



CADTH Reference List

Acupuncture for Anxiety Disorders

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Key Message

We found 4 systematic reviews and 3 randomized controlled trials about the clinical effectiveness of acupuncture for people with anxiety disorders.

Research Question

What is the clinical effectiveness of acupuncture for people with anxiety disorders?

Methods

Literature Search Methods

An information specialist conducted a literature search on key resources including MEDLINE, PsycInfo, the Cochrane Database of Systematic Reviews, the International HTA Database, the websites of Canadian and major international health technology agencies, as well as a focused internet search. The search approach was customized to retrieve a limited set of results, balancing comprehensiveness with relevancy. The search strategy comprised both controlled vocabulary, such as the National Library of Medicine's MeSH (Medical Subject Headings), and keywords. Search concepts were developed based on the elements of the research questions and selection criteria. The main search concepts were acupuncture and anxiety disorders. CADTH-developed search filters were applied to limit retrieval to health technology assessments, systematic reviews, meta-analyses, or indirect treatment comparisons and randomized controlled trials, controlled clinical trials, or any other type of clinical trial. The search was completed on May 17, 2023, and limited to English-language documents published since January 1, 2018. Internet links were provided, where available.

Selection Criteria and Summary Methods

One reviewer screened literature search results (titles and abstracts) and selected publications according to the inclusion criteria presented in [Table 1](#). Full texts of study publications were not reviewed. The Overall Summary of Findings was based on information available in the abstracts of selected publications.

Table 1: Selection Criteria

| Criteria | Description |
|---------------|---|
| Population | People with anxiety disorders (e.g., generalized anxiety disorder, panic disorder, social anxiety disorder, phobia-related disorders) |
| Intervention | Acupuncture, including needle and electroacupuncture (as adjunctive or monotherapy) |
| Comparator | No treatment (e.g., waitlist, sham therapy), usual care (e.g., psychotherapy, pharmacotherapy) |
| Outcomes | Clinical benefits (e.g., psychological symptoms, function, quality of life, patient satisfaction) and harms (e.g., adverse events) |
| Study designs | Health technology assessments, systematic reviews, randomized controlled trials, nonrandomized studies |

Results

Four systematic reviews¹⁻⁴ and 3 randomized controlled trials⁵⁻⁷ were identified regarding the clinical effectiveness of acupuncture for people with anxiety disorders. No relevant health technology assessments or nonrandomized studies were identified.

Additional references of potential interest that did not meet the inclusion criteria are provided in [Appendix 1](#).

Overall Summary of Findings

Four systematic reviews evaluated the clinical effectiveness of acupuncture for people with anxiety disorders.¹⁻⁴ Of the 4 systematic reviews, 1 study also investigated the effect of electroacupuncture.⁴ All 4 studies found that acupuncture led to better treatment outcomes than the control group.¹⁻⁴ One systematic review concluded that acupuncture was a safe treatment,² and 2 systematic reviews found that acupuncture had a better safety profile than the control.^{1,4}

Three randomized controlled trials that evaluated the clinical effectiveness for people with anxiety disorders were identified.⁵⁻⁷ One randomized controlled trial found that acupuncture led to lower levels of anxiety than the waitlist control.⁷ In addition, 1 randomized controlled trial reported that acupuncture and electroacupuncture improved anxiety symptoms after the fifth and tenth treatment session and reduced salivary cortisol levels.⁵ The same study found that the treatment effect of acupuncture and electroacupuncture was independent of anxiolytic medication.⁵ Finally, 1 randomized controlled trial⁶ found that selective serotonin reuptake inhibitors combined with acupuncture led to greater reduction of anxiety symptoms and serum cortisol levels compared to selective serotonin reuptake inhibitors alone or sham acupuncture. Refer to [Table 2](#) for a detailed summary of all systematic reviews and randomized controlled trials included in this report.

Table 2: Summary of Included Systematic Reviews and Randomized Controlled Trials

| Study citation | Study design, population | Interventions and comparators | Relevant outcomes | Author's conclusions |
|---------------------------------|---|---|---|--|
| Systematic reviews | | | | |
| Li et al. (2022) ¹ | SR and MA with 27 RCTs Population: People with GAD N = 1,782 | Intervention: Acupuncture Comparator: Control group | HAMA, SAS, TESS, and total effective rate | Compared with the control group, acupuncture resulted in a better HAMA score, total effective rate, TESS score, and SAS score. |
| Yang et al. (2021) ² | SR and MA with 20 RCTs Population: People with GAD N: NR | Intervention: Acupuncture Comparator: Control group | Anxiety symptoms, side effects | Acupuncture was more effective in reducing anxiety symptoms than controls and was a well-tolerated and safe intervention. |

| Study citation | Study design, population | Interventions and comparators | Relevant outcomes | Author's conclusions |
|-------------------------------------|---|---|---|---|
| Li et al. (2019) ³ | Overview of SR and MAs with 10 studies Population: People with anxiety N: NR | Intervention: Acupuncture Comparator: Control group | Treatment outcomes | Acupuncture group was more effective than control group in the treatment of anxiety. |
| Amorim et al. (2018) ⁴ | SR with 13 clinical trials Population: People with anxiety disorders N: NR | Interventions: Acupuncture, electroacupuncture Comparator: Conventional treatment | Treatment outcomes, side effects | Acupuncture led to effective treatment outcomes for anxiety disorders with fewer side effects compared to conventional treatment. |
| Randomized controlled trials | | | | |
| Amorim et al. (2022) ⁵ | Study design: A double-blinded RCT Population: People with diagnosed anxiety disorders N = 56 | Interventions: 30-minute acupuncture or electroacupuncture treatment applied once a week for 10 weeks Comparator: Control group | BAI, GAD-7, salivary cortisol levels, and OASIS | Electroacupuncture and acupuncture led to improvements in anxiety symptoms after the 5th and 10th session, as well as levels of salivary cortisol. The treatment effect of electroacupuncture and acupuncture was independent of anxiolytic medication. |
| Sabbagh et al. (2021) ⁶ | Study design: Double-blind, three-arm RCT Population: People with anxiety disorder N = 112 | Intervention: SSRI treatment with acupuncture for 4 weeks Comparator: SSRI monotherapy, sham acupuncture | STAI, serum cortisol levels | SSRIs with acupuncture resulted in greater reduction of cortisol levels and significantly larger changes in STAI score than SSRIs monotherapy and sham acupuncture groups |
| Leung et al. (2018) ⁷ | Study design: Pilot RCT Population: Children and adolescents with GAD or self-reported anxiety symptoms N = 20 | Intervention: Acupuncture Comparator: Waitlist control | HAMA for GAD, MASC-2 for self-reported symptoms | Compared with the waitlist control, acupuncture led to significantly lower MASC-parent score. Significant reduction of pre- and post-treatment HAMA and MASC-2 scores was observed in the acupuncture and control groups. |

BAI = Beck Anxiety Inventory; GAD = generalized anxiety disorder; GAD-7 = Generalized Anxiety Disorder 7-item; HAMA = Hamilton Anxiety Scale; MA = meta-analysis; MASC = Multidimensional Anxiety Scale for Children; MASC-2 = Multidimensional Anxiety Scale for Children 2nd Edition; NR = not reported; OASIS = Overall Anxiety Severity and Impairment Scale; RCT = randomized controlled trial; SAS = Self-Rating Anxiety Scale; SR = systematic review; SSRI = selective serotonin reuptake inhibitor; STAI = Spielberger State-Trait Anxiety Inventory; TESS = Treatment Emergent Symptom Scale.

References

Health Technology Assessments

No literature identified.

Systematic Reviews

1. Li M, Liu X, Ye X, Zhuang L. Efficacy of acupuncture for generalized anxiety disorder: A PRISMA-compliant systematic review and meta-analysis. *Medicine*. 2022 Dec 09;101(49):e30076. [PubMed](#)
2. Yang XY, Yang NB, Huang FF, Ren S, Li ZJ. Effectiveness of acupuncture on anxiety disorder: a systematic review and meta-analysis of randomised controlled trials. *Ann Gen Psychiatry*. 2021 Jan 30;20(1):9. [PubMed](#)
3. Li M, Xing X, Yao L, et al. Acupuncture for treatment of anxiety, an overview of systematic reviews. *Complement Ther Med*. 2019 Apr;43:247-252. [PubMed](#)
4. Amorim D, Amado J, Brito I, et al. Acupuncture and electroacupuncture for anxiety disorders: A systematic review of the clinical research. *Complement Ther Clin Pract*. 2018 May;31:31-37. [PubMed](#)

Randomized Controlled Trials

5. Amorim D, Brito I, Caseiro A, et al. Electroacupuncture and acupuncture in the treatment of anxiety - A double blinded randomized parallel clinical trial. *Complement Ther Clin Pract*. 2022 Feb;46:101541. [PubMed](#)
6. Sabbagh Gol A, Rezaei Ardani A, Farahmand SK, et al. Additive effects of acupuncture in alleviating anxiety: A double-blind, three-arm, randomized clinical trial. *Complement Ther Clin Pract*. 2021 Nov;45:101466. [PubMed](#)
7. Leung B, Takeda W, Holec V. Pilot study of acupuncture to treat anxiety in children and adolescents. *J Paediatr Child Health*. 2018 08;54(8):881-888. [PubMed](#)

Nonrandomized Studies

No literature identified.

Appendix 1: References of Potential Interest

Systematic Reviews

Alternative Population

- Wang T, Tan JB, Yao LQ, et al. Effects of somatic acupoint stimulation on anxiety and depression in cancer patients: an updated systematic review of randomized controlled trials. *Complement Ther Clin Pract*. 2023 May;51:101735. [PubMed](#)
- Hullender Rubin LE, Smith CA, Schnyer RN, Tahir P, Pasch LA. Effect of acupuncture on IVF-related anxiety: a systematic review and meta-analysis. *Reprod Biomed Online*. 2022 07;45(1):69-80. [PubMed](#)
- Tong QY, Liu R, Zhang K, Gao Y, Cui GW, Shen WD. Can acupuncture therapy reduce preoperative anxiety? A systematic review and meta-analysis. *J*. 2021 Jan;19(1):20-28. [PubMed](#)

Randomized Controlled Trials

Alternative Population

- Favre-Felix J, Laurent V, Branche P, et al. Auricular acupuncture for preoperative anxiety in parturient women with scheduled cesarean section: a randomized placebo-controlled blind study. *J Integr Complement Med*. 2022 Jul;28(7):569-578. [PubMed](#)
- Zanella S, Buccelletti F, Vassiliadis A, et al. Preoperative anxiety management: acupuncture vs. pharmacological treatment - a prospective study. *Eur Rev Med Pharmacol Sci*. 2022 Feb;26(3):900-905. [PubMed](#)
- Khojastefar M, Selk-Ghaffari M, Memari AH, Halabchi F, Seif-Barghi T. A randomized crossover, pilot study examining the effect of acupuncture in the management of competitive anxiety in athletes. *Journal acupunct*. 2021 Aug 31;14(4):149-156. [PubMed](#)
- Liu C, Zhao Y, Qin S, Wang X, Jiang Y, Wu W. Randomized controlled trial of acupuncture for anxiety and depression in patients with chronic insomnia. *Ann*. 2021 Sep;9(18):1426. [PubMed](#)
- Mak AD, Chung VCH, Yuen SY, et al. Noneffectiveness of electroacupuncture for comorbid generalized anxiety disorder and irritable bowel syndrome. *J Gastroenterol Hepatol*. 2019 Oct;34(10):1736-1742. [PubMed](#)
- Smith CA, de Lacey S, Chapman M, et al. The effects of acupuncture on the secondary outcomes of anxiety and quality of life for women undergoing IVF: a randomized controlled trial. *Acta Obstet Gynecol Scand*. 2019 04;98(4):460-469. [PubMed](#)