terminology clarifies the significance of our findings.

Results

The analysis was carried out following the intention to treat philosophy. All participants satisfied the inclusion criteria for the duration of the trial and all treatments proceeded as per the protocols set out in the Methods section. As shown in Fig. 1, one participant did not receive the allocated treatment in the first phase of the trial. This participant dropped out of the trial after receiving one acupuncture treatment (out of a prescribed 10 treatments). There were no measurements available for this participant and therefore they could not be included in the analysis.

No evidence of significant carry over or period effects were found in any outcome measures therefore all tests reported in this section are paired *t*-tests.

A paired *t*-test was used to determine if base line measures were similar. All measures were found to be similar except for the EDQoL Physical/Cognitive measure which was higher for the acupuncture group (*weakly* significant $p = 0.081$). However as shown above no carry over effect was found and thus the ordering of the treatment did not affect the results.

Primary measure

Table 3 shows the scores for the primary measures. The EDI-3 perfection measure showed a weakly significant improvement as a result of the acupuncture and standard treatment ($p = 0.060$).

Secondary measures

Table 4 shows the scores for the secondary measures. The acupuncture supplementation treatment showed strongly significant improvement ($p = 0.017$) for the STAI-State measure while the STAI-Trait measure showed weakly significant improvement ($p = 0.092$). The acupuncture supplementation treatment showed very strong significant improvement ($p = 0.0009$) for the physical-cognitive domain of the EDQoL scale while the psychological domain showed weakly significant improvement ($p = 0.056$).

Discussion/conclusion

The results of this study indicate that participants having acupuncture treatment, in addition to their existing treatment, reported a significant improvement for quality of life (QoL) and a reduction in anxiety and the expression of perfectionism. To the best of our knowledge, this is the first study to investigate the effect of acupuncture as an adjunct for the treatment of eating disorders. Given research in a non-eating disorder population found that acupuncture was successful in treating depression, anxiety, insomnia and headache, it was hypothesised that these conditions and symptoms, in patients with an eating disorder, may respond positively to acupuncture treatment.

Quality of life in patients with an eating disorder has become a focus of research with the recognition of a need for evidence on the impact of treatment on QoL.³⁴ The addition of acupuncture to the participants' existing treatment found significant improvements in QoL, particularly

within the physical-cognitive and psychological domains. The results for enhancing QoL with acupuncture in other populations have had mixed responses varying from significant improvement^{35,36} to little or no effect.^{37,38} Improved QoL was reported for patients who receive treatment for their eating disorder but the differing scales used makes comparisons difficult.^{39,40} Our findings suggest that the addition of acupuncture improves QoL beyond that which occurs when patients receive best practice treatment. QoL is negatively associated with the severity of an eating disorder^{41,42} and positively associated with changes in eating behaviour.⁴⁰ The addition of acupuncture may enhance changes related to QoL, aiding in the improvement of eating disorder severity and positive changes in eating behaviours and deserves further investigation.

The participants in the study had significantly less STAI-State anxiety after receiving acupuncture. This agrees with previous acupuncture and anxiety findings, which show an improvement in STAI-State anxiety.^{15,43} Similar eating disorder studies with two or more, non-pharmaceutical interventions measuring anxiety have noted significant changes with both interventions but no significant difference between the treatments.^{44,45} This suggests that engaging in treatment may decrease anxiety for those with an eating disorder. The significant differences between the treatments in the study may indicate that acupuncture is beneficial in reducing anxiety beyond that of a potential treatment effect. Recent research has shown that there is a negative correlation between pre-meal anxiety and energy intake at mealtimes for those with AN.⁴⁶ Given that malnutrition intensifies anxiety, this seems to be a self-reinforcing cycle of anxiety and malnutrition.⁴⁷ The addition of acupuncture to a sufferer's existing treatment may help reduce anxiety and thus increase energy intake particularly if the treatment was given prior to meal times.

A link between perfectionism and poor treatment outcome and a greater risk of relapse has been established^{18,48,49} and thus there is a greater need to understand how perfectionism responds to treatment. The findings of a weak decrease in EDI-3 measured perfectionism while receiving acupuncture implies that perfectionism can change as a result of treatment. The EDI-3 perfectionism measure is one that is sensitive to illness status⁵⁰ therefore a decrease in EDI-3 perfectionism may indicate a decrease in the illness status. The parameters of this study do not allow an extrapolation of the findings to indicate whether our decrease in perfectionism had an effect on the eating disorder, its symptoms or its outcome. In light of the gravity of high perfectionism scores in those with an eating disorder, the weak reduction in perfectionism is important, particularly for sufferers with an interest in CAM therapies.

Anxiety is a common co-morbid condition in those with an eating disorder.^{3,51} A weakly significant reduction in STAI-Trait anxiety was found in the present study. These findings accord with other acupuncture STAI-Trait research which finds weakly significant improvements in 'healthy patients'.^{15,43} A reduction in Trait anxiety is beneficial given that elevated Trait scores predict a reduction in the chances of remission.⁵²

Our preliminary findings raise areas for further acupuncture research within the field of eating disorders. Future acupuncture research could investigate the role of acupunc-

tures effect on QoL and consequently its effect on eating disorder severity and behaviour. The role of acupuncture in decreasing pre-meal anxiety and its outcome on weight restoration in AN sufferers is relevant given its potential for reducing anxiety. Given the decrease in perfectionism and Trait anxiety, a comparison study looking at acupuncture's effect on both perfectionism and Trait anxiety relative to other effective treatments in terms of time, cost and remission rates would be beneficial. Findings of this study showed beneficial effects on mood and psychological outcomes. fMRI evidence shows that acupuncture decreases the signal limbic system and future studies may wish to incorporate fMRI evidence into their study.^{20-22,53}

The findings of the study indicate that acupuncture, as an adjunct therapy, has a beneficial effect on patients with an eating disorder, with a specific effect on QoL and State anxiety with strongly significant results found, and a weaker effect on Trait anxiety and perfectionism. This preliminary study has a small sample size, but its significant findings suggest that replication of the study with a larger sample size would be valuable.

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