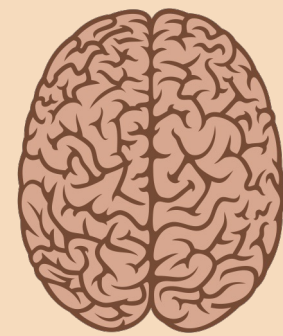


Meditative Sound Enhances the Effectiveness of Yoga on Psychological Distress in Cancer Patients: A Systematic Review and Meta-Analysis

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INTRODUCTION

- Psychological and spiritual distress are prevalent and burdensome throughout the cancer survivorship journey.
- Yoga has gained recognition as a mind-body exercise that can potentially enhance psycho-spiritual well-being in cancer patients.
- However, existing evidence remains inconsistent.



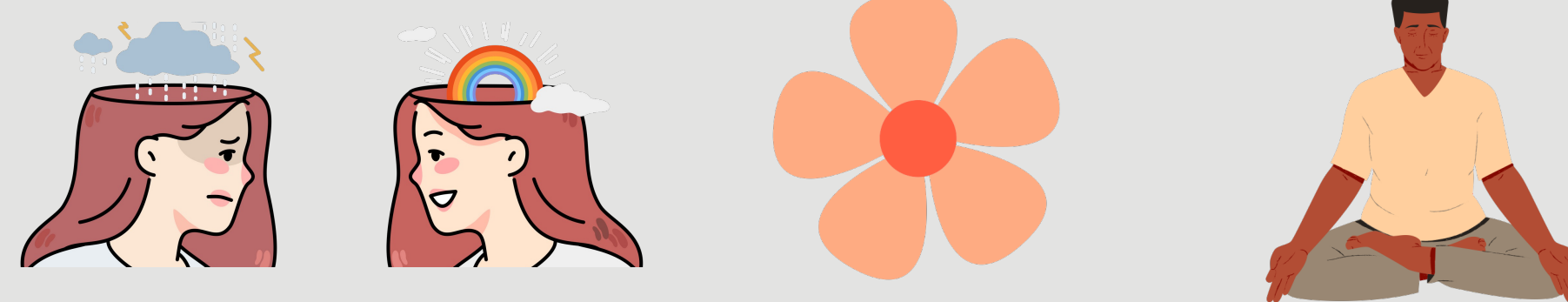
AIM: To systematically evaluate the effects of yoga on psycho-spiritual outcomes in cancer patients

METHODS

- We searched seven databases (PubMed, Embase, Cochrane Central Register of Controlled Trials, PsycINFO, CINAHL, SportDiscus and Web of Science) and clinical trial registries from database inception to 1 August 2023.
- We obtained pooled random effects estimates (Hedges' g) and 95% confidence intervals (CIs).
- Heterogeneity was assessed using the restricted maximum likelihood method and I² values.
- Potential moderators were identified by meta-regression.

RESULTS

- A total of 53 studies with 3874 participants, published between 2004 and 2023, were included.
- The mean age of participants ranged from 46 to 69 years, with 34 (64%) studies focusing exclusively on patients with breast cancer.
- Yoga showed large effects on anxiety (Hedges g, -0.84 [95% CI, -1.31 to 0.37]) and moderate effects on depression (Hedges g, -0.56 [95% CI, -0.97 to -0.16]) at post-intervention, respectively.
- Yoga also exhibited enhancements in emotional quality of life and spiritual well-being.



- Meta-regression analysis revealed that the **inclusion of meditative sound component** was associated with greater improvements in anxiety ($\beta=1.30$) and depression ($\beta=1.61$) symptoms.
- No evidence of publication bias was found.

CONCLUSIONS

- Yoga has demonstrated the ability to alleviate psycho-spiritual distress and improve emotional quality of life in cancer patients.
- Notably, the inclusion of a meditative sound component in yoga was found to enhance its efficacy.
- Yoga, when combined with meditative sound, is a valuable psycho-spiritual intervention for cancer patients.

