The Efficacy of Psychological Interventions for Anxiety in Parkinson's Disease

A Systematic Review and Meta-Analysis Including Mindfulness and Mind–Body Approaches

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KEY FINDING

In Parkinson's disease, psychological interventions **moderately reduce anxiety** — and cognitive and mindfulness/mind–body approaches **work equally well.**

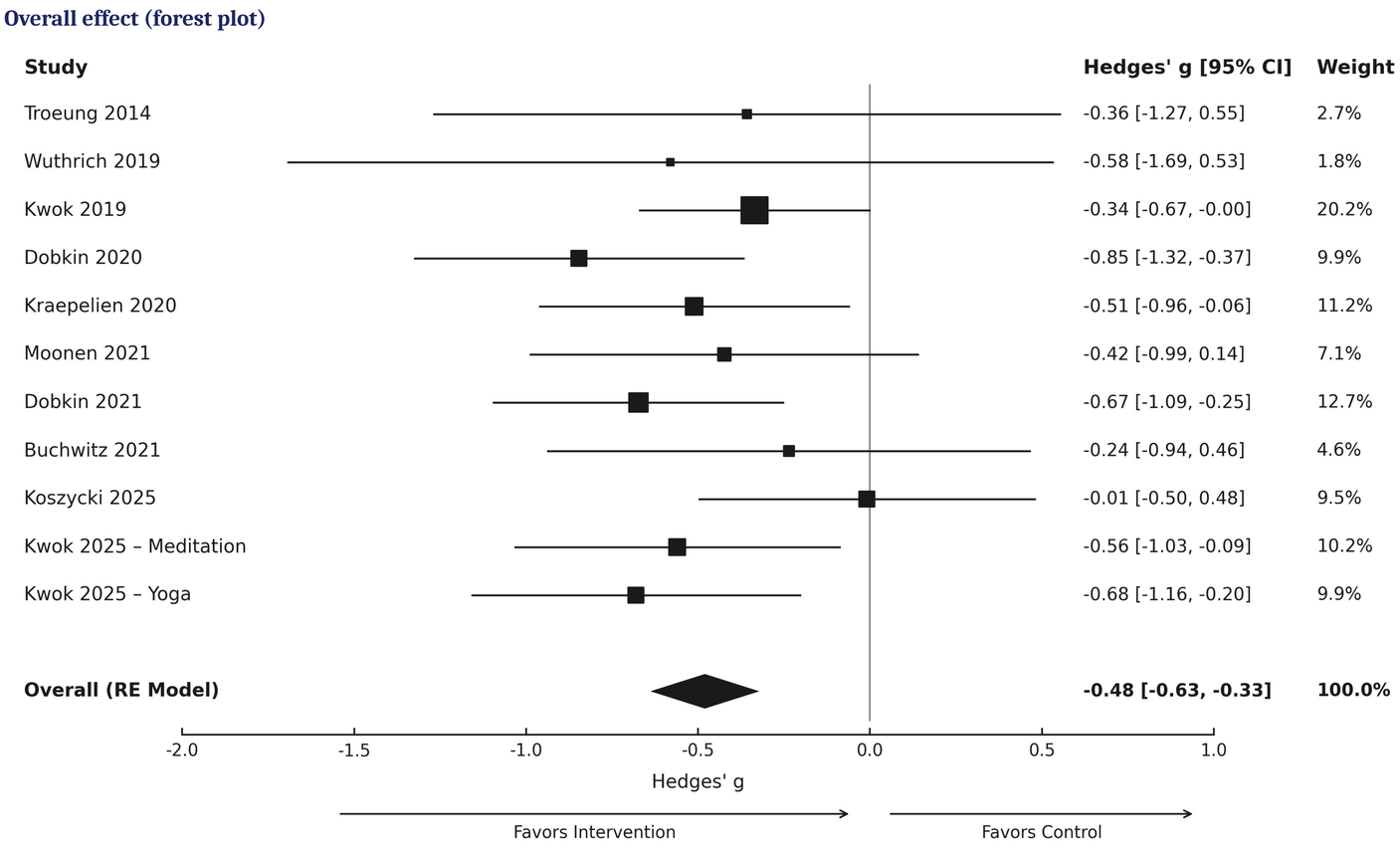
Why it matters

- Anxiety affects ~20–40% of people with Parkinson's disease (PD) and worsens quality of life, fear of falling, and activity avoidance.
- Medication has limited effect on PD anxiety; psychological therapy is a key non-drug option.
- Few meta-analyses compare cognitive and mindfulness/mind–body approaches in one framework.
- Aim: quantify overall efficacy and compare theoretical approaches.

What we did

- Systematic search: PubMed, Embase, Cochrane CENTRAL (through Feb 2026).
- 10 RCTs → 11 independent comparisons; total N = 706.
- Effect size: Hedges' g, random-effects model.
- Subgroup analysis by theoretical orientation.
- Sensitivity: leave-one-out & Hartung–Knapp; Egger's test; Cochrane RoB 2.

Overall effect (forest plot)



Heterogeneity: Q = 8.81, df = 10, p = .55, I^2 = 0%, τ^2 = 0.00
Test for overall effect: Z = 6.27, p < .001

11 comparisons; random-effects model. Diamond = pooled g = −0.48 [−0.63, −0.33].

Results

OVERALL

−0.48

95% CI [−0.63, −0.33], p < .001

COGNITIVE CONTROL–FOCUSED

−0.50

k = 7 · [−0.72, −0.28]

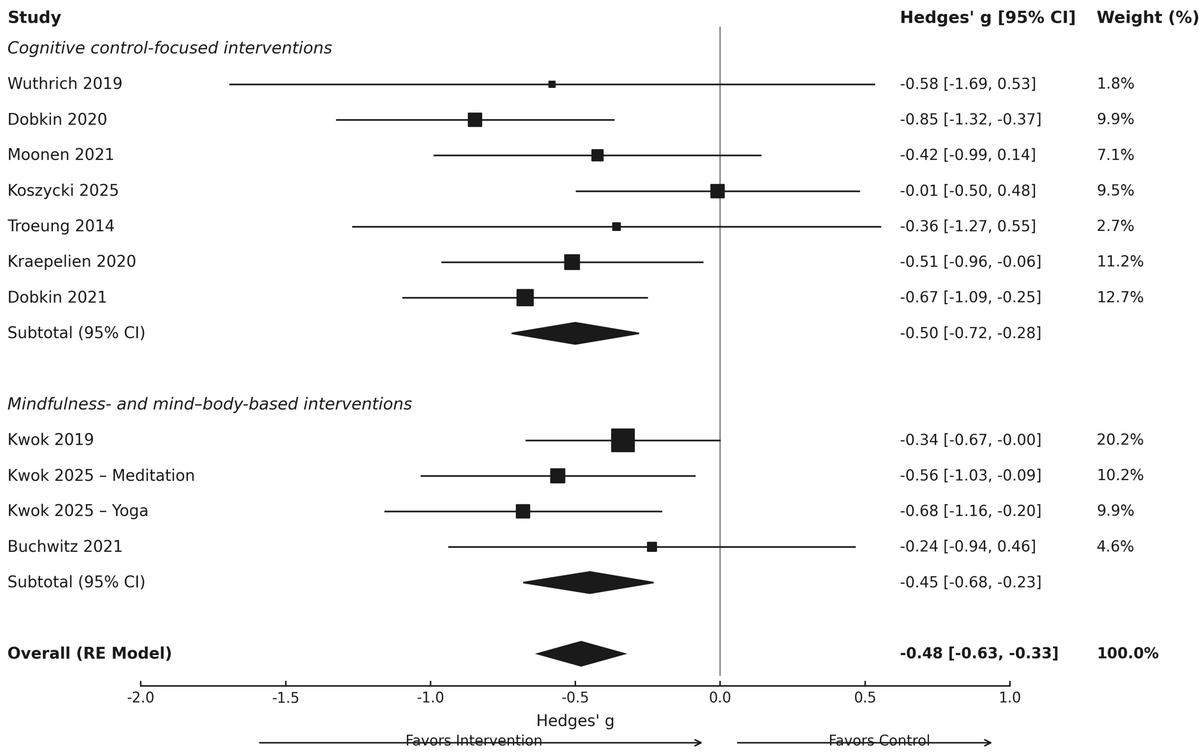
MINDFULNESS & MIND–BODY

−0.45

k = 4 · [−0.68, −0.23]

No significant difference between approaches ($Q_{between}$ = 0.12, p = .73) · I^2 = 0% · Stable across all sensitivity analyses · No clear publication bias (Egger p = .83)

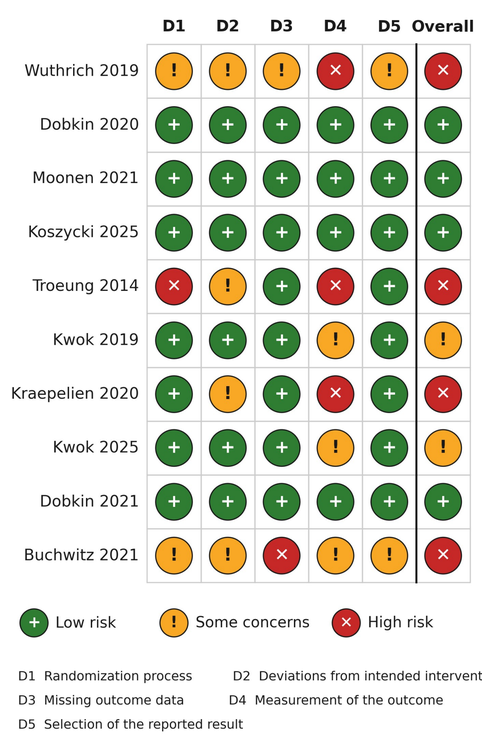
Subgroup: theoretical orientation



Test for subgroup differences: $Q_{between}$ = 0.12, df = 1, p = .73
Overall heterogeneity: I^2 = 0%

Cognitive (k=7) vs mindfulness/mind–body (k=4). Both significant; no group difference.

Risk of bias (RoB 2)



D1 Randomization process
D2 Deviations from intended interventions
D3 Missing outcome data
D4 Measurement of the outcome
D5 Selection of the reported result

4 low · 2 some · 4 high

Study selection

Conclusion

- Structured psychological interventions are effective for PD-related anxiety, with a moderate pooled effect.
- Both cognitive restructuring and mindfulness/mind–body strategies are viable — no evidence one is superior.
- Supports flexible, patient-centered programs targeting disease-specific anxiety (fear of falling, activity avoidance).

Scan to contact the authors

PLAIN-LANGUAGE TAKEAWAY

Talk-based and mindfulness/body-based therapies both ease anxiety in Parkinson's disease about equally — so care can be tailored to each patient.

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