

Feasibility of incorporating a cognitive behavioural therapy for irritable bowel syndrome app alongside dietary counselling

Katerina Belogianni¹, Emma Stennett², Jo Felton², Sarah Hearsey², Alice Twomey², Alice Sibelli³, Rona Moss-Morris⁴, Miranda Lomer^{1,2}

¹Department of Nutritional Sciences, Faculty of Life Sciences and Medicine, King's College London

²Department of Nutrition and Dietetics, Guy's and St Thomas' NHS Foundation Trust, London, UK

³Mahana Therapeutics, California, USA

⁴Department of Psychology, Institute of Psychology and Neuroscience, King's College London, UK

Background & Aim

Irritable bowel syndrome (IBS) is a chronic, relapsing gastrointestinal condition which negatively impacts quality of life. Diet¹ and cognitive behavioural therapy (CBT)² are effective management strategies, yet access to IBS-specific CBT is limited and offered following other treatment failure.³

Aim: To investigate whether an unguided IBS-specific CBT app alongside dietary counselling is feasible and improves IBS outcomes in a dietetic service evaluation.

Methods

Patients with IBS referred to the dietitian at a London-based hospital were eligible.

Exclusions: pregnancy/lactation, patients following a strict low FODMAP diet, patients who received CBT for IBS in the last 6 months.

Intervention (integrated care): dietary counselling and an IBS-specific CBT app (Figure 1) to complete within 12 weeks.

Data collected at baseline (pre-) and post-intervention (12 weeks):

- IBS symptom severity score (IBS-SSS)
- perceived stress score (PSS)
- work and social adjustment score (WSAS)

Clinically significant improvement was defined as ≥ 50 -point reduction in IBS-SSS. Paired *t*-tests were used to compare pre-post outcomes with statistical significance < 0.05 .

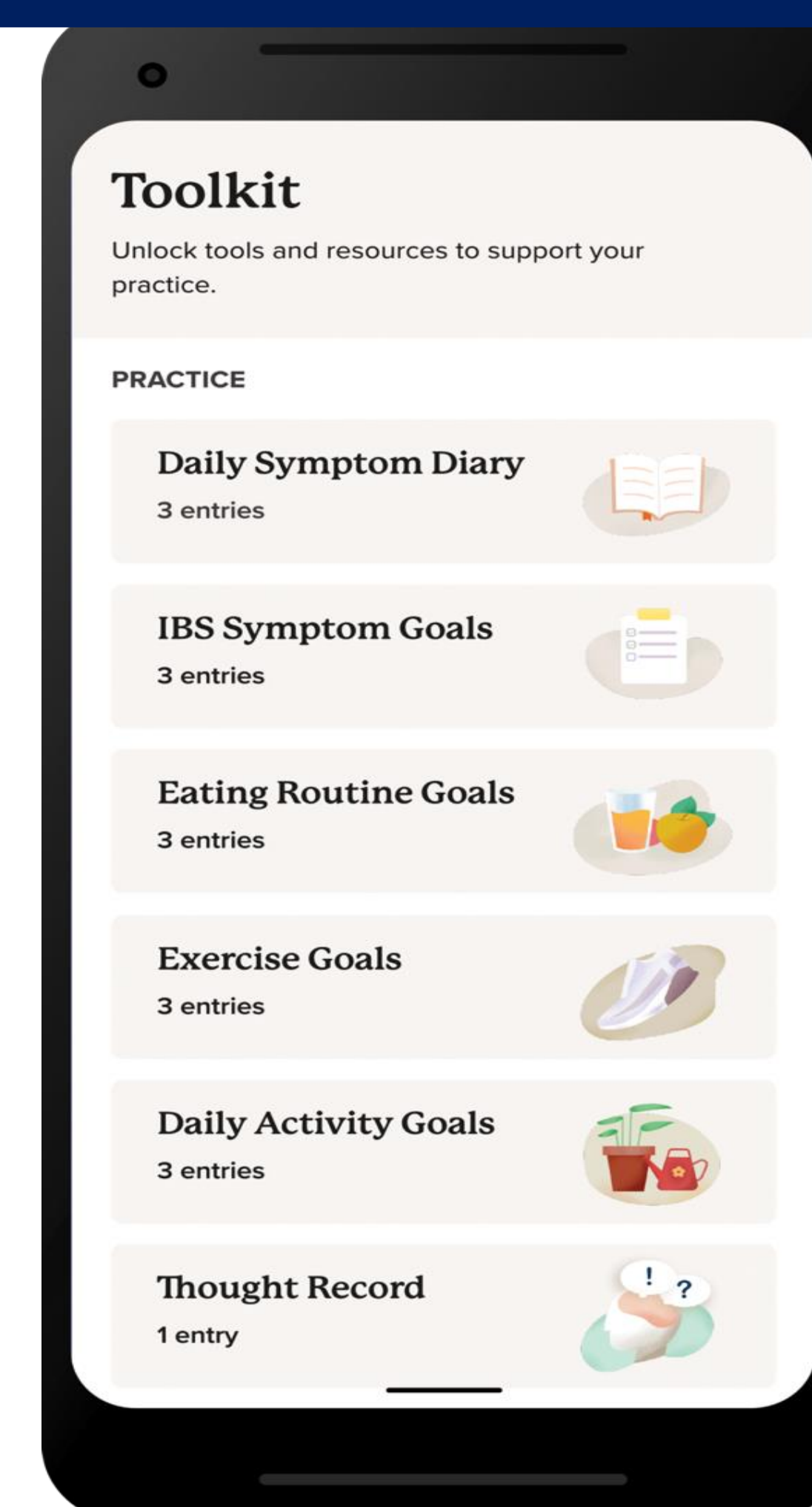


Figure 1. The IBS-specific CBT app (Mahana-IBS) with 10 self-paced sessions of CBT for IBS including meditation, relaxation and lifestyle advice and resources



Results

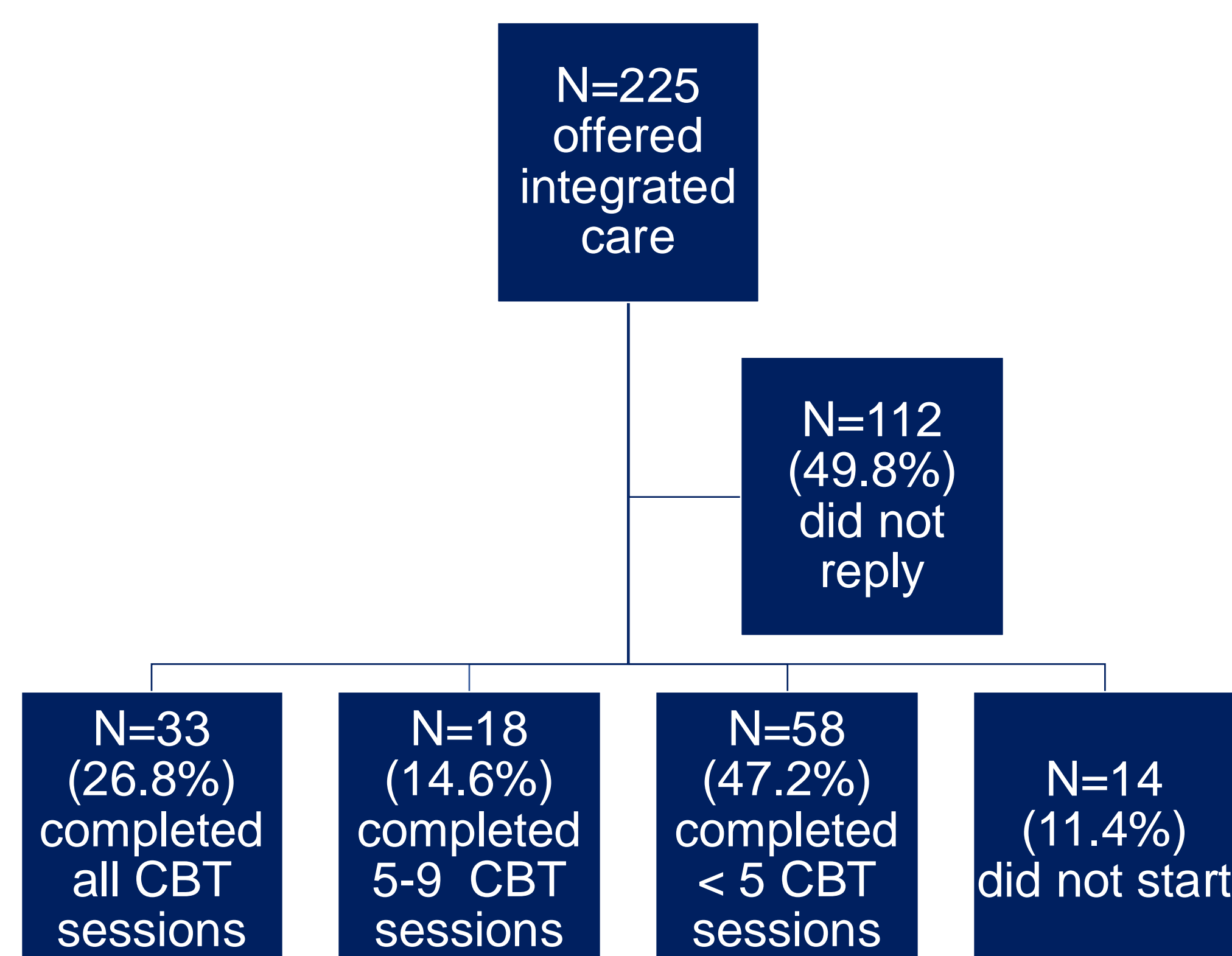


Figure 2. Flow chart of the study

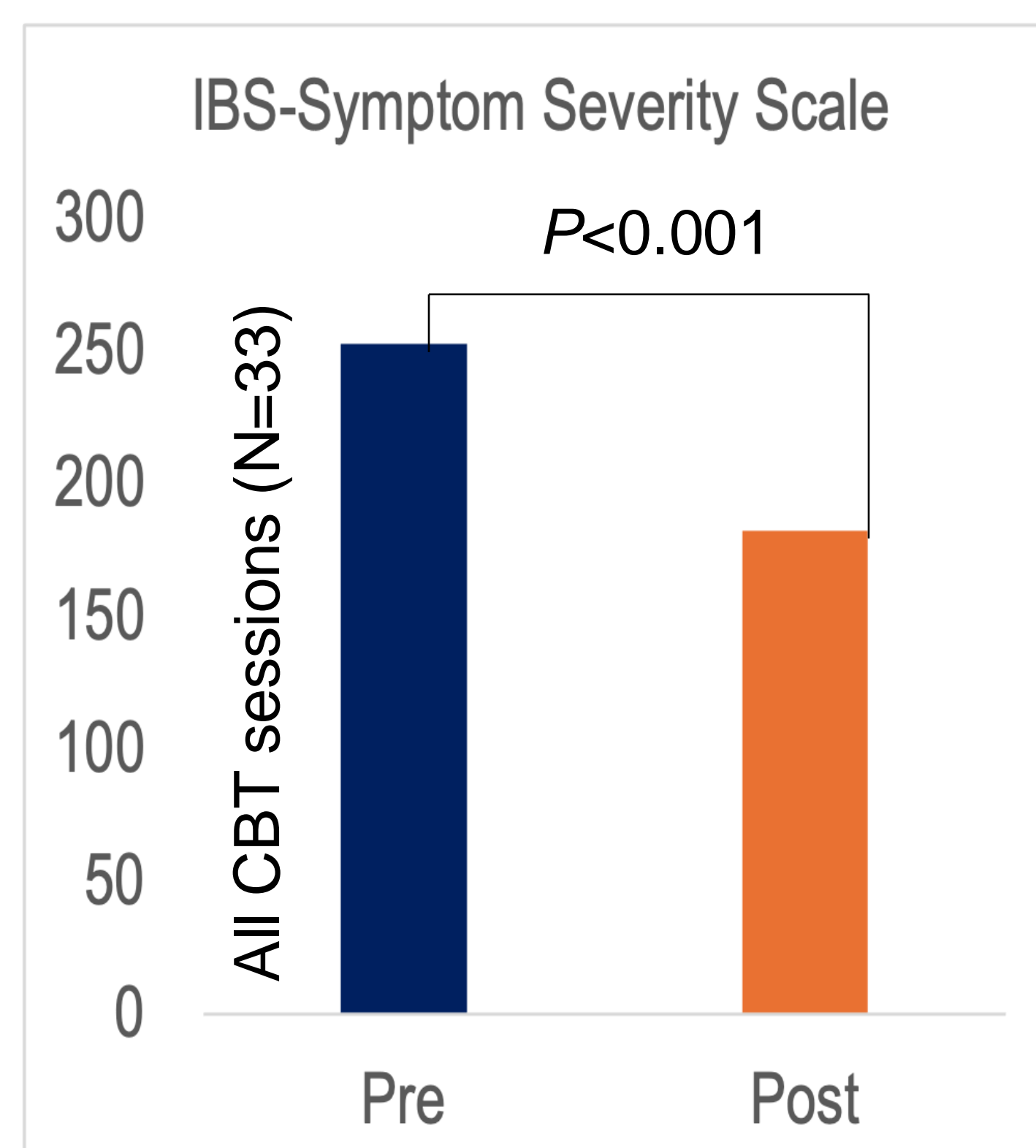


Figure 3. Changes in IBS-SSS

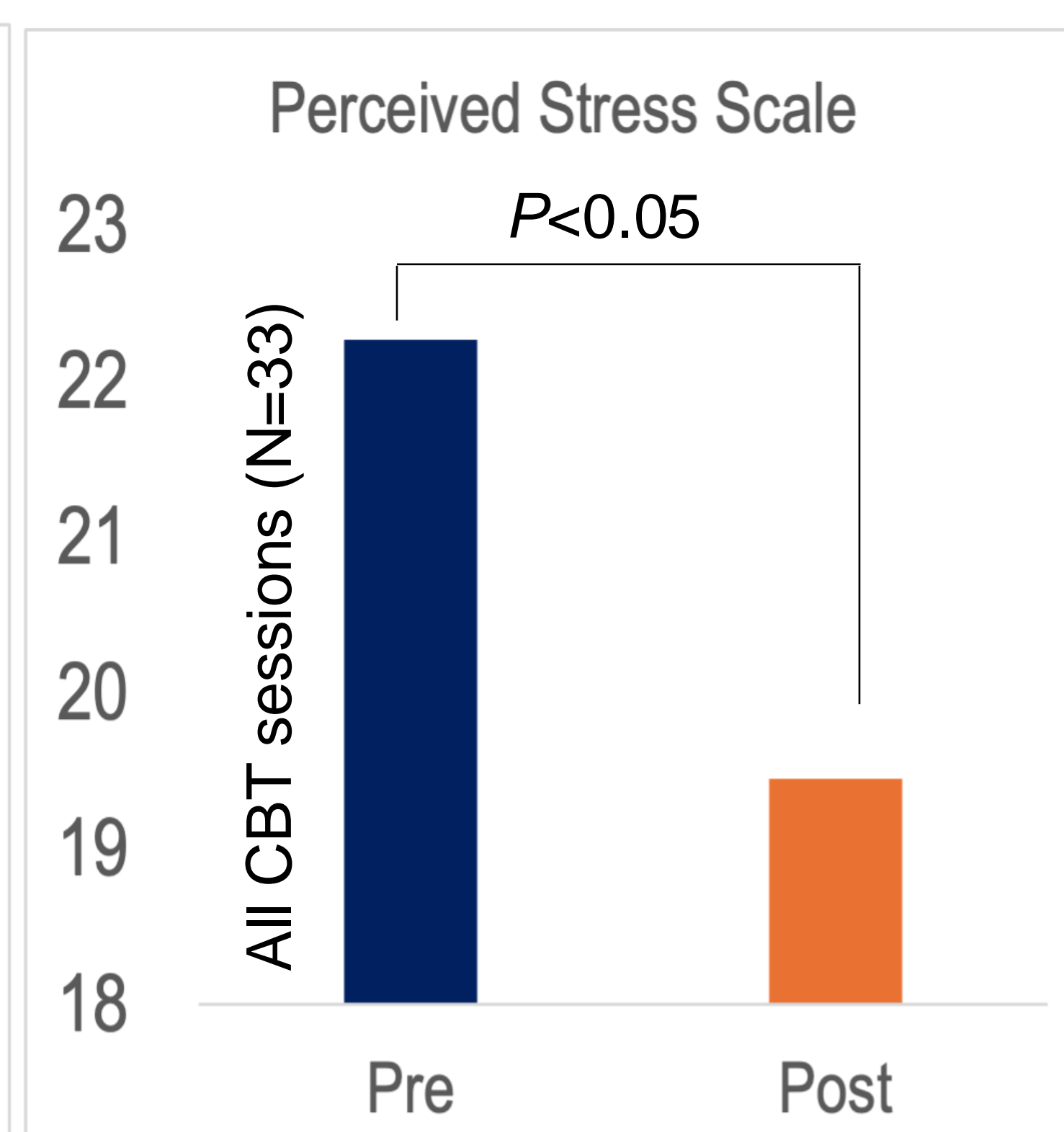


Figure 4. Changes in PSS

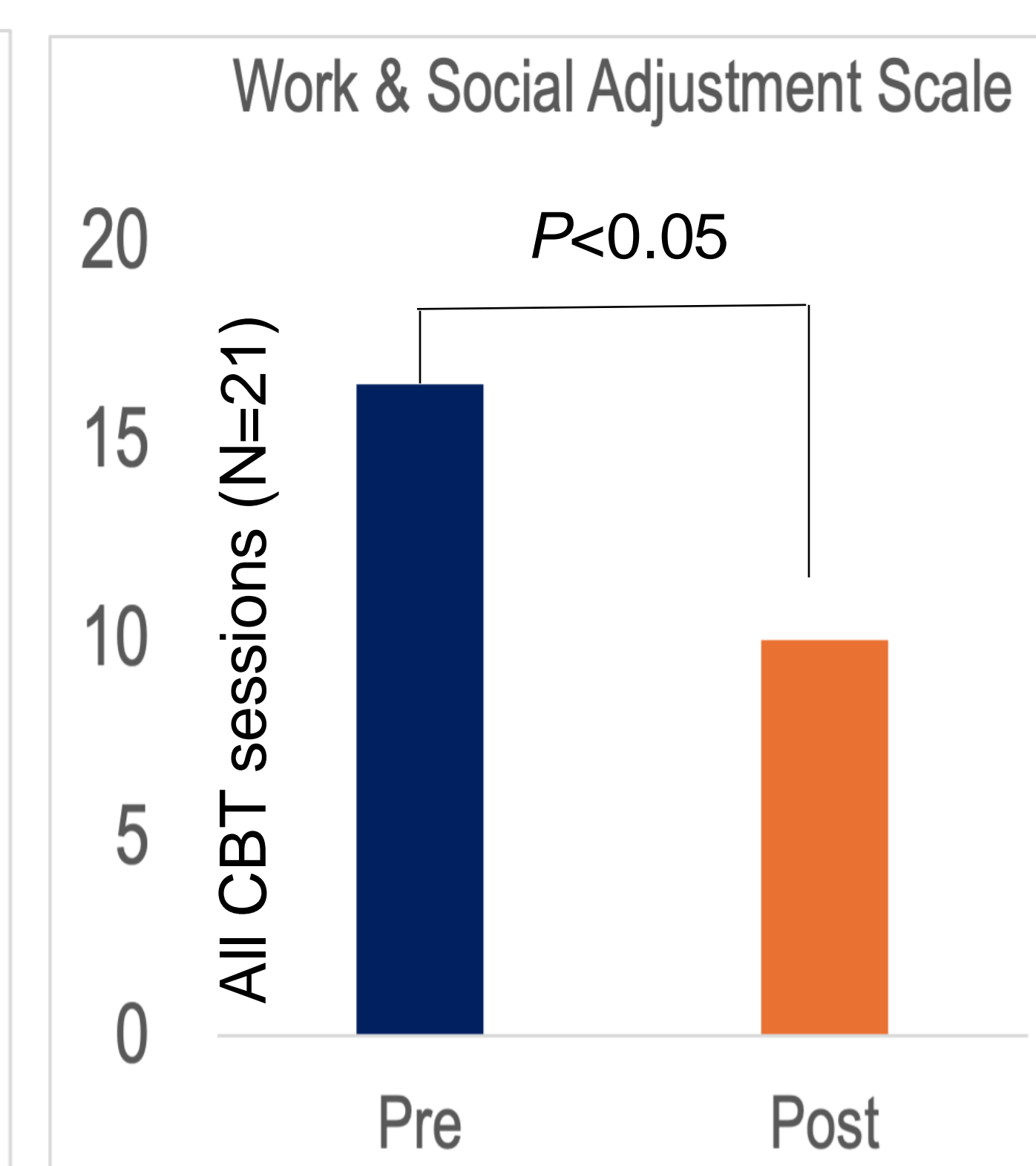


Figure 5. Changes in WSAS

- 51 patients completed at least 5 sessions of the CBT app (Figure 2).
- Patients ($N=51$) had a mean age of 41.7 years ($SD=12.99$), 72.5% were female, 41% were of white ethnic background and 59% were confident in using apps.
- Significant improvements were found in all outcomes (Figures 3-5).
- 18 of the 33 (54.5%) patients who completed all CBT sessions showed a clinically significant improvement in IBS-SSS.

Conclusions

Adding an IBS-specific CBT app alongside dietary counselling appeared acceptable for 22.7% of patients offered integrated care. This could be a feasible way of offering IBS-specific CBT to more patients earlier in their treatment pathway.

References

1. McKenzie YA, Bowyer RK, Leach H, et al. British Dietetic Association systematic review and evidence-based practice guidelines for the dietary management of irritable bowel syndrome in adults (2016 update). *J Hum Nutr Diet.* 2016;29(5):549-75.
2. Everitt HA, Landau S, O'Reilly G, et al. Assessing telephone-delivered cognitive-behavioural therapy (CBT) and web-delivered CBT versus treatment as usual in irritable bowel syndrome (ACTIB): a multicentre randomised trial. *Gut.* 2019;68(9):1613-1623.
3. NICE. Irritable bowel syndrome in adults: diagnosis and management (CG61). National Institute for Health and Care Excellence Clinical guidelines. Published in Feb 2018 Last update in April 2017. (Accessed 09/22, <https://www.nice.org.uk/guidance/cg61>)