

# Impact of waiting time on the outcome of a group therapy intervention for patients with functional neurological disorders

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## SUMMARY

### Objective

The clinical management of patients with functional neurological disorders can be challenging and often involves neuropsychiatric input. Relatively little is known about factors affecting clinical outcomes following treatment interventions in this patient population. This retrospective study evaluated the care pathway based on group therapy intervention for adult patients with functional neurological disorders attending a specialist neuropsychiatry clinic.

### Methods

We retrospectively reviewed the care pathways of 67 consecutive adult outpatients referred to group therapy sessions for functional neurological disorders, focusing on outcome predictors.

### Results

The mean length of the care pathway (from referral to neuropsychiatry to first contact with therapists) in patients rated as clinically improved was significantly lower than the duration of the care pathway of patients who did not show any improvement: 37.8 weeks compared to 52.1 weeks, respectively ( $p < 0.03$ ). There were no other significant differences between the groups in either demographic or clinical variables.

### Conclusions

Longer waiting times were found to negatively affect clinical outcomes of group therapy sessions for functional neurological disorders in a neuropsychiatry setting. Clinicians should be aware of the possible impact of waiting times on the care pathways of patients with functional neurological disorders. Streamlined care pathways for early intervention in this clinical population should be prioritized.

**Key words:** functional neurological disorders, group therapy, neuropsychiatry, waiting times

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### Conflict of interest

The Authors declare no conflict of interest

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## Introduction

Functional neurological disorders are condition in which patients experience medically unexplained neurological symptoms, such as weakness, movement disorders, sensory symptoms, and blackouts<sup>1,2</sup>. It has been estimated that these symptoms account for about 10% of primary care presentations, however their diagnosis and treatment can be particularly challenging<sup>3</sup>. Patients with functional neurological disorders are often referred to neuropsychiatry clinics for specialist assessment and management<sup>4</sup>. Treatment strategies include psychoeducation and psychological interventions, usually based on cognitive behavioral therapy principles, which can be administered either alone or in combination with pharmacotherapy<sup>5</sup>. Predictors of better outcome include early diagnosis, psychoeducation and patient acceptance, along with appropriate referrals to

specialist services<sup>6,7</sup>, where shorter time to treatment through streamlined care pathways were shown to have the potential to amplify the therapeutic effect<sup>8</sup>. We set out to conduct a retrospective study evaluating the care pathway based on group therapy intervention for adult patients with functional neurological disorders attending a specialist neuropsychiatry service in the United Kingdom. We focused on the possible impact of waiting times on the clinical outcomes of this patient population, in order to identify areas for improvement in neuropsychiatry service provision<sup>9</sup>.

## Methods

We retrospectively reviewed the care pathways of 67 consecutive outpatients diagnosed with functional neurological disorders at the specialist neuropsychiatry clinic, Department of Neuropsychiatry, National Centre for Mental Health, Birmingham, United Kingdom. Following clinical assessment and diagnosis confirmation as per the Diagnostic and Statistical Manual of Mental Disorders criteria<sup>1</sup>, patients with functional neurological disorders were referred to an information and management intervention, consisting of five group therapy sessions. The duration of each session was one hour and the frequency of the sessions was weekly. The group therapy sessions were delivered by trained liaison nurses and occupational therapists, and involved elements of psychoeducation, with the use of presentations, hand-outs, discussion, and personal reflection. The aims of the sessions were to increase patients' understanding of their diagnosis, to help them manage their own condition and symptoms, to increase understanding of potential triggers, to provide support and to reduce feelings of isolation and hopelessness. The group therapy intervention was followed by a clinical assessment by the referring consultant, who rated clinical outcomes according to three major categories: improvement, improvement with further therapy recommended, or lack of improvement.

The timeline of the care pathway was assessed for each patient, with focus on its total duration from referral to neuropsychiatry to first contact with therapists. Intermediate points, including first neuropsychiatric assessment, confirmation of diagnosis, and referral to group therapy intervention, were also examined. Student's *t*-tests were used to assess possible differences in demographic and clinical variables, as well as mean durations of care pathways between the groups.

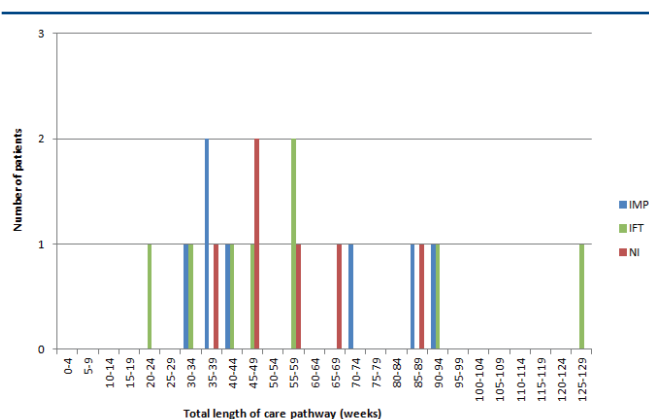
## Results

Of the 67 patients with a diagnosis of functional neurological disorders, 47 were females (70%). The median age at referral to the specialist neuropsychiatry clinic

was 43 years (range 16-69). Referrals mainly originated from secondary care (neurologists:  $n = 38$ , 57%), followed by primary care (general practitioners:  $n = 18$ , 27%). The mean time from referral to first assessment at the neuropsychiatry clinic was 17.5 ( $\pm 1.5$ ) weeks. The mean time between neuropsychiatric assessment and diagnosis was 7 ( $\pm 2.0$ ) weeks, with 84% of the patients being diagnosed on their first assessment. Following discussion in clinic, 34 patients (51%) were referred to the group therapy sessions for functional neurological disorders. The mean waiting time from referral to first contact with the therapists was 24.8 ( $\pm 2.4$ ) weeks.

At their follow-up appointment following the intervention, 7 patients (20%) were classified as clinically improved, 8 patients (23%) as improved with further therapy recommended, and 6 patients (18%) as not improved. The remaining 13 patients showed poor compliance with the treatment intervention or were still attending the therapy sessions at the time of data collection (Fig. 1).

There were no significant differences in either demographic or clinical variables between the outcome groups. However, the mean total length of the care pathway (from referral to neuropsychiatry to first contact with therapists) in patients rated as clinically improved was significantly lower than the duration of the care pathway of patients who did not show any improvement: 37.8 ( $\pm 2.2$ ) weeks compared to 52.1 ( $\pm 5.2$ ) weeks, respectively ( $p < 0.03$ ). This difference was mainly driven by the shorter waiting time between referral to the group therapy sessions and first contact with therapists in the group of patients who reported a clinical improvement: 22.9 ( $\pm 3.8$ ) weeks versus 39.1 ( $\pm 4.4$ ) weeks ( $p < 0.02$ ). When comparing the group of patients rated as improved with further therapy recommended and



Abbreviations. IMP: improved; IFT: improved with further therapy recommended; NI: not improved

**FIGURE 1.** Clinical outcomes following group therapy sessions for functional neurological disorders, according to waiting time before active intervention.

the group of patients rated as not improved, the waiting time between referral to the group therapy sessions and first contact with therapists showed a significant difference ( $25.3 \pm 5.9$  weeks *versus*  $39.1 \pm 4.4$  weeks;  $p < 0.05$ ), whereas the total length of the care pathway was not significantly different.

## Discussion

This retrospective study found evidence for the impact of waiting times on a care pathway involving group therapy intervention for patients with functional neurological disorders in a neuropsychiatry setting. In our sample, clinical improvement was associated with more streamlined care pathways and shorter waiting times. The total duration of the care pathways exceeded 37 weeks for all the patients who showed no improvement following the group therapy intervention. The group of patients with poor outcome was characterized by longer waiting times between referral to neuropsychiatry and confirmation of diagnosis (at least 10 weeks) and longer waiting times between referral to group therapy intervention and first contact with therapists (at least 25 weeks). Our findings are to be interpreted in the light of several

limitations, as the relatively small sample size and the specialized nature of the neuropsychiatric clinic limit their generalizability. The nature of the treatment intervention (group therapy sessions) might also be a factor that limits the generalizability of the findings from our study. For example, the results of a study on patients with psychogenic movement disorders showed that there was no specific benefit from short term psychodynamic psychotherapy either early or late as opposed to neurological observation and support<sup>10</sup>. Moreover, selection bias might have operated at the time of patient referral to our group therapy intervention. Finally, we had no control group of patients without active intervention. Overall, our results confirm previous findings suggesting that the duration of the care pathway can have an impact on the clinical outcome of interventions for functional symptoms<sup>8</sup> and prompt further work to investigate these effects beyond group therapy interventions for functional neurological disorders. Likewise, work toward the development guidelines on care pathways across neuropsychiatric disorders focusing on timeliness of intervention and identification of gaps in health-care service provision should be prioritized.

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