Functional Neurological Disorder

Josie Scholes and Jennie Wilson
SLAM NHS TRUST
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Aims

• Introduction to FND
• Consider the role of physiotherapy
• Evidence for treatment approach
• Consider the approach to take with patients with FND
• Practical tips for this patient group
What is FND?

• FND is an umbrella term for a variety of neurological symptoms which are caused by abnormal nervous system functioning not by structural disease

• No damage to the central nervous system

• Symptoms can vary from more specific motor or sensory symptoms to cognitive or dissociative
Prevalence

<table>
<thead>
<tr>
<th>Condition</th>
<th>Prevalence</th>
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</thead>
<tbody>
<tr>
<td>N=3781</td>
<td></td>
</tr>
<tr>
<td>Headache</td>
<td>19%</td>
</tr>
<tr>
<td>FND</td>
<td>16%</td>
</tr>
<tr>
<td>Epilepsy</td>
<td>14%</td>
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<tr>
<td>Peripheral Neuropathy</td>
<td>11%</td>
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<tr>
<td>Multiple Sclerosis</td>
<td>7%</td>
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<tr>
<td>Movement Disorder</td>
<td>6%</td>
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<td>Spinal Disorder</td>
<td>6%</td>
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<tr>
<td>Syncope</td>
<td>4%</td>
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<tr>
<td>Stroke</td>
<td>3%</td>
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Body mind connection

Psychological experiences affect the body all the time. It is normal for physical changes to happen in the body without a structural cause.
Before we go too far...
https://twitter.com/MaxCRoser/status/1347854974349430785
<table>
<thead>
<tr>
<th></th>
<th>Biological</th>
<th>Psychological</th>
<th>Social</th>
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<tbody>
<tr>
<td><strong>Predisposing Factors</strong></td>
<td>Genetic Factors</td>
<td>Personality/Coping Style</td>
<td>Adverse Experiences</td>
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<tr>
<td></td>
<td>Structural Disease</td>
<td>Depression/Anxiety</td>
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<tr>
<td><strong>Precipitating Factors</strong></td>
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<td>Psychological Trauma/Stress</td>
<td>Stressful Life Events</td>
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<td>Life Changing Events</td>
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<tr>
<td><strong>Maintaining / Perpetuating Factors</strong></td>
<td>Changes to neuroplasticity</td>
<td>Fatigue</td>
<td>Not being believed</td>
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<td>Deconditioning</td>
<td>Anger/Frustration</td>
<td>Not having a clear diagnosis</td>
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<tr>
<td></td>
<td>Muscle tension</td>
<td>Depression/Anxiety</td>
<td>Loss of job/independence</td>
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<td>Pain/Fatigue</td>
<td>Symptom Checking and Avoidance of</td>
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<td>Symptom Provocation</td>
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<td></td>
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<td>Adaptations &amp; Aids</td>
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Symptom model

Risk Factors

Trigger

Alarm caused by symptoms

Symptoms

Secondary changes

Erroneous illness beliefs

Self focussed attention

Disability

Symptoms reinforcement
Altered body schema
Plastic changes
Central sensitisation
Soft tissue shortening
Deconditioning
Fatigue
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Positive signs of FND – FND IS NOT A DIAGNOSIS OF EXCLUSION

- Positive signs e.g. Hoovers
- Inconsistency
- Incongruity

https://www.bmj.com/content/371/bmj.m3745/infographic
Hoover’s Sign

Test hip extension – it’s weak

Test contralateral hip flexion against resistance – hip extension has become strong
Clear understanding of the diagnosis is essential for the successful physio treatment.

- Diagnosis should be given and explained by neurologist or neuropsychiatrist, but often patients will need this repeated and discussed again as part of their physiotherapy assessment and treatment.
- Make sure whole team involved in patient care understand include family members, GP – clearly document in notes to avoid more investigations.
- When discussing the diagnosis and treatment with the patient be clear and use the correct terms this gives the diagnosis credibility
- Show how the diagnosis was made, e.g.
  - Hoover’s sign
  - Distraction of a psychogenic movement disorder
- Normalise it – “this is common”
- Recommendation - READ trick or treat article (Stone & Edwards 2012)
WHY PATIENTS NEED PHYSIOTHERAPY

• Physiotherapy can be very effective (Gelauff et al., 2014b) (Nielsen et al., 2013)
• Successful outcomes were documented in the treatment of patients with functional movement disorders
• Physiotherapists in general are interested in treating such patients, however, inadequate service structures, knowledge and support from non-physiotherapy colleagues are judged to be barriers to provision of care. (Edwards., 2012)
• There are specific interventions and approaches that seem to work
  • unlearning maladaptive motor programs
  • ignoring negative movements
  • (Nielsen et al., 2013)
• The most successful programs appear to do this by conceptualizing the FMD as a problem with abnormally learned “motor programs” in the brain that have to be “unlearned” (Nielsen et al., 2013)
• Most physiotherapists questioned in a study felt that they could do more to help FND patients, but felt poorly supported by neurologists and existing service structure (Edwards et al., 2012b)
• FND Hope conducted a study of patients experience of services https://fndhope.org/fnd-hope-research/Out of 503 patient 225 reported that they had felt discrimination of stigma from physio or OT
Symptoms for Physiotherapy:

- Functional gait disorder
- Weakness or paralysis
- Dystonia
- Reduced, absent or altered sensation
- Involuntary movements (tremors or jerks)
- Balance difficulties and dizziness
- Freezing episodes
- Pain
- Fatigue

SECONDARY SYMPTOMS
- Deconditioning
- Fatigue
- Pain
- Central sensitisation
- Stiff joints
- Contractures
What can this look like in practice?

• https://twitter.com/i/status/1355483194007707649
Approach to physiotherapy in functional motor disorders

KEY ELEMENTS

Education
Promoting self-management
Demonstration that normal movement can occur
Retraining movement with diverted attention
Challenging maladaptive behaviours related to symptoms
What that means...

• Focus on function and automatic movement (sit to stand, walking)
• Early weight-bearing
• Avoid adaptive equipment and aids
• Distraction techniques (including visualisation)
• Use of videos and mirrors
• Graded exercise
• Address secondary changes

Alongside....

• Build trust and rapport before challenging the patient
• Project confidence and create an expectation of improvement
• Cultivate open and consistent communication between the multidisciplinary team, patient and family/carers
• Recognise and challenge unhelpful behaviours and thoughts
Example

Person walking with legs giving way, reliant on crutches

- Normal walking with counting and tapping balloon
- Normal walking with counting
- Normal walking
Retraining the Nervous System through Neuroplasticity

“perfect practice makes perfect”

• Continued practice of functional exercises, using distraction techniques, promotes normal movement patterns over time

• A graded approach eventually results in producing normal movement without distraction techniques

The CD analogy
What can maintain functional motor symptoms?

- Doing less activity
- Using walking aids
- Lots of attention on the body
- An unusual sitting position
- A different way of walking
- Boom and bust activity pattern
- Always walking next to a wall for safety
- Wearing a different shoe on the affected foot
- Standing differently
- Never going out alone
Outcome measures

- Pick et al 2020 carried out a systematic review of the use of outcome measures in FND
- 5 FND specific measures were identified
  - 3 clinician rated
  - 2 patient rated
- No single measure used across the range of symptoms in adults
- Physio specific measures in outcome in FND patients difficult as the act of measuring draws more attention to symptoms and can worsen them.
Resources

- fnforum.org (for clinicians)
- nonepilepticattacks.info
- neurosymptoms.org
- flippinpain.co.uk
Patient Support Organisations

- FNDHope.org.uk (UK based)
- FNDDimensions.org (UK based)
- FNDAction.org.uk (UK based)
- FND FrienDS (Bristol based)
Questions

• Contact details:
  Josie.scholes@slam.nhs.uk