

Supplementary Table 1. Other notable cohort treatment studies in motor functional neurological disorder.

Study	n	Description	Key Points
Multidisciplinary rehabilitation – cohort studies			
Theuer et al 2020 [S43]	129	<p>Retrospective review of patients admitted to a rehabilitation unit over a 20-year period. 185 patients were identified, 129 received treatment (multidisciplinary rehabilitation).</p> <p><u>Duration and setting:</u> length of inpatient stay not reported</p> <p><u>Outcome measures:</u> Improvement defined as remission of symptoms, marked improvement (75%) or moderate improvement (50%)</p>	<p>Treatment involved physiotherapy, occupational activities, psychiatric, and psychological support.</p> <p>After treatment, 70% of patients improved (36.2% with complete remission).</p> <p>Younger patients and those with an acute onset had a better outcome.</p>
Hebert et al 2020 [S35]	20	<p>Prospective cohort study of multidisciplinary rehabilitation based on the MoRe protocol in patients with functional movement disorders.</p> <p><u>Duration and setting:</u> mean 7.5 inpatient days</p> <p><u>Outcome measures:</u> CGI-severity; MAS; FGA; BBS; TUG; FIST; FIM</p>	<p>17 of 20 patients completed inpatient rehabilitation. 93% of patients completing treatment rated themselves as much improved. While not statistically significant at 1-year follow-up, patient-rated improvement was noted in 10 of 13 patients with available date.</p>
Kozłowska et al. 2020 [S49]	57, 60, 25	<p>Three prospective cohort studies of pediatric multidisciplinary rehabilitation.</p> <p><u>Duration and setting:</u> 1-3 weeks, inpatient</p>	<p>67%, 53%, and 80% of children in the 3 cohorts had mFND.</p> <p>Treatment included physiotherapy, psychotherapy (individual and family), attendance at hospital school,</p>

		<p><u>Outcome measures:</u> GAF, resolution of FND, return to school</p>	<p>and reintegration to home school post discharge.</p> <p>FND symptoms resolved in 95%, 85% and 88%, and 61%, 53% and 52% returned to full health and to full-time school.</p>
Butz et al 2019 [S48]	100	<p>Prospective cohort study of pediatric multidisciplinary rehabilitation.</p> <p><u>Duration and setting:</u> average 10.5 days (range 2-103 days), inpatient</p> <p><u>Outcome measures:</u> WeeFIM</p>	<p>All children had mFND. 94/100 completed the program.</p> <p>Treatment included physiotherapy, occupational therapy and recreational therapy, schooling support, and psychotherapy.</p> <p>85% of children reached the maximum WeeFIM score at discharge (full recovery sustained at 2 months).</p>
Jimenez et al 2019 [S37]	63	<p>Retrospective review of patients with functional motor symptoms participating in an interdisciplinary chronic pain rehabilitation program over a 4-year period.</p> <p><u>Duration and setting:</u> 5 days a week (intensive outpatient), for 3-4 weeks</p> <p><u>Outcome measures:</u> pain-disability index; mean timed up and go; mean stair climbing; 6-minute walk test</p>	<p>The cohort of patients had pain plus mixed FND symptoms including functional movement disorders and functional seizures.</p> <p>On discharged, participants showed improvements in a range of outcome measures including pain related disability, depression, anxiety, and physical function. There was a 22% treatment dropout rate.</p>
Jacob et al 2018 [S36]	32	<p>Retrospective cohort study of specialist multidisciplinary rehabilitation.</p>	<p>This study replicates the intervention described by (Czarnecki et al 2012) – see below. The focus of treatment is motor retraining and psychotherapy.</p>

		<p><u>Duration and setting:</u> one-week, inpatient</p> <p><u>Outcome measures:</u> CGI-patient rated, PMDRS</p>	<p>87% of patients reported improvement at the end of treatment. At 6-month follow-up, this reduced to 69%. Improvements occurred despite the long average symptom duration of 7.4 years.</p>
Bolger et al 2018 [S47]	30	<p>Retrospective cohort study of pediatric multidisciplinary rehabilitation.</p> <p><u>Duration and setting:</u> 8.4 ± 4.2 days, inpatient</p> <p><u>Outcome measures:</u> WeeFIM</p>	<p>25/30 children had mFND as part of their clinical presentation.</p> <p>Treatment included physiotherapy, occupational therapy, recreational, and music therapy, and psychological support.</p> <p>WeeFIM score change of 30 ± 11.9 (P <.001), maintained at 3 months.</p>
Demartini et al 2014 [S33]	66	<p>Prospective cohort study of multidisciplinary rehabilitation.</p> <p><u>Duration and setting:</u> 4-weeks, inpatient</p> <p><u>Outcome measures:</u> CGI-patient rated; Health of the Nation Outcome Scale; COPM; PHQ-15; The Common Neurological Symptom Questionnaire</p>	<p>Together with Saifee et al (2012) below, the outcomes of a 4-week multidisciplinary rehabilitation program for patients with chronic mFND symptoms are reported.</p> <p>Significant but modest improvements were seen in a range of assessments post treatment and at 12-month follow-up (55% retention at 12 months). This included two-thirds of individuals rating their general health as better or much better at discharge; similar though slightly less positive gains were reported at 12-months.</p>
McCormack et al 2014 [S40]	33	<p>Retrospective cohort study of inpatient rehabilitation.</p> <p><u>Duration and setting:</u> 101-day median length of stay, inpatient</p>	<p>Similar to Demartini et al (2014) above, the outcomes of patients admitted for rehabilitation on a neuropsychiatric unit are presented. Outcomes are reported at discharge, with no follow up data. As with Demartini</p>

		<u>Outcome measures:</u> qualitative mobility and ADL performance, MRS	et al (2014), improvements are seen despite long symptom durations and complex psychiatric comorbidity.
Czarnecki et al 2012 [S32]	60	Retrospective cohort study of a multidisciplinary rehabilitation vs. treatment-as-usual controls. <u>Duration and setting:</u> 5 consecutive days, intensive outpatient <u>Outcome measures:</u> physician-rated improvement; patient-rated improvement (5-pt Likert) scale at 25 months post-treatment	This study reports the outcomes of an established specialist rehabilitation program with a focus on motor retraining with psychotherapy input. Treatment includes twice daily physical/occupational therapy and speech therapy if relevant. 69% of patients rated themselves as improved after treatment. At long-term follow up, 60% of patients reported to have remained improved.
Saifee et al 2012 [S42]	26	Retrospective cohort study of multidisciplinary rehabilitation. <u>Duration and setting:</u> 24-day median length of stay, inpatient <u>Outcome measures:</u> WSAS, time bothered by symptoms via visual analogue scale	See Demartini et al (2014), above.
Physiotherapy - cohort studies			
Maggio et al 2020 [S38]	50	Retrospective cohort study of outpatient physiotherapy in consecutive patients. <u>Duration and setting:</u> 6-12, 60-minute outpatient sessions	This study found that physiotherapy delivered in an outpatient setting, in a less intensive manner than previous rehabilitation studies, has the potential to benefit patients with mFND.

		<u>Outcome measures:</u> ability to tolerate final session asymptotically or demonstrate “marked improvement”	34% improved and 20% were asymptomatic at the end of treatment.
Demartini et al 2020 [S34]	21	Prospective cohort study of physiotherapy, supplemented by psychiatry, delivered by telehealth. <u>Duration and setting:</u> 24 sessions, including 21 weekly tele-sessions <u>Outcome measures:</u> PMDRS, SF-36, CGI-patient rated	This unique study combined physiotherapy with psychiatry input delivered remotely over telehealth. At the end of treatment, 78% of patients reported improvement, which was associated with statistical improvements in physical and quality of life outcome measures.
Matthews et al 2016 [S39]	35	Prospective cohort study of physiotherapy treatment. <u>Duration and setting:</u> 18 days (mean length of stay), inpatient <u>Outcome measures:</u> MRIMI	Patients with functional gait disorder received physiotherapy during admission to an acute neurology hospital ward. A mean of 11 sessions were provided over 18 days. A significant improvement in the MRIMI was reported at the end of treatment.
Nielsen 2015 [S41]	47	Prospective cohort study of physiotherapy treatment programme. <u>Duration and setting:</u> 5-day, intensive outpatient <u>Outcome measures:</u> SF-36, EQ-5D-5L, WSAS, BBS, 10-meter walk test	This cohort study was an early assessment of the intervention that was tested in the feasibility study, Nielsen et al (2017), reported above.
Cognitive behavioural therapy – cohort studies			
O’Connell et al 2020 [S46]	98 ^a	Retrospective review of CBT for mFND.	Observational study revealed improvements in physical and psychological functioning were similar for patients with mFND

		<p><u>Duration and setting:</u> 12-15 sessions, outpatient</p> <p><u>Outcome measures:</u> 3-point scale of improvement based on clinical note review, CORE-OM</p>	and patients with other neuropsychiatric condition who were treated in a specialist CBT clinic.
Espay et al 2019 ²⁶	15	<p>Prospective unblinded CBT for mFND.</p> <p><u>Duration and setting:</u> 12-weekly 1 hour sessions, outpatient</p> <p><u>Outcome measures:</u> PMDRS</p>	Functional tremor severity improved significantly after 12 weeks of CBT. The improvement was associated with changes in the anterior cingulate / paracingulate activity on fMRI.
Psychodynamic psychotherapy – RCTs			
Kompoliti et al 2014 [S45]	15	<p>Randomized cross-over design study of psychodynamic psychotherapy vs. continued observation and support by a neurologist.</p> <p><u>Duration and setting:</u> 12 weekly 1 hour sessions, outpatient</p> <p><u>Outcome measures:</u> CGI-severity, PMDRS</p>	While patients in both groups improved in terms of CGI-severity scores with time, there were no statistically significant group-level differences at 3-months.
Hubschmid et al 2015 [S44]	23	<p>Randomized study of interdisciplinary psychotherapeutic intervention (psychodynamic interpersonal treatment) vs. standard care.</p> <p><u>Duration and setting:</u> 4-6 sessions over a 2-month period, outpatient</p>	<p>Outcome assessments occurred at 2, 6 and 12-months post intervention initiation.</p> <p>SDQ-20 and CGI scores showed statistically significant group x time effects favouring the group receiving the interdisciplinary psychotherapeutic intervention vs. standard care.</p>

		<u>Outcome measures:</u> SDQ-20, CGI, MRS, healthcare utilization, SF- 36	The intervention group also showed reduced inpatient hospital use compared to standard care. There were, however, no treatment group differences in terms of reported quality of life.
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^a the study included 174 participants, of which only 98 had a diagnosis of mFND. Additionally, outcome measures listed in this table focus on the selected physical functioning and quality of life instruments used in each study. Abbreviations: ADL, activities of daily living; BBS, Berg Balance Scale; CBT, Cognitive Behavioural Therapy; CGI, Clinical Global Improvement scale; COPM, Canadian Occupational Performance Measure; CORE-OM, Clinical Outcomes in Routine Evaluation-Outcome Measure; FGA Functional Gait Assessment; FIM, Functional Independence Measures; FIST, Function in Sitting Test; GAF, Global Assessment of Function; MAS, motor assessment scale; mFND, motor functional neurologic disorder; MRIMI, modified Rivermead Mobility Index, MRS, modified Rankin scale; PHQ-15, Patient Health Questionnaire 15; PHQ-9, Patient Health Questionnaire 9; PMDRS, Psychogenic Movement Disorder Rating Scale; RCT, randomized controlled trial; SF-36, Short Form Health Survey – 36; SDQ-20, Somatoform Dissociation Questionnaire – 20; TUG, Timed Up and Go; WeeFIM, Functional Independence Measure for Children; WSAS, Work and Social Adjustment Scale.