UNDERSTANDING THE EFFECT OF CANCER SURVIVORS' EXPECTANCIES ON ACUPUNCTURE TREATMENT: A SYSTEMATIC REVIEW

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Background

- **Acupuncture** is a widely used complementary therapy, showing effectiveness in managing cancer-related symptoms. **Patient expectancy** is considered a key element of the placebo effect associated with acupuncture.

- **Understanding cancer survivors' expectancy of acupuncture** can give us a clearer picture of the placebo effect and physical effects of acupuncture, which can be used to develop interventions harnessing the expectancy effect to improve patient outcomes.

Purpose

- To examine the effect of cancer survivors' expectancy on acupuncture treatment outcomes and identify factors contributing to expectancy.

Methods

- **Study design** Systematic review

- **PICO**

P	Participants	Cancer survivors aged 18 years or older
I	Intervention	Acupuncture or electroacupuncture
C	Comparison	Alternative therapies or usual care
O	Outcome	Expectancy regarding acupuncture treatment

- **Search terms**

  Cancer **AND** Acupuncture **AND** Expectancy

- **Publication dates** Through August 2023

- **Databases searched** PubMed, Embase, Scopus, CINAHL, Cochrane Central Register of Controlled Trials, PsycInfo, and 3 Chinese databases (CNKI, Wanfang, and VIP)

- **Risk of bias assessment** Cochrane Risk of Bias (RoB 2.0) and the Risk of Bias in Non-randomized Studies of Interventions (ROBANS-I)

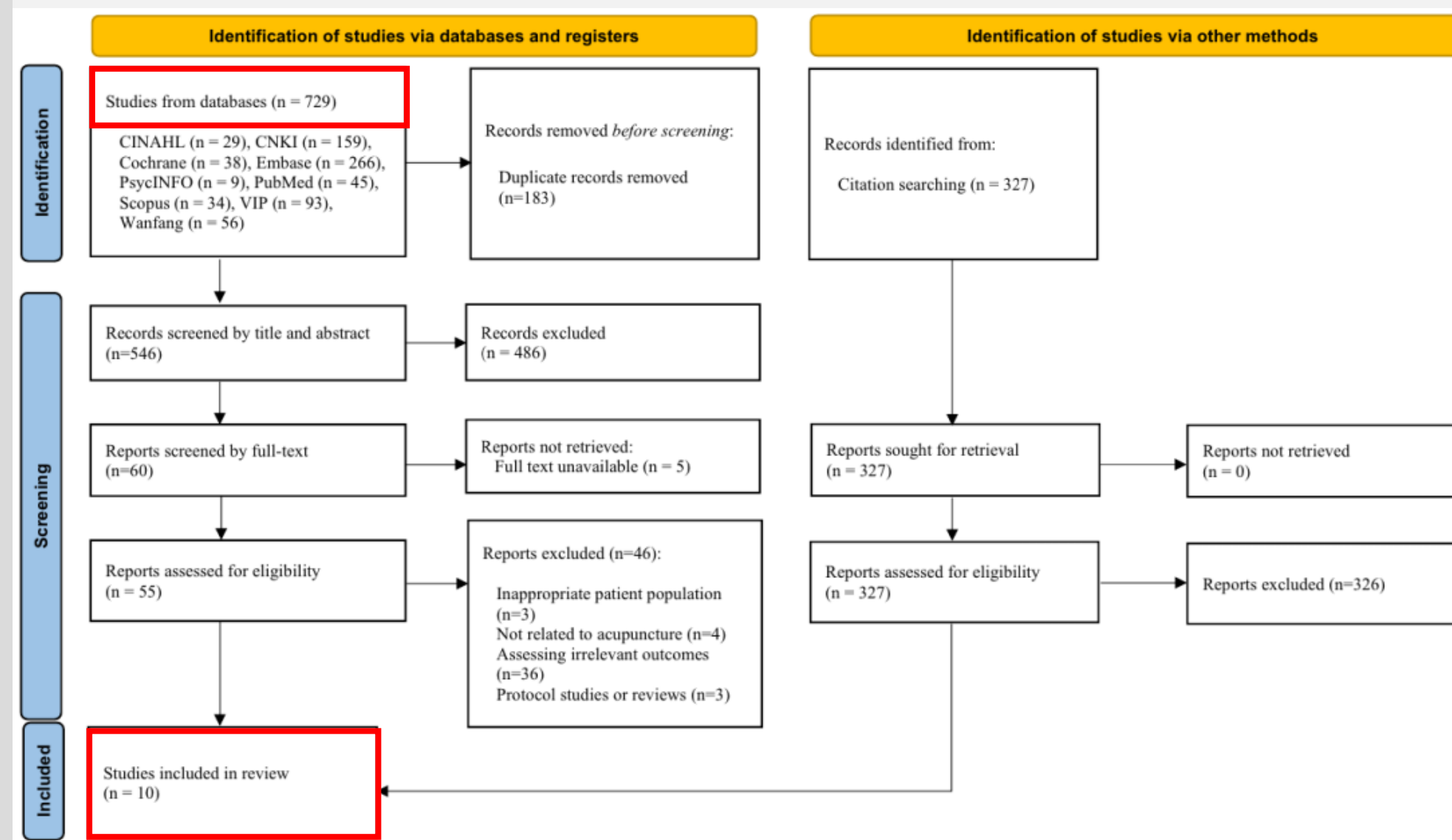- **Protocol registration** The review protocol was registered in PROSPERO (ID: CRD42023467138).

Figure 1. PRISMA flow diagram of study selection

Results

1. Study characteristics

- Included 10 studies with 2,064 participants.

Participants	Patients diagnosed with cancer of various types and stages and receiving maintenance therapy after their initial cancer treatment
Study design	Randomized controlled trial (6), quasi-experimental (1), retrospective cohort (1), and cross-sectional (2)
Country	U.S. (5), Sweden (4), U.K. (1)
Intervention	Manual acupuncture (9), Electroacupuncture (2)
Control	Alternative therapies such as cognitive behavioral therapy (CBT), sham acupuncture, or usual care
Outcome	Cancer-related symptoms and conditions, including pain (5), nausea/vomiting (3), xerostomia (3), capacity in daily activities (2), fatigue (2), insomnia (2), quality of life (2), stool frequency (2), and vasomotor symptoms (2)

Note: ( ) - number of studies

Results (cont'd)

2. Risk of bias assessment

- Low risk of bias (2); some concerns about bias (5); high risk of bias (3)

- **High risk of bias** arising mainly from the potential bias in the subjective measurement of the outcome or a less rigorous randomization process.

3. Relationship between expectancy and cancer-related outcome

- 5 studies explored the relationship between expectancies and outcomes

- **Positive association (3):** higher expectancy ↔ alleviated **insomnia** with acupuncture compared to CBT ($p=0.02$), **pain** reduction with sham acupuncture compared to usual care ($p=0.007$), and less **frequent bowel movements** with acupuncture compared to sham acupuncture ($p=0.014$) at treatment completion.

- No association (2): emesis, chemotherapy-induced neuropathy
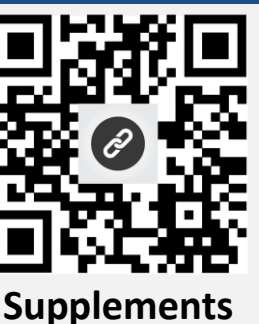
4. Measurement of expectancy

Assessed timepoint	Before (7), during (5), and end of the acupuncture (5)
Expectancy measure	the Acupuncture Expectancy Scale (4) researcher-constructed questionnaires (6)
Contributing factors to **higher expectancy**	**Age**: younger than 65 years ($p=0.031$, Enblom, 2017; $p=0.001$, Widgren et al., 2022)
	Gender: females ($p=0.032$, Widgren et al., 2022)
	Education level: university education ($p=0.003$, Enblom, 2017)
	Responder status: acupuncture responders ($p=0.004$, Bauml et al., 2014; $p=0.001$, Li et al., 2023)

Conclusions

- Patient expectancies of acupuncture may influence cancer-related outcomes, but limited research and inconsistent results created a need for further studies.

- Future studies should explore multiple dimensions of expectancy as well as contextual or cultural factors influencing expectancy effects.

Acknowledgements & References

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Supplements