

Interventions for interoception in mental health disorders: A systematic review of randomised-controlled trials

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BACKGROUND

Interoception describes the sensing, awareness and interpretation of the physiological signals arising within the body, involving major visceral systems.

Deficits in interoception may present a **transdiagnostic marker** across several mental health disorders including eating and somatic symptom disorders.

Interoception-Based Interventions (IBIs) are defined as “first-person reflection upon or cultivation of specific modes of experience, and practices that explicitly involve interoception”. Alter interoception: 1. Effects on body physiology. 2. Cognitive processing of interoceptive signals.

AIMS

To provide a comprehensive and reliable literature overview of the characteristics and efficacy of these IBIs in:

- Improving interoception.
- Reducing target symptom severity in mental health disorders.

Assess methodological quality, assessment measures and intervention focus of the available RCTs.

METHODS

SEARCH STRATEGY

Searched on Pubmed & PsycINFO databases

First search strategy

((“interoception”) OR (“interoceptive”) OR (“body awareness”)) AND ((“affective disorders”) OR (“depression”) OR (“anxiety”) OR (“eating disorders”) OR (“anorexia nervosa”) OR (“bulimia nervosa”) OR (“psychosomatic”) OR (“addiction”) OR (“addictive disorders”)) AND ((“randomized”[Title/Abstract]) OR (“RCT”[Title/Abstract]) OR (“random*”[Title/Abstract])

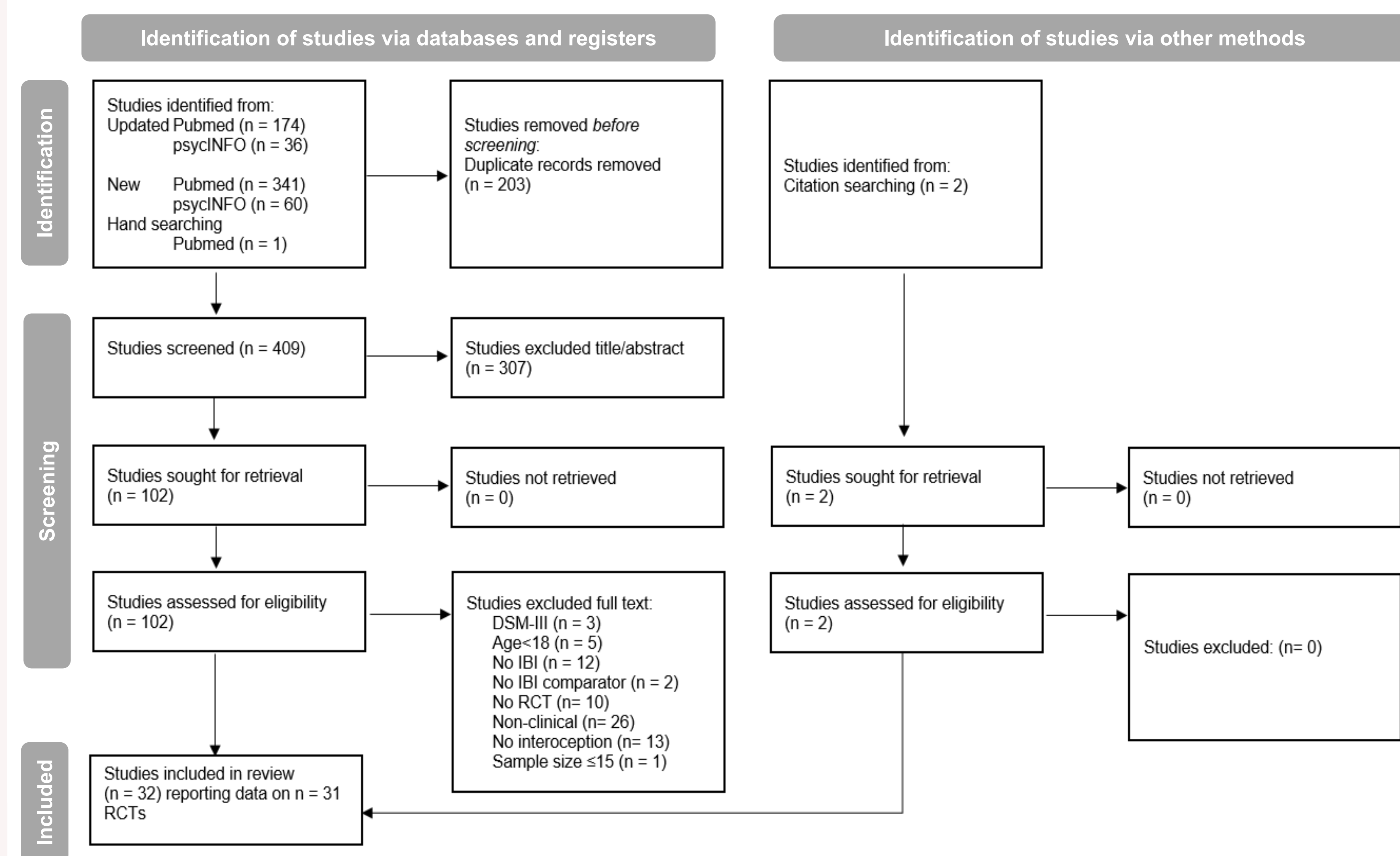
Second search strategy

((“body awareness”) OR (“interocept*”) AND ((“randomized”[Title/Abstract]) OR (“RCT”[Title/Abstract]) OR (“random*”[Title/Abstract])

CRITERIA

- Randomised controlled trial (RCT) design.
 - Adult population with a mental health disorder diagnosis, according to DSM-5 or ICD-10.
 - Published in English.
 - Comparing an IBI against a non-interoceptive control condition.
 - Using both at one validated measure assessing interoception and mental health symptoms.
- Non RCT design & non - intervention studies
 - The use of psychotropic medication without an IBI.
 - Children, infant and non-clinical population.
 - Qualitative studies or studies with no relevant data, i.e., no between-group effects.

RESULTS



- 64.5% (20/31) RCTs: significant interoception improvement in patients receiving IBIs.
- Strong evidence of improvement in: **Irritable Bowel Syndrome 3/3, Substance Use Disorder 2/3, Fibromyalgia 2/3** and **PTSD 3/5**.
- No clear differences in efficacy of improving interoception based on IBI focus.
- 14/31 RCTs (45.2%) demonstrated significant symptom improvement in patients receiving IBIs.
- Strong evidence of improvement in: **Eating Disorders (2/2)** and **Substance Use Disorder (2/3)**.

QUALITY

- Randomization 100% & Appropriate randomization (e.g., sealed envelopes or computer algorithm) 77.4%
- Withdrawal justification 96.8% & Blinding of researchers 41.9%
- **Pre-registered protocol** (added but not part of the scale total score) 54.8%

DISCUSSION

IBIs improving interoception in EDs and SUDs correspond to improvements in symptomatic change.

→ Not in the case of IBS, PTSD and Fibromyalgia.

The most frequently applied type of IBI targeted both improving the perception of physiological signals and the metacognitive appraisal of the signals.

→ No differences in efficacy in improving interoception.

→ Differences in efficacy were found in symptom improvements in EDs and SUDs.

LIMITATIONS

- Low power as more than half trials with n ≤ 60 participants
- Risk of bias: as less than half studies had a pre – registered protocol or appropriate blinding.
- IBIs very heterogeneous in improving interoception & mental health symptoms, meta-analysis not conducted.
- Limited database search and Jadad scale used.

