FUNCTIONAL NEUROLOGICAL SYMPTOM DISORDER (FND)

Marco Sinai Ph.D.
Allan Memorial Institute
Dept of Psychology
McGill University Health Center
Goals

- Describe FND (not conversion disorders; not psychogenic movement disorders)
- Show how FND pts fall through the medical system cracks
- Present Neuropsychology of PNES
- Present FND Psychotherapy models
- Present our PNES case series
- Describe FND treatments in specialized international centers
DSM-5 criteria for Functional Neurological Symptom Disorder (FND aka Conversion Disorder)

- A. The patient has $\geq 1$ symptoms of altered voluntary motor or sensory function.
- B. Clinical findings provide evidence of incompatibility between the symptom and recognized neurological or medical conditions.
- C. The symptom or deficit is not better explained by another medical or mental disorder.
- D. The symptom or deficit causes clinically significant distress or impairment in social, occupational, or other important areas of functioning or warrants medical evaluation.
Changes From DSM-IV criteria

- More explicit recognition that symptoms arise from abnormal CNS function in the absence of structural abnormalities
  - *It is a software problem, not a hardware issue*
  - *It is involuntary (vs. malingering)*

- DSM-5 no longer require the identification of psychological factors initiating or exacerbating symptoms
  - *Importance of the neurological examination to make diagnosis,*
  - *Recognition that relevant psychological factors may not be demonstrable at the time of diagnosis.*
  - *Welcome changes since the majority of functional patients do not relate to the “conversion theory”.*
Historical Origins

Hysteria

Dissociative Disorders

Somatoform Disorders

Somatic Symptom and Related Disorders
Somatic Symptom and Related Disorders (SSRD)

Other SSRDs

Functional Neurological Disorder (Conversion Disorder)

Somatic Symptom Disorder
<table>
<thead>
<tr>
<th>DSM IV</th>
<th>DSM 5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somatoform Disorders</td>
<td>Somatic Symptoms and Related Disorders</td>
</tr>
<tr>
<td>Somatization disorder</td>
<td>Somatic Symptom Disorder</td>
</tr>
<tr>
<td>Conversion disorder</td>
<td>Functional Neurological Disorder</td>
</tr>
<tr>
<td>Hipocondriasis</td>
<td>Illness Anxiety Disorder</td>
</tr>
<tr>
<td>Somatoform pain disorder</td>
<td>Psychological Factors Affecting Other Medical Conditions</td>
</tr>
<tr>
<td>Body dysmorphic disorder</td>
<td>SSD with predominant pain</td>
</tr>
<tr>
<td>Factitious</td>
<td>Factitious</td>
</tr>
</tbody>
</table>
### Differential Diagnosis

<table>
<thead>
<tr>
<th></th>
<th>VOLUNTARY CONTROL</th>
<th>UNCONSCIOUS GAIN</th>
<th>CONSCIOUS GAIN</th>
<th>ORGANIC PRESENCE</th>
</tr>
</thead>
<tbody>
<tr>
<td>MALINGERING</td>
<td>+</td>
<td>-</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>FACTICIOUS (Munchausen)</td>
<td>+</td>
<td>+/-</td>
<td>-/+</td>
<td>-</td>
</tr>
<tr>
<td>FND (Conversion)</td>
<td>-</td>
<td>+/-</td>
<td>-/+</td>
<td>-/+</td>
</tr>
<tr>
<td>SSD</td>
<td>-</td>
<td>+/-</td>
<td>-/+</td>
<td>+</td>
</tr>
<tr>
<td>Organic Illness</td>
<td>-</td>
<td>-/+</td>
<td>-/+</td>
<td>+</td>
</tr>
</tbody>
</table>
Somatic Symptom & Related Disorders

Somatic Symptom Disorder

Functional Neurological Symptom Disorders (Conversion Disorders)

Sensory Symptoms/Dysfunction
- Blindness
- Deafness
- Numbness

Movement Symptoms/Dysfunction
- Tremor
- Dystonia
- Myoclonus
- Gait disorder
- Weakness or paralysis
- Absences/Convulsions (PNES)

Overlap with Dissociative Disorders
FND a Medical No Man’s Land

Brain

Structure Organic-Neurology

Functional Neurological Disorders

Inorganic-Psychiatry/Psychology

Does the body rule the mind, or does the mind rule the body? I don’t know
(The Smiths, Still III)
FND Patients are stuck in a dualist world

- Neurologists are uncomfortable with Functional Disorders
  - Bewildered by psychological variables. It is not a topic taught formally during training
  - FND pts biased by medical community
    - Not taken seriously and dismissed
      - “it’s not a seizure”
      - “stop resisting”
      - “she’s faking it”
    - Leading to disparity in their care
- Psychiatrists/Psychologists are uncomfortable with Functional Disorders
  - Overwhelmed by neurological symptoms
  - Uniformed about tests performed by neurologists (psychologists)
1. Patient presents with neurological-like symptoms.
2. Neurologist reaches FND diagnosis.
3. Patient denies psychological sx or refuses to believe physical sx are “in my mind”
4. Patient is referred to Psychiatry

1. Patient is confused/offended/defensive.
2. Patient feels neglected/invalidated because no medical follow-up is planned

1. Therapeutic Alliance is compromised from the beginning.
2. Treatment beyond pharmacotherapy for psychiatric comorbidities is precluded

**Negative Prognosis**
FND EPIDEMIOLOGY

■ Prevalence (it depends):
  - 1–9% of neurological symptoms observed in a general hospital population (Lempert et al., 1990; Factor et al., 1995)
  - 14-25% of patients in a Neurology program/setting (Ewald 1994)
  - Scottish Study (3,781 pts; Stone, 2010)
    XIV  HA 19%, FND 16%, Epilepsy 14%, PN 11%, Demyelination 7%, Spinal disorder 6%, PD/movement 6%, Syncope 4%
  - Dutch Stroke Service (Vroomen, 2008): 2% FND cases

■ Female preponderance: 3 to 1

■ Onset across lifespan; 30s mode

■ Diagnostic Accuracy
  - In the 60s 33% diagnosed with Hysteria received medical Dx at 10 year follow-up (Slater)
  - More current studies show misdiagnosis rates 0.4-4% (Stone)
COMORBIDITY

■ Neurological - Functional overlay
  - 10-30% of patients with pseudoseizures have documented epilepsy
  - Many FND patients meet Criteria for Somatic Symptom Disorder in DSM-5
    ■ 30% pt with a neurological condition may exaggerate their symptoms.
    ■ 10-15% of FND with movement sx have underlying organic problem

■ Psychiatric (UofT review of 64 patients from 2000-2002)
  - Anxiety Disorders (30-40%)
    ■ PTSD (Hx of physical and sexual abuse)
  - Mood Disorders
    ■ Major Depression (20%)
    ■ Dystimia (67%)
  - Adjustment Disorder (10%)
  - Personality Disorders (40%)
Our Case Series

- 15 patients. 14 PNES, (1 Functional Dystonia),
  - 3 patients did not show up to intake/uninterested in psychotherapy.
- Referrals: MNI Epilepsy (Dr. Ducharme), 11; MAP 1; Psychiatry Inpatient, 1; Lindsey Gingras, 1
- Gender: 2 M, 12 F
- Age of Onset: Twenties, 2; Thirties, 8; Forties, 3; Fifties, 1
- Identifiable Psychological Trauma: 8/14 (57%)
  - Sexual Trauma: 6/14 (43%)
  - Child Loss 2/14 (14%)
- Neuropsychiatric comorbidities: Anxiety 10, PTSD 2, OCD 1, MDE 5, Pain 3, Personality Dx 5 (OCPD, DP, BPD; all have avoidant traits)
- Organic Comorbidity: Epilepsy 7; Brain Tumor 3; Stroke 1; Severe TBI 1, Lyme 1, None 1.
Treatment

- Treatment starts with how Dx is presented by neurologist and how psychiatric referral is managed
- Pharmacotherapy to treat mood and anxiety comorbidities
- Psychotherapy
  - Different kinds of CBT
  - Hypnosis
  - Mentalization Based Therapy (Psychodynamic Orientation)
- Emerging evidence (still limited) from rTMS studies
Prognosis

- Outcome is variable
- Persisting symptoms in 65-95%
  - 1/3 remission, (semi)functional
  - 1/3 sx improvement
  - 1/3 no improvement or worsening of sx
- Negative prognostic factors
  - Longstanding symptoms
  - Insidious onset
  - Primary psychiatric diagnosis of Illness Anxiety Disorder (hypochondriasis), factitious disorder or malingering
Our Case Series

- **Outcome:**
  - *Active Treatment terminated (10 patients)*
    - Sx free and (semi)functional: 6/10 (Includes 2 pts who never had seizures during treatment)
    - Mixed. Improvement during active therapy cannot be maintained 2/10
    - Promising but could not continue therapy 2/10
Contemporary Neurobiological Models

- Perez Emotional Unawareness Model
  - *Increased activation in networks controlling emotional regulation and motor movement*
Contemporary Neurobiological Models

- Meta-analysis of neural correlates of conversion disorders (Boeckle 2016) largely supports Perez Emotional Unawareness Model
  - *Increased activation in following network:*
    - Frontal cortex
      - Dorsolateral prefrontal cortex
      - Medial prefrontal cortex
      - Superior frontal gyrus
    - Insula
    - Limbic areas
      - Amygdala,
      - Dorsal anterior cingulate cortex
  - *Decreased thalamic activation relative to controls:*
The Role of Neuropsychology in Assessment Diagnosis and Treatment of PNES

- Video EEG remains Gold Standard
  - *Neuropsych battery has too low specificity to differentiate Epilepsy vs PNES*

- Formulate integrated Cognitive-Emotional conceptualizations

- Direct Patients to most appropriate treatment

- Implement interventions
  - *Psychotherapy*
  - *Cognitive rehab*

- Neuropsychology feedback can correct misperceptions about subjective cognitive concerns
Neuropsychology of PNES

- Willment et al., 2015 proposes a standard battery that draws from the National Institute of Neurological Disorders and Stroke (NINDS) Common Data Elements (CDE) project for epilepsy:

**Table 1. Proposed Neuropsychological Battery.**

<table>
<thead>
<tr>
<th>Intellectual functioning</th>
</tr>
</thead>
<tbody>
<tr>
<td>General IQ estimate: Estimates of IQ are used to approximate what can be expected of an individual’s cognitive skills</td>
</tr>
<tr>
<td>Formal IQ testing</td>
</tr>
<tr>
<td>American National Adult Reading Test (AmNart)</td>
</tr>
<tr>
<td>Wechsler Adult Intelligence Scale–Fourth Edition (WAIS-IV), Verbal Comprehension Index (VCI), Perceptual Reasoning Index (PRI), Working Memory Index (WMi), Processing Speed Index (PSi), General Ability Index (GAI)</td>
</tr>
</tbody>
</table>

**Attention:** Attention refers to a number of processes that allow an individual to selectively direct or orient cognitive resources to a target while decreasing the allocation of cognitive resources to unwanted or irrelevant inputs.

<table>
<thead>
<tr>
<th>Basic attention span/registration</th>
<th>Wechsler Adult Intelligence Scale–Fourth Edition (WAIS-IV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sustained attention</td>
<td>Conners’s Continuous Performance Test (CPT-II)</td>
</tr>
<tr>
<td>Selective/focused attention</td>
<td>Conners’ Continuous Performance Test (CPT-II)</td>
</tr>
<tr>
<td></td>
<td>Brief Test of Attention</td>
</tr>
</tbody>
</table>

**Executive functioning:** Executive functioning skills encompass a wide range of higher-level cognitive and behavioral capacities that allow an individual to pursue goal-directed behavior. Examples of executive functioning skills include working memory, response inhibition, problem solving, and reasoning.

<table>
<thead>
<tr>
<th>Working memory</th>
<th>Wechsler Adult Intelligence Scale–Fourth Edition (WAIS-IV)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing speed</td>
<td>Working Memory Index (WMi; Digit Span, Arithmetic)</td>
</tr>
<tr>
<td>Flexibility–Set shifting</td>
<td>WAIS-IV Processing Speed Index (PSi; Coding, Symbol Search)</td>
</tr>
<tr>
<td>Flexibility–Response inhibition</td>
<td>Trail-Making Test B</td>
</tr>
<tr>
<td>Flexible problem solving</td>
<td>Stroop Color-Word Interference Test</td>
</tr>
<tr>
<td>Abstract reasoning</td>
<td>Wisconsin Card Sorting Test</td>
</tr>
<tr>
<td></td>
<td>WAIS-IV Subtests Similarities, Matrix Reasoning</td>
</tr>
</tbody>
</table>
Neuropsychology of PNES

- Willment et al., 2015 proposes a standard battery that draws from the National Institute of Neurological Disorders and Stroke (NINDS) Common Data Elements (CDE) project for epilepsy:

<table>
<thead>
<tr>
<th>Memory: Refers to the process of encoding, storing, and retrieving information</th>
</tr>
</thead>
<tbody>
<tr>
<td>Verbal memory</td>
</tr>
<tr>
<td>Rey Auditory Verbal Learning&lt;sup&gt;107&lt;/sup&gt;</td>
</tr>
<tr>
<td>Wechsler Memory Scale–Fourth Edition (WMS-IV)&lt;sup&gt;108&lt;/sup&gt; Subtest–Logical Memory&lt;sup&gt;9&lt;/sup&gt;</td>
</tr>
<tr>
<td>Nonverbal memory</td>
</tr>
<tr>
<td>Brief Visuospatial Memory Test–Revised (BVMT-R)&lt;sup&gt;109&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Language: The neuropsychological evaluation of language skills typically involves, at the very least, a screen of basic linguistic functioning (e.g., comprehension, repetition, reading, writing) and an account of higher order language abilities (e.g., confrontation naming, verbal fluency)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Confrontation naming</td>
</tr>
<tr>
<td>Boston Naming Test&lt;sup&gt;110&lt;/sup&gt;</td>
</tr>
<tr>
<td>Verbal fluency</td>
</tr>
<tr>
<td>Controlled Oral Word Association–Phonemic and Semantic Fluency&lt;sup&gt;107&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Visuospatial functioning: The measurement of visual-perceptual skills, visuospatial processing (e.g., mental rotation, line judgment), and visual constructional skills</th>
</tr>
</thead>
<tbody>
<tr>
<td>Construction skills</td>
</tr>
<tr>
<td>WAIS-IV Subtest Block Design&lt;sup&gt;101&lt;/sup&gt;</td>
</tr>
<tr>
<td>Rey Osterrieth Complex Figure Copy&lt;sup&gt;104&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Motor functioning: In PNES, reductions in motor speed may be related to number of factors, including antiepileptic medications, psychomotor retardation, or factors specific to PNES that have not been fully characterized</th>
</tr>
</thead>
<tbody>
<tr>
<td>Speed of fine-motor dexterity</td>
</tr>
<tr>
<td>Lafayette Grooved Pegboard&lt;sup&gt;111&lt;/sup&gt;</td>
</tr>
</tbody>
</table>
Neuropsychology of PNES

- Willment et al., 2015 proposes a standard battery that draws from the National Institute of Neurological Disorders and Stroke (NINDS) Common Data Elements (CDE) project for epilepsy:

<table>
<thead>
<tr>
<th>Formal measures</th>
<th>Embedded measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Test of Memory Malingering (TOMM)</td>
<td>Reliable Digit Span$^{135}$ using the WAIS-IV Digit Span subtest</td>
</tr>
<tr>
<td>Personality Assessment Inventory (PAI) Negative Impression and Positive Impression Management subscales$^{117}$</td>
<td></td>
</tr>
</tbody>
</table>
Neuropsychology of PNES - Results

- O’Brian 2015: 20 PNES vs healthy controls
  - significantly higher levels of depressive, anxiety, dissociative sx, and alexithymic traits.
  - significantly higher impairments in spatial working memory and attention.

- Tyson et al., 2018: 33 PNES vs 72 ES
  - PNES show a consistent lack of impairment on tests sensitive to diffuse neurocognitive deficits such as processing speed, working memory, and verbal fluency.
    - PNES better than ES on most tests
  - Validity Measures
    - No group differences on the Test of Memory Malingering (TOMM)
    - PNES less likely to fail RDS
  - Multivariate logistic regression of 7 tests correctly identified 85% of cases.
Clinical Parenthesis
(Assessment of Effort)

- Importance of Symptom Validity Testing in neuropsychological assessment.
- Reliable Digit Span is a well validated measure of symptom validity (Shroeder et al., 2011)
  - *Sum of the longest string of digits repeated without error over two trials under both forward and backward conditions* (Greiffenstein et al., 1994, pp. 219-220)
  - *Suggested Cut-offs of <=7 or <=6 depending on population.*
Models That Inform Psychotherapy

- **Panic Model**
  - *Patient overly concerned by somatic/neuro-like sensations (dizziness, lightheadedness)*

- **Belle Indifference (Conversion Model)**
  - *Patient exhibits anosognosia for somatic/neuro-like signs/symptoms*

- **Emotional Avoidance (Conversion Model)**
  - *Patient can name emotions and experience, but is afraid of negative emotions and will avoid them.*
  - *Emotions related to trauma are especially avoided/repressed.*
  - *Mentalization deficit*

- **Alexithymia (Conversion Model)**
  - *Patient has difficulty naming emotions/having conscious experience of emotions.*
  - *Pt exhibits positive affect when relating distressing events (incongruence)*
  - *Mentalization deficit*
Attachment Theory

- **Psychobiological Model**
  - *Conceptually ideal for mind/body disorders like FND*

- Evolutionary based, survival mechanism

- When perceived insecurity DANGER
  - *Attachment system is activated*
  - *Seek and maintain proximity with attachment figure*

- If attachment figure is effective
  - *Induction of perceived security*
  - *Attachment system is deactivated*
  - *Reproductive and exploratory systems are activated*
Attachment Theory

- Developmental experience of reliable attachment figure leads to Secure Attachment
  - Emotional awareness
  - Ability to communicate emotional needs
  - Felt security and sense of self worth

- Developmental experience of inadequate attachment figures leads to Insecure Attachment – Three main types
  - Insecure Avoidant
    - Underactivation of attachment system
    - Learning hx of self-reliance (I’m ok, others are useless)
    - Good emotional regulators but... tend to avoid conscious experience of emotions
    - These patients may have few or no psychiatric comorbidities
    - These patients will tend to deny psychogenesis of functional symptoms
Attachment Theory

- **Insecure Anxious**
  - Overactivation of attachment system
  - Learning hx of dependency (I’m not ok, others can protect me)
  - Deficits in emotional regulation, high in neuroticism.
  - These patients will tend to have several psychiatric comorbidities.
  - These patients will tend to show dependent personality traits and fit the panic model.

- **Insecure Ambivalent**
  - Overactivation of attachment system
  - Learning hx of confused, inconsistent caregivers/relationships (I’m not ok but others can’t help)
  - Deficits in emotional regulation, high in neuroticism and low in agreeableness traits.
  - These patients will tend to have interpersonal difficulties (I need you, approach, I hate you, withdraw).
  - These patients will tend to show borderline personality traits, express anger toward medical system.
Our Case Series

■ Model
  - Conversion Model 13/14 (93%)
    ■ Emotional Avoidance: 8/14 (57%)
    ■ Emotional Avoidance (Trauma): 2/14 (14%)
    ■ Belle Indifference 1/14 (7%)
      - Myoclonus anosognosia 1
    ■ Alexithimia/Emotional incongruence 2/14 (14%)
  - Panic Model 3/14 (21%)
  - Unclear due to lack of seizures during treatment 2/14 (14%)

■ Attachment Styles:
  - Insecure Attachment: 13/14 (93%)
    ■ Avoidant (4/13)
    ■ Anxious (4/13)
    ■ Ambivalent (5/13)
  - Unclear 1/14 (pt dropped out)
Treatment Centers for Conversion Disorder

- United Kingdom
  - Maudsley/King’s College Hospital – London; National Hospital for Neurology, Queen Square – London; Functional Disorders Research Group, University of Edinburgh - Edinburgh
    - Inpatient/Outpatient setting
    - Psychiatric follow-up including education about CD
    - Treatment of comorbidities
      - Psychopharmacology and CBT
    - Rehabilitative Physical Therapy
    - Unclear outcome
Treatment Centers for Conversion Disorder

■ USA

- **Brown Medical Center, Rhode Island – Dr. Curt LaFrance**
  - Outpatient, 12 Week manualized CBT
    - *Psychoeducation and Finding a key supporter*
    - *Relaxation techniques*
    - *Internal stressors and external triggers*
  - 90% success rate in reducing frequency of symptoms.

- **Stanford University Medical Center, Palo Alto – Dr. John Barry**
  - Outpatient eclectic approach
    - *Insight based therapy*
    - *CBT*
    - *Biofeedback*
    - *Hypnosis*
    - *Group Therapy*
  - No outcome data
Treatment Centers for Conversion Disorder

- Women and Children’s Hospital, Adelaide – Dr. Jon Jureidini
  - Inpatient Restrained Rehabilitation Model
    - Management of Medical System
      - Effort in reaching consensus that “we don’t know” what causes pain or disability
    - Aggressive Pain Management
      - Avoid dismissing patient’s distress
      - Builds trust with patient and family
    - Identification of Predicament
      - Exploration of stressors in patient’s environment
    - Management of Emotions
      - Addressing anxiety and mood symptoms
      - Enhancing emotional literacy (mentalization)
    - Restrained Rehabilitation
      - Aim to restore function led by skilled professionals in area of impairment (physiotherapists, OT)
      - Therapy goals set collaboratively with patient
      - Slowly graded exercise increase
      - Restraint from engaging in favourite activities
      - Good Day/ Bad Day management
      - Inpatient until functionally independent
Treatment Centers for Conversion Disorder

- Bergisch Gladbach Hospital, Cologne – Dr. Ulrich Shultz-Venrath
  - *Therapeutic Community Model, heavily based on Mentalization Based Therapy*
    - No emphasis on understanding the origin of the problem
    - Initial Individual Psychotherapy
    - Group Therapy
    - Strong emphasis on increased awareness of relationship between thought and emotions and their symptoms through group therapy.
    - Incorporates Physiotherapy, Art therapy, and Music therapy.
    - 90% success rate
Successful Treatments - Summary

■ Common Aspects
  - *Interdisciplinary collaboration.* All professionals involved need to agree on approach and communicate closely
  - *Limit Confrontation* by either avoiding rigid models or focus therapy on skill acquisition either physical rehabilitation or emotional skills.
  - *Treat Symptoms as Real.* Dismissing patient as faking is extremely damaging.

■ Competing Aspects
  - *Clarify Diagnosis and Model*
    - Encourages spontaneous recovery
    - Appears more suited to PNES, less to other movement disorders
  - *Model-less Approach*
    - Emphasize that we don’t know what causes the sx
    - Focus on skill acquisition and sx management
Clinical Guidelines/Recommendations

■ VARIABLES TO CONSIDER
  
  - Presence of Emotional Symptoms
    ■ If patient is aware of emotional disturbance or has present or past psychiatric comorbidities, formal FND diagnosis is more likely to be accepted by pt.
    ■ If patient does not endorse emotional symptoms, more caution is warranted. Consider de-emphasizing formal diagnosis while reassuring pt of absence of serious organic disorder.
  
  - Type of FND
    ■ Motor subtypes (except PNES) maybe less amenable to psychotherapy
    ■ Motor subtypes require physiotherapy treatment as for organic counterpart.
Clinical Guidelines/Recommendations

■ PRESENTING THE DIAGNOSIS
  - Interdisciplinary team approach
  - Insistence that symptoms are real and not imagined. Explain functional vs. structural dysfunction
  - Assurance of ongoing medical treatment
  - Reinforcing the necessity and benefit of psychiatric treatment
  - Reassure them they are not alone, and condition It is not uncommon. Many FND pts are high function lawyers, professionals, business men.

■ WHAT TO AVOID
  - “It’s stress”, “It’s depression”, “it’s all in your head”, “it always gets better”.
  - Indiscriminate use of antidepressants
  - Assuming conversion disorder is always benign
Our Treatment

- Based on Acceptance and Commitment Model
  - *Radical Pragmatism – Do What Works*
  - *Identification of what is important to patient*
  - *Encouragement of committed action*
    - Commitment to treatment
    - Behavioural activation
    - Choice – personal responsibility
  - *Reframing of Relationship with Patient’s Mental World*
    - Reframing meaning of suffering
    - Increased emotional awareness
    - Increased understanding of functions of emotions
    - Increased tolerance of negative emotions

- Strong reliance on Attachment theory to improve interpersonal relationships

- Open to exploration of non-psychological factors contributing to symptoms
Our Treatment

■ Initial Phase
  - History and presentation of agnostic model with particular emphasis on validating patient symptoms as real
  - Tracking of symptoms though formal schedules
  - Identifying what is important for patient

■ Treatment Phase
  - Emotional work
  - Identifying and working through barriers to committed action

■ Termination Phase
  - Collaborative spacing of sessions
  - Relapse prevention
Summary

- FND patients are misunderstood by the medical system
- Emerging Imaging Studies suggest that FND symptoms are real not imagined or feigned.
- Pt refusal of Dx is part of the disorder, similar to hemineglect or anosognosias
- Treatment starts with how the diagnosis and follow-up are managed.
References


Historical Models

■ Hysteria
  - Ancient Greece: wandering womb
  - Wandering womb is the cause of all female disorders

■ Thomas Willis (1622 to 1675)
  - Performed autopsies on women who had been hysteric and demonstrated no uterine pathology.
  - Proposed Mind and Body Concept
  - Proposed that the brain and spinal cord were the sites of the disease, and theorized that excess “animal spirits” released from the brain traveled via the nerves to the abdomen, where they entered the blood, causing symptoms of hysteria.
  - He also noted hysteria in men, but postulated that it was more common in women because they were weaker in the mind
Historical Models

■ Charcot
  - “Hysteria” was the result of a “weak” neurological system which was hereditary (based on observation of Jewish patients).
  - It could be set off by physical trauma (industrial-accident or war-related traumas).
  - Hysteria was not unique to females and could occur in such models of masculinity as railway engineers or soldiers.

■ Freud and Breuer
  - Hysterical symptoms derive from undischarged "memories" connected to "psychic traumas."
  - These memories are “quarantined” from consciousness (repression).
  - Hysterical symptoms result from the intrusion of these memories into the somatic innervation, a mind-to-body process Freud and Breuer called "conversion."
Le Log- Charcot’s Trauma Hysteria pt

- A florist’s delivery man in Paris. One evening, in October 1885, he was wheeling his barrow home through busy streets when it was hit from the side by a carriage which was being driven at great speed. Le Log, who had been holding the handles of his barrow tightly, was spun through the air and landed on the ground. He was picked up completely unconscious. He was then taken to the nearby Beaujon hospital where he remained unconscious for five or six days. Six months later he was transferred to La Salpêtrière. By this time the lower extremities of his body were almost completely paralyzed, there was a twitching or tremor in the corner of his mouth, he had a permanent headache and there were ‘blank spaces in the tablet of his memory’. In particular he could not remember the accident itself.

- Because there had never been any signs of external injury, Charcot decided that Le Log—was a victim of traumatic hysteria and that his symptoms had arisen as a result of the psychological trauma he had suffered.

- Richard web: Freud, Charcot and hysteria: lost in the labyrinth
Bertha Pappernheim
2/27/1859-5/28/1936
Sigmund Freud on Anna O. Case

Dr. Breuer's patient was a girl of twenty-one, of high intellectual gifts. Her illness lasted for over two years, and in the course of it she developed a series of physical and psychological disturbances which decidedly deserved to be taken seriously. She suffered from a rigid paralysis, accompanied by loss of sensation, of both extremities on the right side of her body; and the same trouble from time to time affected her on her left side. Her eye movements were disturbed and her power of vision was subject to numerous restrictions. She had difficulty of the posture of her head, she had a severe nervous cough. She had an aversion to taking nourishment, and on one occasion she was for several weeks unable to drink in spite of a tormenting thirst. Her powers of speech were reduced, even to the point of her being unable to speak or understand her native language. Finally, she was subject to conditions of 'absence',(1) of confusion, of delirium, and of alteration of her whole personality, to which we shall have presently to turn our attention.
PHENOMENOLOGY

- “Traditional”: Mutism, deafness, blindness, syncope, seizures, amnesia, paralysis, anesthesia...
- Subtle, sophisticated, more diagnostically challenging presentations
- Plasticity of symptoms
- Symbolism vs identification and imitation
WORK-UP

- Medical and neurological history
- Correlation with conscious/unconscious emotions
- Primary and secondary gain
- Psychiatric profile/family assessment
- History of abuse
- Presence of a family model
- Other unexplained medical symptoms
<table>
<thead>
<tr>
<th>Pt</th>
<th>Age of Onset</th>
<th>Gender</th>
<th>Comorbidities</th>
<th>Psych Trauma - Sexual/nonsexual</th>
<th>Phys Trauma</th>
<th>Model</th>
<th>Referral</th>
<th>Seizure triggers</th>
<th>Outcome</th>
<th>Terminated</th>
</tr>
</thead>
<tbody>
<tr>
<td>pt1</td>
<td>30s</td>
<td>F</td>
<td>Eating disorder, Anxiety, Migraine, Fibromyalgia, Pain disorder nos, OSA</td>
<td>Insecure attachment - Sexual trauma unclear, likely not a factor.</td>
<td>TBI, repeated concussions</td>
<td>Belle Indifference - Pseudo-neurological symptom denial</td>
<td>MNI</td>
<td>Epilepsy</td>
<td>No apparent Emotional triggers. Mostly Physiological triggers</td>
<td>Positive. Pt seizure free &gt; 1 yr</td>
</tr>
<tr>
<td>pt2</td>
<td>40s</td>
<td>F</td>
<td>Anxiety Dxs, Pain Dx, Dependent PD</td>
<td>Insecure attachment - Child Loss, no sexual</td>
<td>None</td>
<td>Panic Model / Conversion Model - Emotional avoidance</td>
<td>Day Hospital</td>
<td>Clear Emotional triggers. Exertion/fatigue, lights, head movement (transportation)</td>
<td>Mixed. Vulnerable to relapse when faced with stressors</td>
<td>yes</td>
</tr>
<tr>
<td>pt3</td>
<td>40s</td>
<td>F</td>
<td>Anxiety, BPD, OSA</td>
<td>Insecure attachment - Multiple severe sexual</td>
<td>Stroke</td>
<td>Conversion Model - Emotional avoidance</td>
<td>Lindsey-Gingras</td>
<td>Clear Emotional triggers.</td>
<td>mixed. Positive effect of therapy that cannot be maintained</td>
<td>yes</td>
</tr>
<tr>
<td>pt4</td>
<td>30s</td>
<td>M</td>
<td>Anxiety, r/o OSA</td>
<td>Unclear attachment - yes sexual</td>
<td>Epilepsy</td>
<td>Conversion Model - Emotional avoidance</td>
<td>MNI</td>
<td>Epilepsy</td>
<td>Clear Emotional triggers, fatigue</td>
<td>good. Pt symptom free and functional</td>
</tr>
<tr>
<td>pt5</td>
<td>40s</td>
<td>F</td>
<td>Anxiety</td>
<td>Unclear attachment - yes sexual</td>
<td>Brain Tumor</td>
<td>Conversion Model - Emotional avoidance</td>
<td>MNI</td>
<td>Epilepsy</td>
<td>unclear - emotional avoidance</td>
<td>pt could not continue therapy</td>
</tr>
<tr>
<td>pt6</td>
<td>30s</td>
<td>F</td>
<td>Depression, anxiety, r/o autism</td>
<td>Insecure attachment - Child Loss, no sexual</td>
<td>Epilepsy</td>
<td>Unclear - Treated depression, anxiety, Interpersonal difficulties, Pt refused trauma focused therapy</td>
<td>MNI</td>
<td>Epilepsy</td>
<td>none during treatment</td>
<td>good. Pt symptom free and functional</td>
</tr>
<tr>
<td>pt7</td>
<td>20s</td>
<td>F</td>
<td>OCD</td>
<td>Insecure attachment - no sexual</td>
<td>Brain Tumor</td>
<td>Conversion Model - Emotional avoidance</td>
<td>MNI</td>
<td>Epilepsy</td>
<td>Clear Emotional triggers.</td>
<td>good. Sx free at termination</td>
</tr>
<tr>
<td>pt8</td>
<td>30s</td>
<td>F</td>
<td>OCPD</td>
<td>Unclear attachment - no sexual</td>
<td>Epilepsy</td>
<td>Panic Model / Conversion Model - Emotional avoidance</td>
<td>MNI</td>
<td>Epilepsy</td>
<td>unclear - emotional avoidance</td>
<td>Improved but still seizures. No longer MUHC pt</td>
</tr>
<tr>
<td>pt9</td>
<td>30s</td>
<td>F</td>
<td>Depression, Anxiety</td>
<td>Insecure attachment - no sexual</td>
<td>Epilepsy</td>
<td>Panic Model</td>
<td>MNI</td>
<td>Epilepsy</td>
<td>Clear Emotional triggers.</td>
<td>good. Pt symptom free and functional</td>
</tr>
<tr>
<td>pt10</td>
<td>30s</td>
<td>F</td>
<td>OCPD, GAD, MDE, BPD traits vs BAD</td>
<td>Insecure attachment - no sexual</td>
<td>Epilepsy</td>
<td>Unclear - Treated depression, interpersonal difficulties</td>
<td>MNI</td>
<td>Epilepsy</td>
<td>none during treatment</td>
<td>good. Pt symptom free and functional</td>
</tr>
<tr>
<td>pt11</td>
<td>30s</td>
<td>F</td>
<td>PTSD, Depression</td>
<td>Insecure attachment - Multiple severe sexual</td>
<td>Epilepsy</td>
<td>Conversion Model - Emotional avoidance (Trauma), Belle Indifference</td>
<td>MNI</td>
<td>Epilepsy</td>
<td>Clear Emotional triggers. Lights</td>
<td>Increased Sx with trauma therapy</td>
</tr>
<tr>
<td>pt12</td>
<td>20s</td>
<td>F</td>
<td>PTSD, BPD, MDE?</td>
<td>Insecure attachment - Multiple severe sexual</td>
<td>Epilepsy</td>
<td>Conversion Model - Emotional avoidance (Trauma)</td>
<td>MNI</td>
<td>Epilepsy</td>
<td>Clear Emotional triggers. Lights</td>
<td>Unclear. crisis management.</td>
</tr>
<tr>
<td>pt13</td>
<td>30s</td>
<td>F</td>
<td>Anxiety, Fibromyalgia</td>
<td>Insecure attachment - no sexual</td>
<td>Lyme</td>
<td>Conversion Model - Emotional avoidance</td>
<td>MAP</td>
<td>Clear Emotional triggers.</td>
<td>Unclear.</td>
<td>ongoing</td>
</tr>
<tr>
<td>pt14</td>
<td>30s</td>
<td>M</td>
<td>Anxiety</td>
<td>Unclear attachment - yes sexual</td>
<td>Brain Tumor</td>
<td>Belle Indifference - Alexythimia</td>
<td>MNI</td>
<td>Epilepsy</td>
<td>unclear. Sleep Hygiene</td>
<td>Unclear.</td>
</tr>
<tr>
<td>pt15</td>
<td>20s</td>
<td>F</td>
<td>Depression, anxiety, OCD, Neurocognitive Impairment, LD, Dependent Personality</td>
<td>Insecure attachment - no sexual</td>
<td>Diabetes</td>
<td>unclear</td>
<td>MNI</td>
<td>Epilepsy</td>
<td>unclear</td>
<td>uncertain</td>
</tr>
</tbody>
</table>