Meditation for the secondary prevention of depression and anxiety in heart disease:
A systematic review

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IMPACCT – Improving Palliative, Aged and Chronic Care through Clinical Research and Translation

Introduction

- Heart disease remains the **leading cause of global morbidity and mortality**

- Attendance at cardiac outpatient rehabilitation programs remains low

- **Unmet psychological support needs**

Aims

- Identify high levels of evidence for **adjunct meditation strategies** designed to improve **depression and anxiety** symptoms among adults with **heart disease**

- Classify the **elements of meditation interventions** that facilitated improvements in depression or anxiety after a cardiac event.
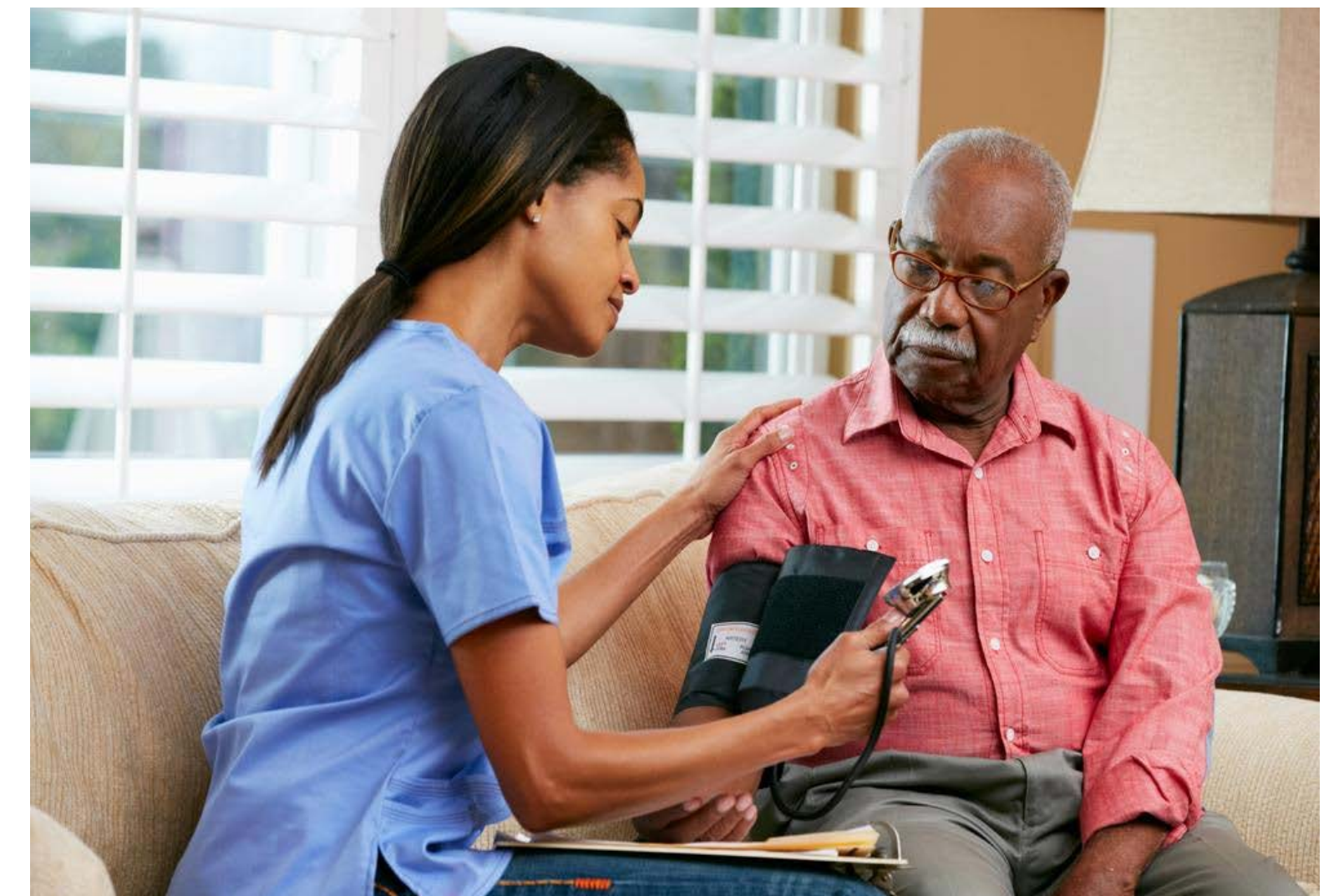
Methods

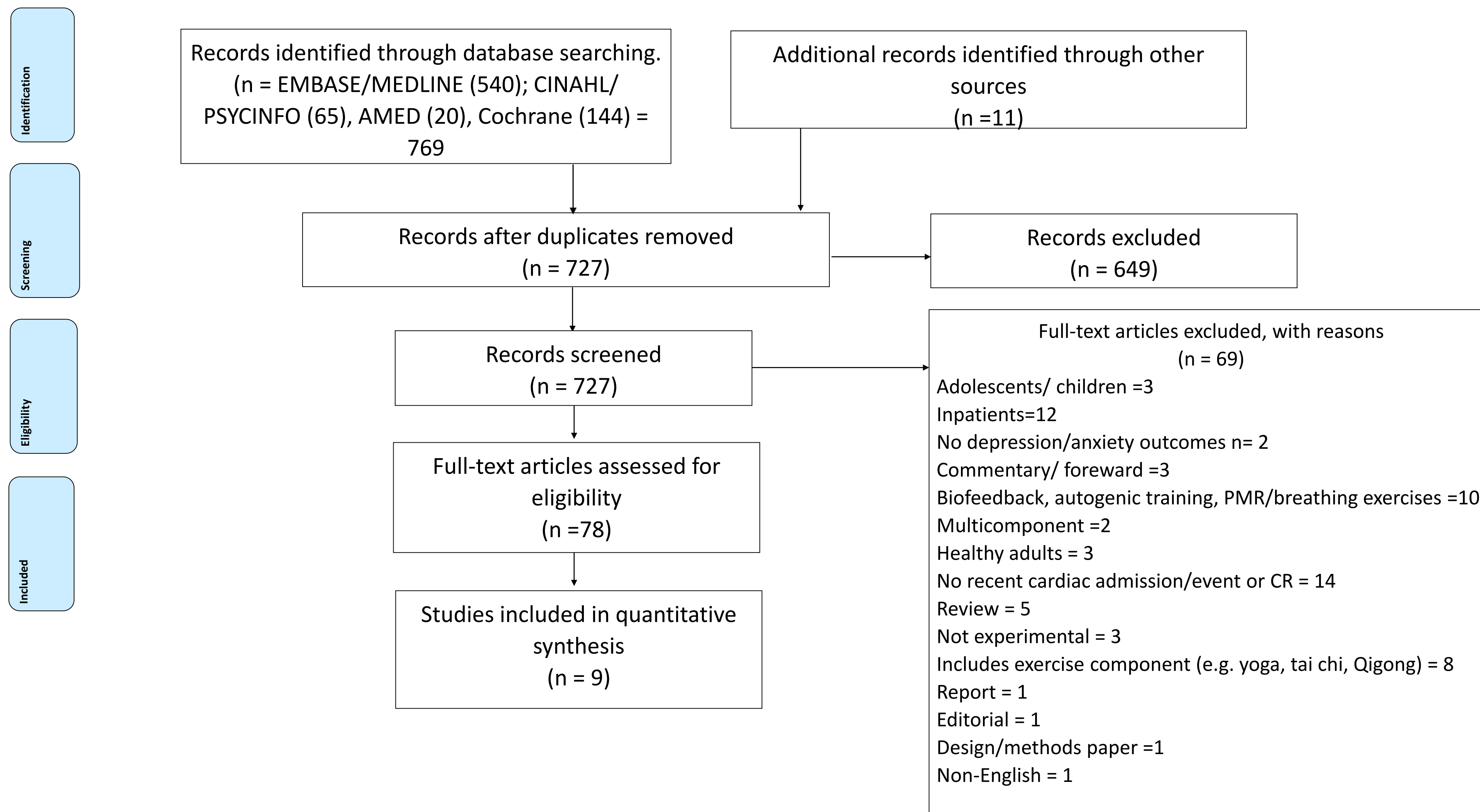**Eligibility criteria: which studies included patients recommended to cardiac rehabilitation (CR) programs?**

- Acute coronary syndromes

- Surgical patients (coronary artery bypass surgery, cardiac stenting, pacemakers….)

- Heart failure

- Modifiable risk factors

**Outcomes**

- Depression and anxiety

Methods

Identification

Screening

Eligibility

Included

Records identified through database searching.
(n = EMBASE/MEDLINE (540); CINAHL/
PSYCINFO (65), AMED (20), Cochrane (144) =
769

Additional records identified through other
sources
(n =11)

Records after duplicates removed
(n = 727)

Records excluded
(n = 649)

Records screened
(n = 727)

Full-text articles assessed for
eligibility
(n =78)

Studies included in quantitative
synthesis
(n = 9)

Full-text articles excluded, with reasons
(n = 69)
Adolescents/ children =3
Inpatients=12
No depression/anxiety outcomes n= 2
Commentary/ foreward =3
Biofeedback, autogenic training, PMR/breathing exercises =10
Multicomponent =2
Healthy adults = 3
No recent cardiac admission/event or CR = 14
Review = 5
Not experimental = 3
Includes exercise component (e.g. yoga, tai chi, Qigong) = 8
Report = 1
Editorial = 1
Design/methods paper =1
Non-English = 1

Results

Sample characteristics?

• Internationally relevant **population - high-income countries** [US (n=6) & Netherlands (n=1)]

    - **low-income countries** [India (n=1) & Iran (n=1)]

• Predominately **male (67%)**
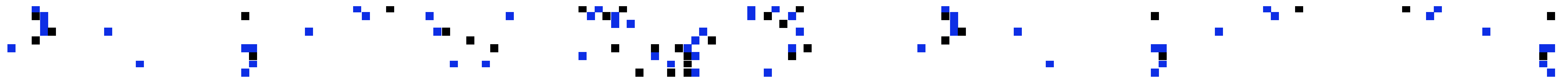
Results

What did participation look like?		
	Frequency	**Duration**
Home practice	1.3 sessions (SD ± 0.8) (9 studies)	23 minutes (SD ± 9) (6 studies)
Group sessions	11 sessions (SD ± 7) (5 studies)	68 minutes (SD ± 27) (5 studies)
Intervention period	9.5 weeks (SD ± 4.8) (8 studies)	
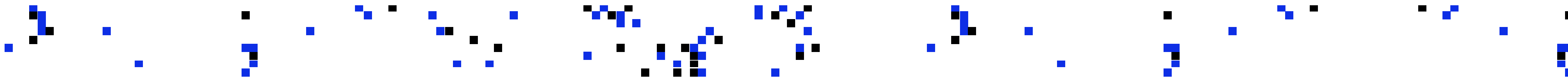
Results

Intervention delivery: Who delivered the sessions?

- Researcher/RN (2 studies)

- Self administered home practice with an audiotape or CD only (2 studies)

- Professional health educators (1 study)

- Health care professionals (1 study)

- Clinical psychologist (1 study)

- Music therapist (1 study)
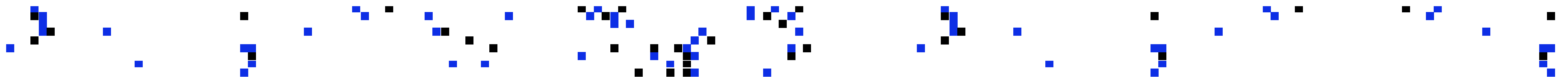
Results

What did the usual care and comparison groups do?

Usual care

- Conventional CR

- Waitlist control

- Cardiologist follow up appointment

Comparison groups

- 10 minute phone call (defibrillator concerns)

- Self help booklet

- Medical advice re: diet, exercise and health education class

- Weekly health education class (risk factor modification)
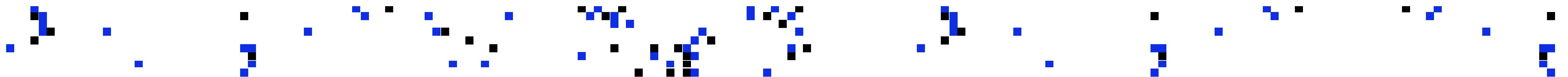
Results

Outcomes

Statistically significant improvements in **over half (5/9) phase II studies**

Specific heart disease populations?

- CHF
- CHD/ CVD
- Metabolic syndrome/ co-morbid CHD
- CVD/ co-morbid depression
- PCI patients
- Male AICD recipients

Types of interventions

- Guided imagery
- MBSR
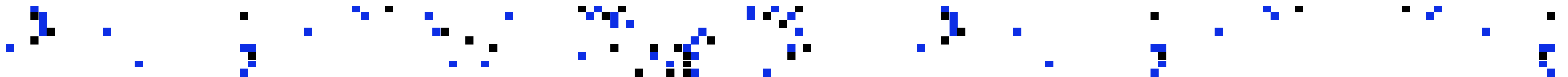- Mindfulness meditation

Results

Depression

- **Statistically significant** differences in **four studies**

- **MBSR** or an adapted version of MBSR **(3 studies)**

- **Guided imagery (1 study)**

Anxiety

- **Statistically significant** results in **three studies**

- **MBSR** or an adapted version of MBSR **(2 studies)**

- Within group differences using **guided imagery (1 study)**

Results

What elements of meditation interventions worked across studies?

- **Daily home meditation practice (5/9 studies)**

- **Focused attention to body parts (3/4 studies) =** improved depression, anxiety, state anxiety

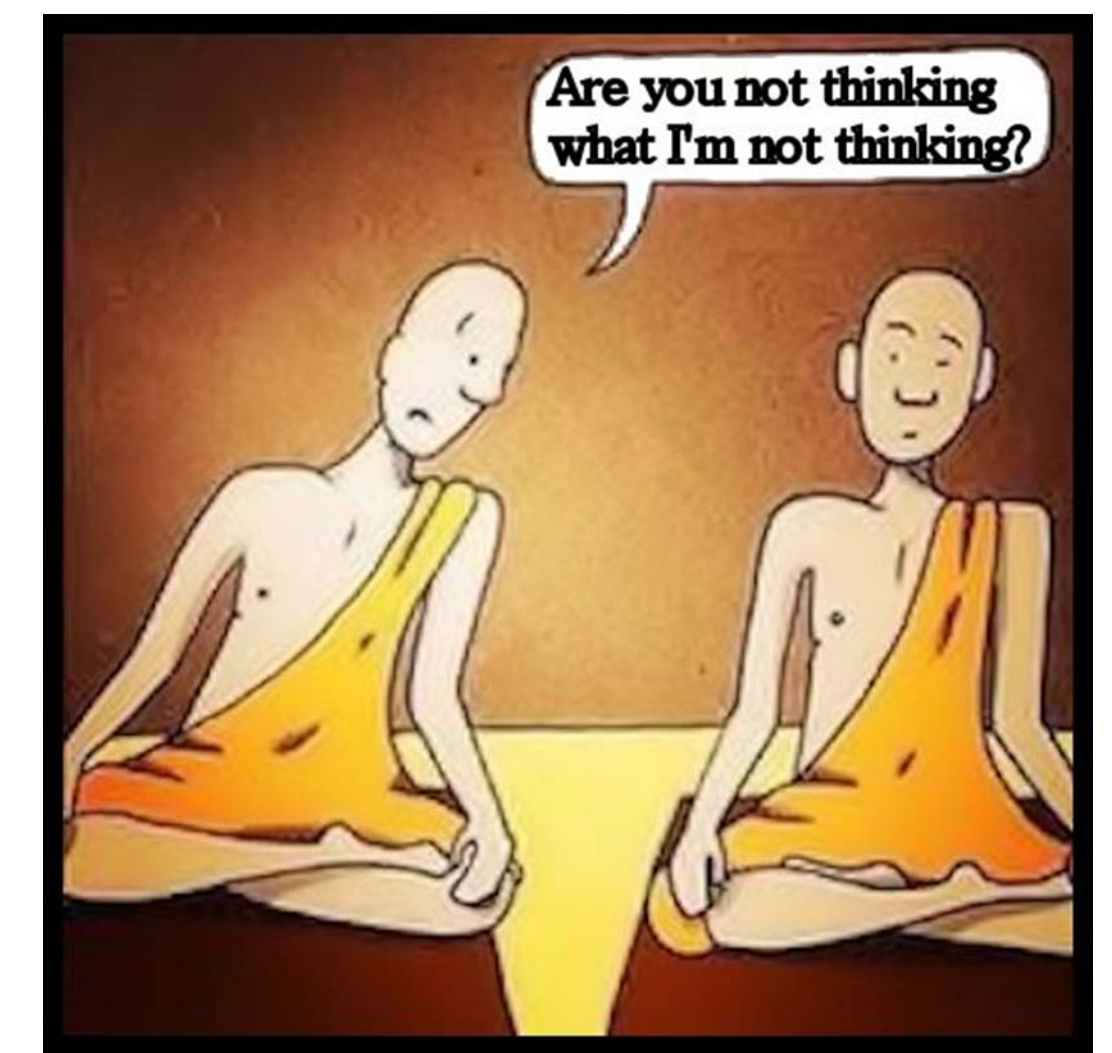- **Group meetings (4/5 studies) =** improved depression only
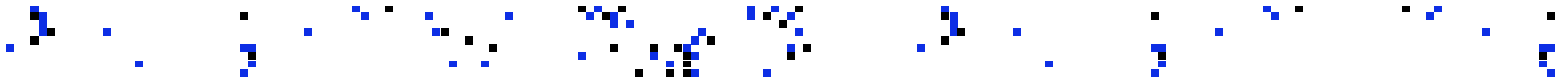
Discussion

- **No phase III randomised controlled trials**

- **Preliminary efficacy** for reductions in depression and anxiety symptoms

- Mindfulness a potential meditator for improvements in depression and anxiety (<60 years)

- Results in line with **American Heart Association recommendations**

Implications for research/ conclusion

- **Definitive research (phase III RCT)** needed

- **Reporting** of meditation studies should adhere to the **CONSORT statement**

- Effect of the **practitioner** and effect of the **group dynamic** needs consideration

- **Gender specific** analyses

- **Mechanisms of effect**

- **Meditation elements** for specific heart disease populations?

Are you not thinking what I'm not thinking?

Thank you

UTS