

Evaluation of patient outcomes from a 3-week and 8-week outpatient multidisciplinary rehabilitative programme for Functional Neurological Disorder (FND)



Phoebe Lawes¹, Melda Hassan¹, Sean Gorman¹, Hannah Marsh¹, Jennifer Wilson¹, Mariana Mendonca², Dr Simon Harrison¹, Dr Laura Marsh³, Dr Susannah Pick³

¹FiND Programme, Bethlem Royal Hospital, South London and Maudsley NHS Foundation Trust, London, Monks Orchard Rd, London, Beckenham BR3 3BX, UK, ²Paediatric Psychology Service, St George's University Hospitals NHS Foundation Trust, Blackshaw Road, London, SW17 0QT, UK, ³Department of Psychology, Institute of Psychiatry, Psychology and Neuroscience, King's College London, 16 De Crespigny Park, London SE5 8AB, UK

Introduction

Functional Neurological Disorder (FND) is a debilitating neuropsychiatric condition involving involuntary symptoms such as weakness, seizures, tremors, or walking difficulties.

The Functional integrated Neurological Disorders (FiND) programme is an outpatient multidisciplinary day programme for adults with FND. It offers specialist treatment aimed at reducing symptom severity and improving functional mobility by teaching distraction techniques. Through using these techniques, clients gain an understanding of their condition, to aid in the management of their symptoms.

Originally an 8-week programme, this has been amended to an initial 3-week programme, with the option to extend the treatment by a further 5-weeks for clients requiring further intensive treatment. This updated, needs-based stepped-care model was designed to increase access to treatment.

Aim

The current study aimed to assess the new stepped care model by evaluating the outcomes of clients completing both the 3-week and extended 3 + 5-week programmes.

Method

Suitable clients attended the programme for 2 days per week over a 3-week period. Clients suitable for further intervention were offered an additional 5 weeks of the programme, with follow-up sessions at 1- and 3- months.

The following routinely collected outcome measures were collected at baseline, post-intervention, and follow-up:

- Beck Anxiety Inventory (BAI)
- Beck Depression Inventory (BDI-II)
- Work and Social Adjustment Scale (WSAS)
- 10-Meter Walk Test (10MWT)
- Timed Up and Go (TUG)
- Berg Balance Scale (BBS)

Method

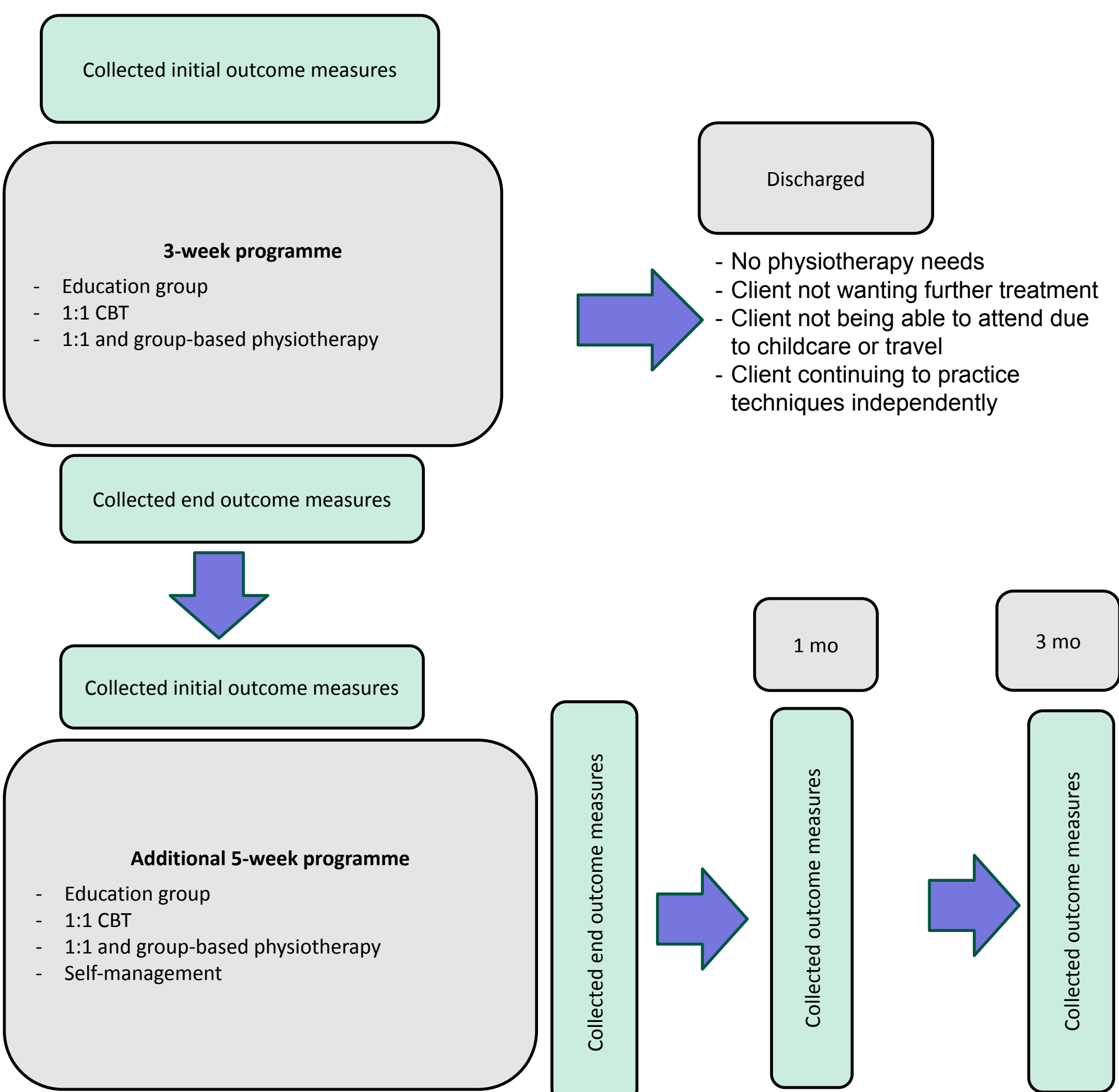


Figure 1. Figure showing programme structure. During 3-week programme, clients are offered 6 hours of 1:1 CBT, 6 hours of 1:1 Physiotherapy and 15 hours of educational group sessions including Physiotherapy group workshop.

Analysis

For each group, linear mixed-effects models assessed changes in outcome measures from week 1 to week 3. For the group receiving the 3 + 5-week intervention, changes in outcome measures were also assessed at week 8 and at 1 and 3 month follow up.

Each model was estimated using the Restricted Maximum Likelihood (REML) method and included time as the fixed effect, with a random intercept for subject. Significant main effects were followed up with Bonferroni corrected-pairwise comparisons of estimated marginal means.

Results

Variable	3 Weeks (N = 60)		3 + 5 Weeks (N = 48)	
	M	(SD)	M	(SD)
Age* (years)	42.8	(12.2)	44.9	(14.9)
Time since diagnosis* (months)	15.7	(16.1)	17.3	(19.2)
	N	(%)	N	(%)
Gender				
Male	13	21.7	10	20.8
Female	47	78.3	38	79.2
Ethnicity				
White	31	51.7	30	62.5
Asian or Asian British	5	8.3	2	4.2
Black or Black British	13	21.7	10	20.8
Mixed Background	6	10.0	5	10.4
Other ethnic group	4	6.7	1	2.1
Not specified	1	1.7		
Symptoms				
Upper limb weakness	21	35.0	22	45.8
Lower limb weakness	46	76.7	31	64.6
Tremors	30	50.0	26	54.2
Dystonia	18	30	9	18.8
Sensory loss	30	50.0	24	50.0
Dizziness	15	25	16	33.3
Involuntary movement	32	53.3	23	47.9
Pain	41	68.3	39	81.3
Fatigue	46	76.7	41	85.4
Speech difficulties	22	36.7	21	43.8
Dissociation	18	30.0	11	22.9
Cognitive symptoms	28	46.7	29	60.4
Functional seizures	17	28.3	20	41.7
Sensory sensitivity	15	25.0	9	18.8

*Data gathered at referral
*Data only available for 29 service-users in the 3-week group, and 50 service-users in the 3 + 5-week group

Figure 2. Table of sample characteristics at baseline, shown separately for individuals completing the 3-week programme, and for those completing the 3+5-week programme.

- Compared to **baseline**, there were **significant improvements** across **all** outcome measures at **week 3** ($p < .05$).
- **3 + 5 weeks**
Compared to **baseline**...
• There were **significant improvements** across **all** outcome measures, **excluding the TUG**, at **week 3** ($p < .001$).
- There were **significant improvements** across **all** outcome measures at **week 8** ($p < .001$).
- **Significant improvements** were sustained across **all** outcome measures at both **1 and 3-month** follow ups, **excluding the TUG** at **3-month follow up**.

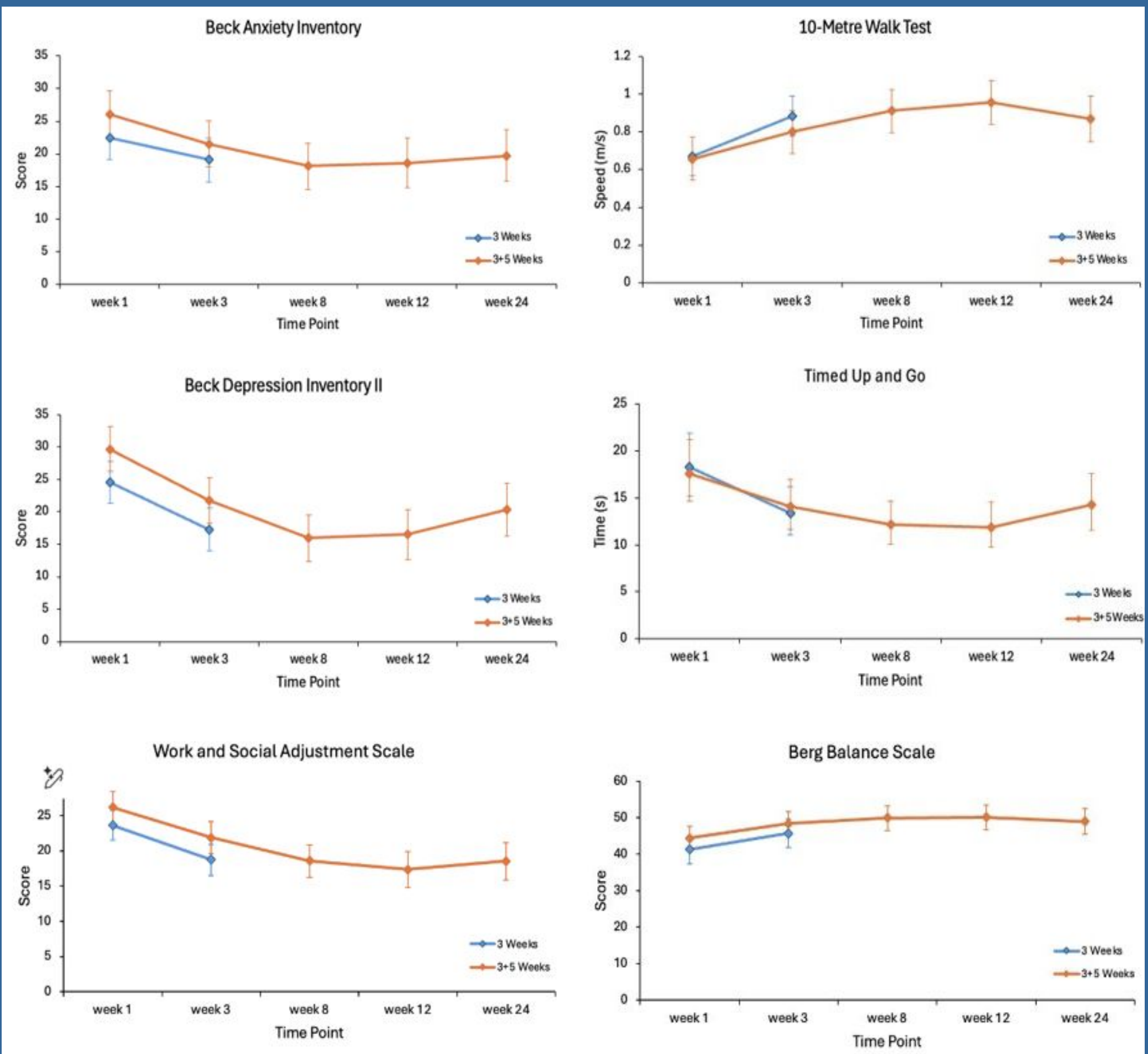


Figure 3. Estimated marginal means (EMMs) of all 6 outcome variables at each timepoint for individuals completing just the 3-week programme, and for those completing the 3+5-week programme. EMMs for the TUG are back-transformed, derived from log-transformed models, for graphical presentation.

Conclusions

Both the 3-week and the 3 + 5-week multidisciplinary treatment programmes were associated with reductions in patient-reported anxiety, depression and functional impairment, and improvements on most clinician-rated physiotherapy measures.

These findings support the use of a more cost-effective, needs-based stepped care treatment model for people with FND. This holds relevance for future intervention studies and FND specialist services.

Email: phoebe.lawes@slam.nhs.uk
Web:
<https://slam.nhs.uk/service-detail/service/neuropsychiatry-services-274/>

Acknowledgements.

We would like to thank the patients that took part in this study. We would also like to thank Dr Laura Marsh for her support during this project.