Functional Neurologic Syndromes

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Disclosure

Within the past 24 months, I have received an honorarium from TEVA.

All relevant financial relationships have been mitigated by DMU CME.

Criteria

- A somatic symptom disorder is diagnosed when the primary complaint is a physical complaint complicated by a neuropsychiatriic behavioral problem

FNSD

- This is present when the physical complaint consists of neurologic symptoms.
- In the past this has been referred to as a conversion disorder, or hysteria.
- The neurologic symptoms can be sensory, motor, or cognitive

Diagnosis

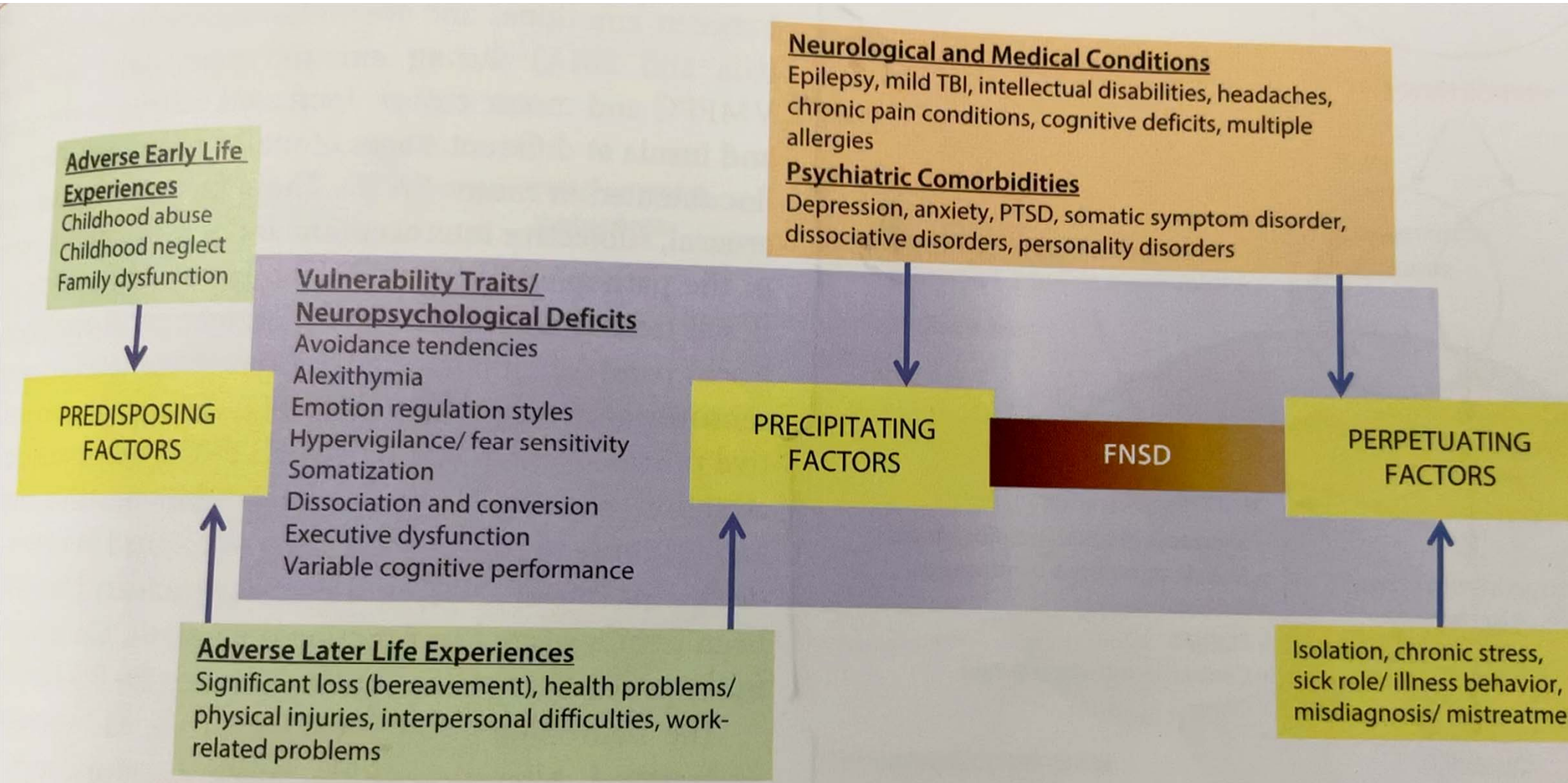
- Diagnosis is made when the neurologic symptoms are not consistent with an alteration in the normal neurologic system or other medical diagnosis
- There is no evidence that patients are feigning their problems and there is growing evidence that the FNSD arises from changes in the function of the normal brain.

RISK FACTORS

- Female gender
- Any age, but most commonly occurs between age 35 and 50
- Having a neurologic diagnosis is a significant risk factor
- No single category of neurologic disease is more likely to have an associated FNSD
- Traumatic brain injury
- Prior neurosurgery
- Intellectual or learning disabilities
- Substance abuse disorders
- Headache
- Chronic pain
- Medically unexplained symptoms

Pathophysiology

- No single factor explains the development of FNSD
- Rather an interaction of multiple factors over time



-1. Risk factors in FNSD. Multiple factors are associated to FNSD including vulnerability traits/neuropsychological d

THEORIES

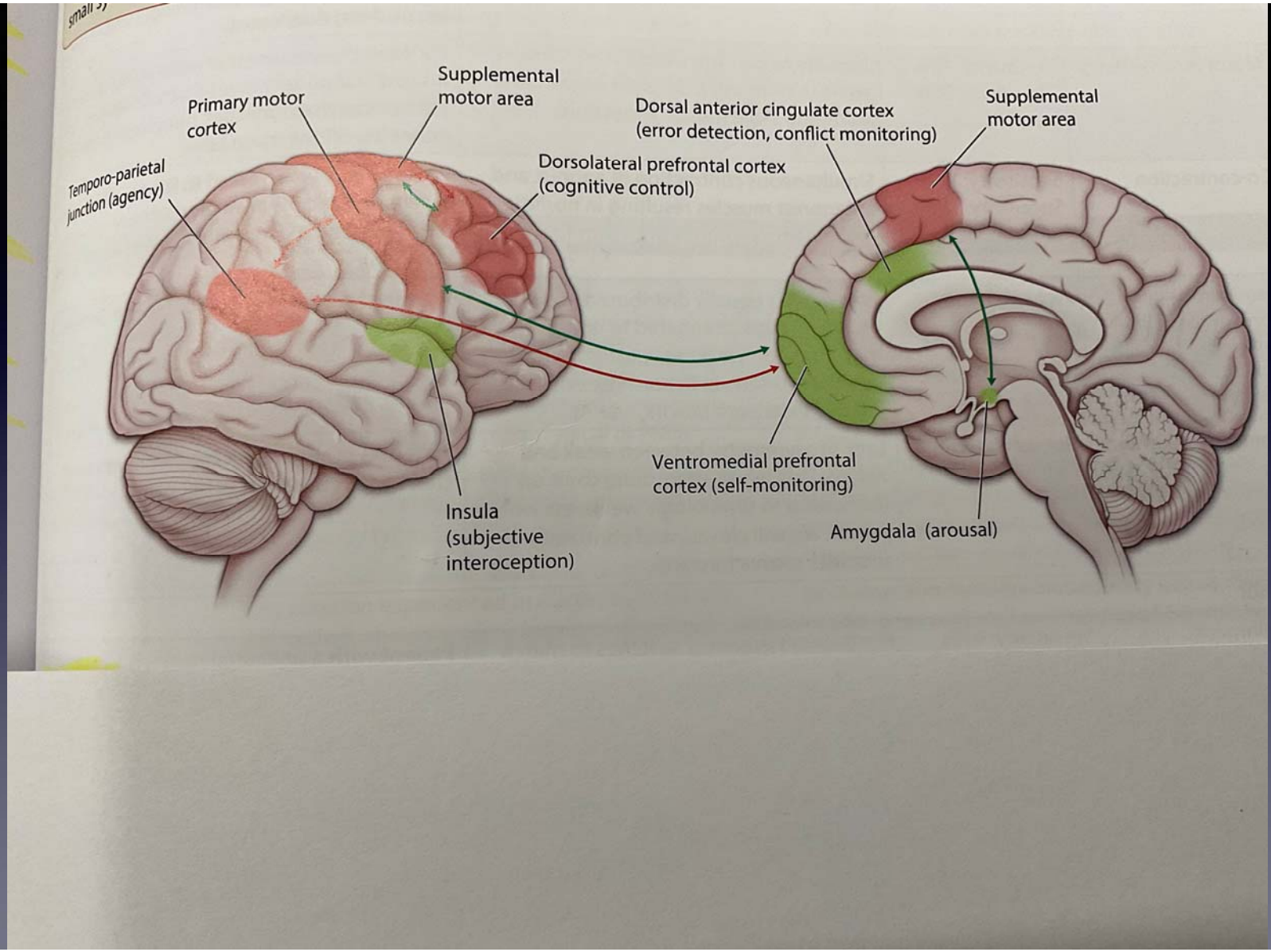
- Classical Freudian
- A disassociated hypothese by Piere Janet
- Modern cognitive model

STRUCTURAL AND FUNCTIONAL IMAGING

- These provide insight into the brain changes associated with FNSD
- Differences in the anatomy of both cortical and subcortical regions in patients with FNSD compared to healthy controls are demonstrated

BRAIN CHANGES

- Increased thickness in premotor cortex and decreased volumes in subcortical nuclei in functional motor disorders
- Cortical atrophy in the right motor and premotor regions and bilateral cerebellar atropy in pseudo seizures


Primary motor cortex
Supplemental motor area
Temporo-parietal junction (agency)
Dorsolateral prefrontal cortex (cognitive control)
Dorsal anterior cingulate cortex (error detection, conflict monitoring)
Supplemental motor area
Insula (subjective interoception)
Ventromedial prefrontal cortex (self-monitoring)
Amygdala (arousal)

ASSESSMENT

- History and physical
- Hemotologic and metabolic blood profile
- Central nervous system visualization
- EEG
- Neuropsychological evalution
- Personality profile
- Identification of risk factors as previously mentioned

DIFFERENTIAL DIAGNOSIS

- This is very broad
- Use the DEMENTIAS PLUS MNEMONIC

MNEMOMIC

- D rugs
- E emotional difficulty
- M metabolic abnormality
- E endocrine problem
- N nutritional and degenerataive logical disease
- T tumor or trauma
- I ischemia, infection, inflammatory diseases
- A anoxia, autoimmune, anemia, arrhythmia
- S social, sensory, spiritual isolation, seizure disorder
- PLUS; pain or low urine or stool output, low sleep

COURSE AND NATURAL HISTORY

- Little information is available
- There are high rates of long standing disability
- More studies need to be done with better algorithm for treatment

TREATMENT

- Clear communication
- Engagement in treatment
- Reassure patient that symptoms are genuine and not considered fake
- Name the diagnosis
- Highlight predisposing and perpetuating factors
- Describe the mechanism for the disease
- State there are treatments that work
- Explain that the brain gets overloaded and shuts down and manifests symptoms

TREATMENT

- Multidisciplinary collaboration is essential
- Neurologists, psychologists, primary care physicians and family members optimally work together with the patient
- Cognitive behavioral therapy

COGNITIVE BEHAVIORAL THERAPY

- Education about the disorder and stress response cycle
- Stress management
- Incorporation of new behaviors
- Identification and change of unhelpful thought patterns that reinforce symptoms
- CBT treatment workbooks

TREATMENT

- Physical therapy
- Mindful movement
- Pharmacologic treatment: this is most appropriate when treataing comorbid psychiatric problems
- Brain stimulation: ECT or TMS