Functional Neurological Disorder: Trauma, Emotional Dysregulation, and Treatment with Emotion-Focused Psychotherapies

by

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Abstract

Functional neurological disorder (FND) is a complex, stigmatized, and often disabling condition that is presently under-researched compared to other neurological disorders. It is the product of biological, psychological, and social factors, and reflects the interrelated quality of the mind and body. Previously characterized as “psychogenic”, in recent decades this view has been challenged by more biological explanations and a strong focus on neuroimaging. However, evidence remains substantial for the relevance of social and psychological factors, particularly trauma and its resulting emotional dysregulation, as well as the personality trait of neuroticism/negative affect. While the most-researched treatment for FND is CBT, its effects are generally small. Given the relevance of emotional factors in FND, emotion-focused treatments should be explored, and there is promising initial evidence supporting their use.

Keywords: functional neurological disorder, emotional dysregulation, trauma, short-term psychodynamic psychotherapies, emotional awareness and expression therapy

Dedication

Thank you:

To my friends, my family, my lovers, and my communities, those precious relationships that shape me and bring my life so much meaning. To my clients, who fill my heart, challenge my mind, and grant me the sacred privilege of being in a helping relationship with them. To teachers and mentors, for inspiring or disappointing me – all is learning. To this beautiful ailing earth that holds and sustains me. To music and breath for bringing me closer to spirit. To death and suffering and loss, for making life and joy and love.

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Chapter 1: Introduction

In this capstone paper, I will review current research on the etiology and psychotherapeutic treatment of Functional Neurological Disorder (FND), focusing on the importance of trauma and emotion. In this first chapter of the project, I will introduce the topic of mind-body disorders and specifically FND. I will provide an overview of the topic, situating its importance within the field of psychological medicine and briefly describing the state of current research regarding its etiology and treatment. I will then state the purpose of this paper and offer a definition of terms. Finally, I will discuss the impact of the project, share my personal relationship to the topic, and provide an overview of the subsequent chapters of the paper.

Overview of FND

Mind-body disorders have been observed and recorded in human culture for at least 2500 years, as seen in records from ancient Egypt and Greece (Hallett, 2019; Clark-Smith & Clarke, 2019). In the modern age, the birth of psychotherapy began with a strong interest in mind-body presentations, then called hysteria (Kanaan et al., 2019). Terminology has evolved and diverged since then, with many terms still being used today including medically unexplained symptoms, psychophysiological disorders, conversion disorder, functional somatic disorder, functional neurological disorder, and somatoform disorder. These terms all describe the general phenomenon of bodily symptoms, sometimes quite severe, that are not linked to any identifiable structural (physical) illness or injury but are perpetuated by brain and nervous system processes (Burton et al., 2020). Chronic pain, chronic fatigue syndrome, fibromyalgia, and irritable bowel disease are examples of conditions that often fit the description of symptoms arising without a clear structural cause (Schubiner & Clarke, 2019).

The definition and scope of this class of disorders is variable and broad. For the sake of specificity, this paper will focus on one construct, functional neurological disorder (FND), which refers to impairments in voluntary motor or sensory function that cannot be explained by a known neurological disease (APA, 2013). It is the closest contemporary correlate to the historical diagnosis of hysteria or conversion disorder, and the *DSM-V* still retains the alternate title of conversion disorder. However, many in the field consider mind-body illnesses to share many of the same features and pathways, rather than being distinct entities (Clarke & Schubiner, 2019).

Patients with FND and other mind-body disorders have high rates of depression, anxiety, and personality disorder (Baizabal-Carvallo, Hallett, & Jankovic, 2019). These individuals are eight times more likely to have experienced stressful events and maltreatment in childhood and adulthood than the healthy population, and twice as likely than the rest of the psychiatric population (Reuber, 2018). FND occurs more commonly in people with lower socioeconomic status, possibly as a result of increased stress (McLaughlin et al., 2023). They are also more likely to be women at about 70%, causing a large coalition of female clinicians and researchers to argue that FND is a feminist issue (McLoughlin et al., 2023).

This class of disorders is underrecognized and undertreated in the mental health field as well as in other health sciences such as medicine (McLoughlin et al., 2023). However, estimates for the prevalence of these conditions are high, with as many as 40-49% of primary care patients presenting with the broadest category, medically unexplained symptoms (Haller et al., 2015). About 16% of patients seen by neurologists are diagnosed with a “non-organic” disorder, making it the second most common reason for patients to attend neurology clinics (Edwards et at., 2012). FND has an incidence of 4-5 per 100 000, making it about as prevalent as Parkinson’s disease or multiple sclerosis (McLaughlin et al., 2023). Despite concerns about a missed diagnosis, the rate of misdiagnosis is low at 4% (Edwards et al., 2012).

Despite their prevalence, UK neurologists have described patients with functional neurological symptoms as the “most difficult to help”, and US neurologists rated them at the bottom of “likeable conditions” (Carson et al., 2012). They have been called “heartsinks” or “timewasters” (McLaughlin et al., 2023). This may be because of the high rates of comorbidity with personality and mood disorders in this population, or because of the difficulty of treatment given the multifactorial and unknown cause of the symptoms, or even because of discrimination against a condition that disproportionately affects women (McLaughlin et al., 2023). Stima is unfortunately prevalent in FND, partly related to perceptions that patients are feigning or imagining their symptoms (McLaughlin et al., 2023). However, evidence from clinical signs, behavioural neuroscience, and laboratory findings has ruled out feigning in FND (McLaughlin et al., 2023).

In their feminist analysis of FND, McLaughlin et al. (2023) examine the gendered aspect of research funding in science and neurology. It is well-known that females are under-represented in medical research, including females of animal species in biomedical studies, most especially in neuroscience (McLaughlin et al., 2023). However, it appears there are differences between the male and female central nervous system. (Of course, this binary does not reflect the existence of intersex and transgender individuals.) In the related condition of pain disorder, research has been dominated by male research participants even though the condition affects women more frequently than men. And despite FND being one of the most common conditions seen by neurologists, McLaughlin at el. note the following: “At the time of writing, the largest clinical trial register shows 285 studies are currently recruiting for epilepsy, 185 for motor neuron disease, 446 for multiple sclerosis and 556 for Parkinson’s disease (clinicaltrials.gov). Only 10 are currently recruiting for FND, despite it having similar rates of disability and distress to other neurological conditions” (p. 859). This discrepancy sharply highlights the marginalization of this disorder compared to other conditions with similar severity and prevalence.

Untreated functional neurological disorders are costly to the healthcare system, and the cost to society is much higher considering the rate of disability and its economic impact. For example, of the 3781 new neurology outpatients seen in the Scottish Neurological Symptoms Study, 30% had symptoms that were “not at all” or only “somewhat” explained by neurological disease; of those patients, 27% were not working for health reasons (Carson et al., 2012). In another UK statistic, estimates for annual costs associated with patients with “medically unexplained symptoms” are around £18 billion, which is slightly higher than annual costs for people living with dementia (Edwards et al., 2012). Equally important is the cost of human suffering, as quality of life is significantly impacted by these limiting conditions (APA, 2013). Unfortunately, people with FND can wait a long time to receive diagnosis and treatment, and delayed diagnosis results in poorer outcomes (McLauglin et al., 2023).

In the history of FND/conversion disorder, the illness was considered psychogenic - caused by psychological factors. Today, much of the field of FND has taken on an “agnostic” position toward the cause of the disorder. This is in an effort to destigmatize the illness as well as to reflect the multifactorial nature of the disorder and the unanswered questions that remain about its cause. However, evidence strongly suggests a trauma-related, emotional, stress, and/or psychological component to FND, and patient improvement from the disorder is improved when they accept a psychological explanation for their symptoms (Scamvougeras & Castle, 2024). Therefore, it is important for treating clinicians to be aware of the current evidence for psychological factors and particularly trauma-related and emotional factors. The agnostic position that avoids a psychogenic explanation may be temporarily reassuring to patients who do not want to feel that they are “crazy”, and it may prevent the frequent and harmful experience of patients being told their symptoms are being feigned or are “all in their head” (Edwards, Stone, & Lang, 2014). It also incorporates the many factors at play in FND, and the uniqueness of each case. However, as Scamvougeras & Castle

(2024) wisely point out, it is not truly destigmatizing to simply reassure people they aren't crazy; destigmatization should involve acknowledging that mental health and psychological problems are just as valid, blameless, and deserving of care as medical illnesses. Given the evidence for the impact of trauma, stress, emotion, and other psychological factors in the cause and maintenance of this illness, it is important for patients to be informed and offered treatment that addresses these factors if relevant for them.

Current Issue: Long Covid

There appears to be a relationship between FND and post-COVID-19 symptoms, also known as long COVID. The COVID-19 pandemic has been a worldwide stressor, increasing levels of anxiety and depression, which are known to contribute to FND development and symptoms (Janssen-Aguilar, R. et al., 2022). Long COVID is an umbrella term that includes more than 200 symptoms and lacks a consensus definition (Alonso-Canovas et al., 2023). Viral infections and vaccinations are known to be potential triggering events for FND (Alonso-Canovas et al., 2023). Presentations for FND increased in emergency departments during the pandemic (Janssen-Aguilar, R. et al., 2022), and studies have begun to identify patients who have developed FND following a COVID-19 infection or vaccination; in one, more than half of post-COVID FND patients had originally been diagnosed with long COVID (Alonso-Canovas et al., 2023). A systematic review of studies containing original data on long COVID was conducted to look for evidence for a functional disorder component (Teodoro et al., 2023). The authors stated that the similarities between FND and some manifestations of long COVID are striking. However, they found that the current literature lacks specificity and contains numerous confounding variables making it impossible to confirm a hypothesis that long COVID corresponds to FND. However, they do recommend a neurological examination to screen for a FND when diagnosing long COVID.

An interventional cohort study by Donnino et al. (2019) examined the treatment of long COVID (in individuals without evidence of major organ damage) with psychotherapy, specifically psychophysiologic symptom relief therapy (PSRT). PSRT addresses underlying psychological factors, such as unconscious conflicts and emotions, and other stressors, with the intention of interrupting the conditioned responses they believe are at the heart of psychophysiological conditions. The primary outcome measure was the Somatic Symptom Scale-8 (SSS-8), a validated scale of 0-32 points. The results were striking: at 14 weeks, they found a mean decrease of 10.9 points. Said another way, the percentage of participants who scored high/very high on the SSS-8 went from 100% to about 30%. Another result was that the participants who strongly believed that exercise made their symptoms worse went from 57% to 4% by the end of the study. Therefore, there is compelling evidence to suggest that long COVID, at least in individuals without organ damage, can be alleviated with psychotherapy. This paper will not dive further into this important question but I include it here to acknowledge the growing importance of FND research and treatment.

Purpose Statement

The overarching question guiding this paper is "what is the relevance of psychological factors in FND, and how does that inform the psychotherapeutic treatment of patients with this disorder?" Therefore, the purpose of this paper is to thoroughly explore the current research on the nosology and etiology of FND, establish the relevance of trauma, emotion, and psychological factors in FND, and explore emotion-focused psychotherapy for FND. Despite the movement to de-center the psychogenic hypothesis of FND in favour of a more "agnostic" and multifactorial view, I argue that the relevance of trauma and emotion should not be overlooked. Emotion-focused treatments such as Intensive Short-Term Dynamic Psychotherapy (ISTDP) and Emotional Awareness and Expression Therapy (EAET) are promising options for patients for whom emotional factors are relevant.

Contribution to the Field

The field of FND and related disorders is in active, ongoing debate and development. As a patient, suffering from FND can be highly disabling and frightening, and wading through all of the conflicting and vague information can be overwhelming. As a clinician, to accurately and effectively convey the diagnosis to the patient is a challenge that is compounded by ongoing conflicts in the field; however, research shows that effective communication about the condition can be an important first step in treating it (Espay et al., 2020). As well, to approach treating this population requires a consideration of complicated and at times conflicting information. Therefore, it is important to work toward a clearer understanding of the diagnosis and its possible treatments. This paper does so by critically evaluating the evidence and arguing that the psychogenic explanation for FND should not be entirely abandoned.

Additionally, this diagnosis raises significant questions about the mind-body complex and about how psychiatric disorders develop and are defined. The medical model is increasingly recognized as being inadequate or inaccurate when applied to mental illness (Johnstone & Boyle, 2018). An alternate framework, the Power Threat Meaning Framework, offers a robust integration of influences on human beings, including culture, society, adversity, and biology. It is a promising, evidence-based alternative to the DSM that I believe more counsellors should be aware of. Therefore, one contribution of this paper is to introduce the reader to the PTMF and to analyze FND through its lens. As far as I am aware, this is the first piece of writing to do so.

Despite the severity of this diagnosis, there are very few treatment options available to patients in Vancouver and British Columbia. There is one specialist clinic in the province, the UBC Neuropsychiatry Clinic, and it has a waitlist of about two years. This clinic only offers diagnostic evaluation and assessment, not long-term treatment; after assessment, they send treatment

recommendations to a patient's community care team. On the site FNDhope.org, in searching their list of providers in the greater Vancouver area, I found only six providers listed and none of them are mental health professionals. Therefore, there is a need for other treatment options, particularly mental health providers. This project makes a contribution by increasing awareness of the condition amongst counsellors.

Reflectivity and Positionality Statement

I have been aware of the body's tendency to reflect psychological and emotional problems since my early teens, when my best friend experienced fainting, nausea, nosebleeds, migraines, and menstrual problems that seemed clearly related to her history of trauma. Since then I have been close with others who have had unexplained medical symptoms, and I have developed an interest in the complex and fascinating subject of the mind-body connection. I have also experienced my own chronic physical symptoms that have some correlation with stress and lifestyle factors.

As a social worker in healthcare, including in neurorehabilitation settings, and as an intern counsellor, I have had the opportunity to work with several patients who have mind-body disorders, two of whom were diagnosed with FND. These two patients were both compelling and relatable to me: queer women in their 30s who were artistic, intelligent, ambitious, kind, and funny. However, our social locations differed in important ways. I am a white woman who has had the immense privilege of a relatively safe and secure childhood, while both of these patients were Indigenous women who had experienced significant trauma in their childhoods and beyond. And one day, they were suddenly struck by a catastrophic inability to move or speak. Both of them were hospitalized for weeks, investigated for stroke and other neurological illness, only to be told that there was

nothing wrong with them aside from this “software” vs. “hardware” problem. I worked with them both, offering counselling as well as systems navigation for disability income and social supports.

I had an existing interest in this difficult-to-treat condition and had done some reading and studying about treatment models that had been researched with this population, specifically short-term psychodynamic approaches such as ISTDP (Intensive Short-Term Dynamic Psychotherapy). However, working with these individuals was a whole different experience. With the patient in front of me, things seemed much less clear and the stakes were high. How to map out, together, the factors contributing to their FND when those factors can be so complex and multifactorial? I deeply wanted to be of help to these clients but my lack of expertise and experience concerned me. I told myself that the basics of counselling still applied to these specialized cases, and that forging a genuine relationship had to be therapeutic on some level. However, I worried about missing things, such as reinforcing maladaptive patterns if I missed opportunities to address contributing factors such as people-pleasing and passivity. These two clients were gracious with me, and felt that our work together was helpful in some way, but I felt I could have done more. This project is partly about an intention to honour those patients by continuing to learn so I can be more likely to offer effective support to other patients with this condition.

Definition of Terms

Emotion: A feeling state, directed toward an object (e.g. sadness about something), that induces changes in physiology, subjective experience, and behaviour (Peluso & Freund, 2018). Emotions are adaptive, in that they provide information and promote action (Peluso & Freund, 2018).

Etiology: The cause of a disease or abnormal condition.

Functional disorders: Disorders resulting from pathological changes in bodily “function” rather than “structure” (Edwards, Stone, & Lang, 2013).

Functional neurological disorder: A condition in which one experiences physical symptoms, most often motor weakness, movement disorders, or seizure-type symptoms, but including other symptoms such as speech impairment or dizziness, that lack an organic or structural cause and are related to the functioning of the brain and nervous system (Espay et al., 2018).

***Nosology*:** Field of study dealing with the classification of diseases.

Outline of the Capstone Project Chapters

Chapter Two is comprised of a literature review of several key aspects of FND. I first examine the terminology and nosology of FND as it is complex and evolving. I embark on a discussion of diagnostic paradigms in general, reviewing problems with the DSM and exploring FND from the perspective of two alternative diagnostic frameworks. I then review current research on the etiology of FND, including neurobiology, trauma history, and emotional factors. In Chapter Three, I discuss psychotherapy for FND, beginning with an overview of evidence-based principles of psychotherapy and how they apply to treatment for FND. I then discuss specific treatment approaches, first reviewing CBT before exploring two emotion-focused treatments, ISTDP and EAET, that show promise for the effective treatment of FND.

Chapter Two: Literature Review

The previous chapter provided an overview of functional neurological disorder, described the writer's positionality, and stated the purpose and impact of this capstone paper. This chapter will delve deeply into a few key aspects of my research question. First, I will offer a comprehensive overview of the nosology, or categorisation, of FND, and its prevalence, predisposing and perpetuating factors, and prognosis. I will then discuss psychiatric diagnosis in general, and how alternate diagnostic systems conceptualise FND. This will be followed by an overview of current research and theory of the etiology, or cause, of FND, including a critical discussion.

Nosology

Functional neurological disorder (FND) is one of many terms describing the phenomenon of physical symptoms that are unexplained by structural illness or injury, but perpetuated by brain and nervous system functioning (Burton et al., 2020). Described as existing on the boundaries of neurology and psychiatry, and challenging our assumptions of mind-body dualism, FND continues to be the subject of active debate in the field. A review of some prominent classification systems and alternative definitions is presented here to situate the complexity and fragmentation of the field at this time, for researchers, clinicians, and patients alike.

A 2023 study examined terminology used for this disorder over the last 60 years and identified nine terms, all of which describe the same category of illness, and none of which dominates in recent medical literature (Bratanov et al., 2023). These terms are *psychogenic, somatization, somatoform, medically unexplained symptoms, hysteria, conversion disorder, dissociative, functional neurological disorder,* and *functional disorder*. They found that from the 1960s to 1980s, the terms hysteria and psychogenic dominated, accompanied by psychogenic, dissociative, and conversion disorder. From the 1980s to the 2000s, the terms hysteria and

psychogenic decreased in use, with a rise of somatization and somatoform. In the most recent period, no particular term was used predominantly. Functional neurological disorder is the newest term, emerging only in the last decade; medically unexplained symptoms is also relatively new to this period. Functional neurological disorder, while having relatively few citations, had the highest impact in terms of its use in highly-cited papers.

However, even this study did not reveal the breadth of terminology used today. For example, some prominent researcher-practitioners use the term *psychophysiologic*, some use *mind-body medicine*, the term *bodily distress disorder* has been used, evolving to *bodily stress syndrome*, and a major coalition of researchers and clinicians have proposed a new umbrella term of *functional somatic disorder*. These will be described in further detail below.

DSM-V and ICD 10

The two major diagnostic manuals, the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; DSM–5; American Psychiatric Association, 2013) and the *International Classification of Diseases* (11th revision; ICD-11; World Health Organization, 2019) are the most influential on clinical and research professionals and the patient populations they serve, and the two systems organise and label this disorder somewhat differently. In the *DSM-V*, the category of *somatic symptom and related disorders* replaces the *DSM-IV*'s previous *somatoform disorder*. The primary diagnosis of this category is *somatic symptom disorder* (SSD), which describes the presence of "distressing somatic symptoms plus abnormal thoughts, feelings, and behaviours in response to these symptoms" (APA, 2013); it includes a subtype for primarily pain symptoms. The *DSM-V* removed the criteria that such symptoms be unexplained by recognized pathophysiological processes (e.g. bona fide organic/structural illness), which was previously a central concept in this disorder. The *DSM-V*'s explanation does not claim that the somatic symptoms are caused by a

pathophysiological process, but rather explains that such a criterion reinforces mind-body dualism, notes that individuals felt the diagnosis was pejorative, and expresses a preference to define the diagnosis in positive terms, not by the absence of an explanation (APA, 2013). However, another diagnosis in this category, *functional neurological symptom disorder* (FNSD, alternately titled conversion disorder, and more commonly referred to in the literature as FND), does explicitly require an incompatibility between the symptoms and a recognized neurological disorder. FNSD is a more specific diagnosis requiring one or more symptoms of altered voluntary motor or sensory function, and is the focus of this paper.

The *ICD-11* organises these disorders under two separate categories. The category of dissociative disorders contains the diagnosis *dissociative neurological symptom disorder* (DNSD), corresponding to the diagnosis of FND. DNSD is characterised by "the presence of motor, sensory, or cognitive symptoms that imply an involuntary discontinuity in the normal integration of motor, sensory, or cognitive functions and are not consistent with a recognized disease of the nervous system, other mental or behavioural disorder, or other medical condition" (WHO, 2019). The diagnosis can additionally be specified by particular symptoms such as visual disturbance, auditory disturbance, other sensory disturbance (such as tingling, pain, numbness), vertigo or dizziness, non-epileptic seizures, speech disturbance, paresis or weakness, gait disturbance, movement disturbance, and cognitive symptoms. Therefore, this category is broader than the *DSM-V*'s FNSD. The other category, disorders of bodily distress or bodily experience, contains the diagnosis of *bodily distress disorder*, characterised by "the presence of bodily symptoms that are distressing to the individual and excessive attention directed toward the symptoms" (WHO, 2019). These symptoms tend to vary over time, but can sometimes be limited to one symptom such as pain or fatigue. This corresponds generally to the *DSM-V*'s SSD.

Finally, the *ICD-11* includes chronic and primary pain disorders in the medical section "Symptoms, signs or clinical findings, not elsewhere classified". *Chronic primary pain* is characterised by significant emotional distress or functional disability, and is described as involving biological, psychological, and social factors (WHO, 2019). *Chronic widespread pain,* their term for fibromyalgia, is described as diffuse pain present in at least four of five body regions and associated with significant emotional distress or functional disability; like CPP, it is multifactorial, influenced by biological, psychological, and social factors (WHO, 2019). Other functional disorders listed in this section include *functional gastrointestinal disorder* (FGID), referring to chronic or recurrent gastrointestinal symptoms that do not have an underlying pathophysiology or structural abnormalities. The *ICD-11* notes that FGID is the most common reason patients see a gastroenterologist. These related somatic conditions are not the focus of this capstone, but are relevant in understanding the breadth of this phenomenon.

Prevalence

Given the heterogeneity of classification for this disorder, prevalence is difficult to pinpoint with precision. Taking a broad definition, prevalence for somatic symptom disorder is relatively high – a 2015 survey for SSD found prevalence rates of 6.7% to 17.4% (van Geelen et al., 2015). In primary care patients, estimates range from 10-20% (Creed & Barsky, 2004) and up to 25-49% (Kroenke, 2003; Haller et al., 2015; Landa, 2012). Functional neurological disorder is common in neurological clinics; a study of 3781 neurology outpatients found that 30% had symptoms that were "not at all" or only "somewhat" explained by neurological disease (Stone et al., 2010). In the general population, FND prevalence is estimated at about 4-12/100 000 per year (Aybek & Perez, 2020).

Predisposing Factors

For SSD, the personality trait of negative affectivity (neuroticism) has been identified as an independent risk factor, whereas cooperativeness and less harm avoidance predict faster remission (APA, 2019). SSD presents more commonly in individuals with lower socioeconomic status and education, those with early childhood adversity or recent stressful life events including health-related events, and women (APA, 2019). Cognitive factors that impact the outcome include sensitization to pain, increased attention to bodily sensations, and interpretation of normal symptoms of stress as caused by medical illness (APA, 2019).

Predisposing factors for FND include psychosocial adversity, including childhood abuse or neglect; female sex; history of physical illness or injury, especially prior nervous system illness; exposure to illness models in the family, or preoccupation with physical health (APA, 2019). Maladaptive personality traits, especially emotional instability, are common in this population (APA, 2019). Patients with FND are likely to have co-occurring anxiety disorders (61.9%), major depression (42.9%), and personality disorders (45%) (Baizabal-Carvallo, Hallett, & Jankovic, 2019).

Precipitating Factors

Severe life events or physical trauma in the preceding year are common in patients with FND (Baizabal-Carvallo, Hallett, & Jankovic, 2019). These can include a physical injury, surgery, emotional event, or neurological symptoms such as migraine or vertigo. Symptoms of panic attack can be present during the precipitation of FND (Pareés et al., 2014).

Prognosis

The prognosis for FND tends to be poor, with lack of recovery expected for half to two-thirds of patients (Carson et al., 2012). Positive prognostic features include younger age, acute onset, early diagnosis and treatment, above-average intelligence, acceptance of psychological nature of the disorder, and monosymptomatic presentation (WHO, 2019). Negative prognostic features include

comorbid medical conditions, polysymptomatic presentation, co-occurring mental disorders, maladaptive personality traits, poor physical functioning prior to onset, receipt of disability benefits, and active or anticipated litigation (WHO, 2019; Espay et al., 2018).

Alternate Diagnoses

Discussion remains active about the means of defining and organising these illnesses. Some argue that the mechanisms behind various mind-body illnesses are similar enough to warrant being understood as the same general construct (Clarke & Schubiner, 2019). Below are two major contributions in this direction.

Some leading figures in the world of mind-body medicine prefer the term *psychophysiologic disorder* (PPD), combining "psyche", meaning mind or soul and "physiology", meaning the function of living organisms and tissues (Clarke & Schubiner, 2019). These practitioners advocate for an inclusive category, offering the following: "Psychophysiologic disorders consist of pain or other physical symptoms (often more than one) that can affect almost any structure, organ system or body region. Symptoms are caused or amplified by psychological processes and are not primarily due to disease of or damage to the body's organs or structures. Common emotional processes linked to these symptoms include the long-term impact of adverse childhood experiences, current life stresses, limited self-care skills, suppressed emotions, post-traumatic stress, depression and anxiety" (Clark & Schubiner, 2019, p. 21). Other factors they describe as commonly contributing to the presence of PPD are a history of other types of PPD symptoms over the years; onset of symptoms in relation to a life or physical stressor, even if it is relatively small; and personality traits such as perfectionism, compassion for others, self-sacrificing, a need to be seen as good, and a tendency to be self-critical. They argue that these conditions should be "ruled in" and not simply diagnosed by exclusion, and offer three primary diagnostic criteria: functional, meaning that the

functional nature of the symptoms are inconsistent with the body's structure; inconsistent, meaning the symptoms manifest variably in ways that a structural/organic condition would not; and triggered, meaning the symptoms emerge via stimuli that activate the brain. They state that a patient does not need to meet all three of these criteria to be considered for a diagnosis of PPD.

An informal European research network of experts, EURONET-SOMA (European Network to Improve Diagnostic, Treatment and Health Care for Patients with Persistent Somatic Symptoms) has been meeting since 2016 to achieve a common framework to understand these syndromes. One of their overarching goals is to unify the either/or mind/body dualism that can be present in the field. They also wish to evolve a classification that reflects the complex interactions between the mind/brain and body. They have proposed the term *functional somatic disorder* (FSD) as an umbrella term to unify conditions characterized by "persistent and troublesome physical symptoms that are accompanied by impairment or disability…reflecting the integration of bodily and brain functions and dysfunctions. They are the product of complex interactions, involving multiple biological and psychosocial factors" (Burton et al., 2020, p. 6). They propose three categories within this umbrella category based on the pattern of symptoms and the organ or physiological system involved: multisystem, single system, and single symptom. They propose six system clusters, based on epidemiological and clinical studies: nervous system, musculoskeletal, cardiorespiratory, gastrointestinal, genitourinary, and fatigue-related. They add two optional qualifiers: the presence of psychological or behavioural features that are dysfunctional (causing distress beyond the symptoms themselves); and occurrence in tandem with a symptom-congruent medical condition, providing the example of fibromyalgia in a person with rheumatoid arthritis.

Significantly, both of these systems are much more inclusive. Rather than placing conditions such as chronic pain, inflammatory bowel disease, and FND in separate sections as is the case with the *DSM* and *ICD,* these systems unify these mind-body conditions under one

umbrella. However, they differ in important ways. Clark & Schubiner argue for a primarily psychological influence on symptoms, whereas the researchers in EURONET-SOMA take a more agnostic approach, holding space for psychological factors without prioritising them over biological factors.

Critiques of Categorical Model and Alternatives

Since this paper discusses a specific diagnosis, it is important to consider the problems with our dominant systems of classifying and diagnosing psychopathology. The *DSM-V* (and *ICD-10*) have been critiqued for many reasons, including lack of validity, and these critiques have become significant enough to warrant large institutional shifts away from reliance on its system, such as by the US National Institute of Mental Health (NIMH) (Johnstone & Boyle, 2018). However, it continues to dominate the field, particularly in insurance-based systems in the United States.

The *DSM-V* and the *ICD-10* are based on the medical model, which is "the application of the theories and practices of medicine to people's actions, thoughts and feelings" (Johnstone & Boyle, 2018). Diagnosis is a fundamental aspect of the medical model, and diagnoses in mental health are clusters of symptoms that are organized into discrete categories. Therefore, the *DSM-V* and the *ICD-10* are considered to be categorical models.

In medicine, diagnosis is the process of pattern matching a patient's symptoms to previously identified patterns (Johnstone & Boyle, 2018). In order to improve the accuracy of these pattern clusters, the field has developed rules and methods of research. One of these rules is not to rely on symptoms to identify valid clusters, because symptoms are nonspecific. Instead, rely on signs, which are objectively measurable bodily processes or characteristics (Johnstone & Boyle, 2018). There must be evidence that the sign preceded the symptom. Therefore, medical research

directly influences the process of diagnosis, because research produces evidence for these signs and patterns that generate diagnostic criteria.

However, in the field of psychiatry, there has been no success thus far at identifying signs (also called biomarkers) of mental illness (Johnstone & Boyle, 2018). The listed criteria for psychiatric diagnosis are generated by committees using processes that are very different from medical research, and are lists of subjective complaints. It has been argued that the lack of good science behind the identifying of these patterns means that these lists of symptoms are unlikely to represent valid patterns, and therefore the matching task of psychiatric diagnosis is unlikely to be meaningful or useful (Johnstone & Boyle, 2018).

Another problem with the *DSM-V i*s nonspecificity, indicated by the high rates of comorbidity in psychiatric populations (Hoffman & Hayes, 2019). Comorbidity in medicine refers to the co-occurrence of distinct conditions, but statistical evidence points to substantially overlapping liabilities or causes to different *DSM-V* disorder categories; for example, anxiety and depression share an internalizing liability (Hopwood et al., 2020). In other words, *DSM-V* disorders are not distinct entities but overlap significantly with each other in their underlying causes (e.g. “fuzzy boundaries” (Forbes et al., 2023)).

Heterogeneity is another problem with the categorical model. There is substantial heterogeneity found within people who share the same diagnostic label. For example, if one must meet half the criteria for obsessive-compulsive disorder to be diagnosed, two patients with the same diagnosis could share none of the same symptoms (Hopwood et al., 2020). Therefore, diagnosis alone is insufficient for a treating clinician to formulate a treatment plan or select the most effective intervention (Hopwood et al., 2020). Finally, the structure of the *DSM-V* and the *ICD-10* themselves are troublesome because they are organised into sections based on presumed

similarity and historical tradition, but these categories are often not based on empirical evidence about the structure of psychopathology (Hopwood et al., 2020).

Despite the ongoing reign of the medical model, it is becoming clear that mental health and psychopathology do not entirely map onto the medical disease model. Medicine aims to treat the cause, not the symptom; for example, a sore throat may be caused by a virus or a bacterial infection, but antibiotics will only work for the latter (Hopwood et al., 2020). Similarly, a medical disease is distinct from its symptoms; many diseases may cause fever or swelling but the symptom is not the same as the disease. This is not the case for mental and behavioural problems. For example, depression is characterised by low mood, loss of interest or pleasure, fatigue, feelings of hopelessness, worthlessness or guilt, etc., but these symptoms are the same as the "disease". Additionally, each case of depression is unique, the outcome of one individual's history, circumstances, personality characteristics, narratives, and other individualised factors, unlike a medical disease process. A report published by the United Nations Human Rights Council (2017) stated that "many of the concepts supporting the biomedical model [of mental health] have failed to be confirmed by further research" (p. 5), and declares that mental health should be viewed through a societal lens rather than a medical one.

In short, the categorical model of understanding mental and behavioural health has significant limitations that are being recognised and responded to by many in the field of psychology. Some evidence-based alternatives are described in the following section.

Alternative Models

Several alternative classification systems for psychopathology have been developed and are gaining in prominence. One of which, HiTOP (the Hierarchical Taxonomy of Psychopathology), attempts to create a more statistically valid taxonomy by analysing empirical evidence to organise

psychopathology in a hierarchy from specific to general (Hopwood et al., 2020). It starts from the building blocks of psychopathology - from signs, symptoms, and behaviours at the bottom to homogenous components or traits, then up to syndromes, which are grouped into spectra (Forbes et al., 2024). The spectra at this time are internalizing, thought disorder, disinhibited externalizing, antagonistic externalizing, detachment, and somatoform. At the top is a general severity factor, reflecting the finding of a statistical general factor for all forms of psychopathology (Hopwood et al., 2020). It is a quantitative model, derived from statistically generated patterns among symptoms and disorders (Forbes et al, 2024, in press). It is also a dimensional, as opposed to categorical, model. This means that it conceives of psychopathology as existing on a spectrum with "normal" human functioning and feeling. The model does not make any assumption or claim about which level at which to focus intervention.

A 2024 study by Forbes et al. has made a major contribution to the HiTOP model. The researchers took symptoms from DSM diagnoses and turned them into a massive survey, available in mini, short, medium, and long versions. Importantly, they shuffled the symptoms so they were not being asked in any kind of cluster related to a DSM diagnosis. 14, 800 participants completed the survey, with researchers attempting to gather a diverse sample by reaching out to mental health and cultural organisations. The researchers then analysed the data to cluster it into related groups, and further analysed it into a hierarchical structure. The result was two super-spectra of "externalizing, mania, and detachment" and "emotional dysfunction", and eight spectra: externalizing, harmful substance use, mania/low detachment, thought disorder, somatoform, eating pathology, internalizing, and neurodevelopmental and cognitive difficulties, as seen in the below figure.

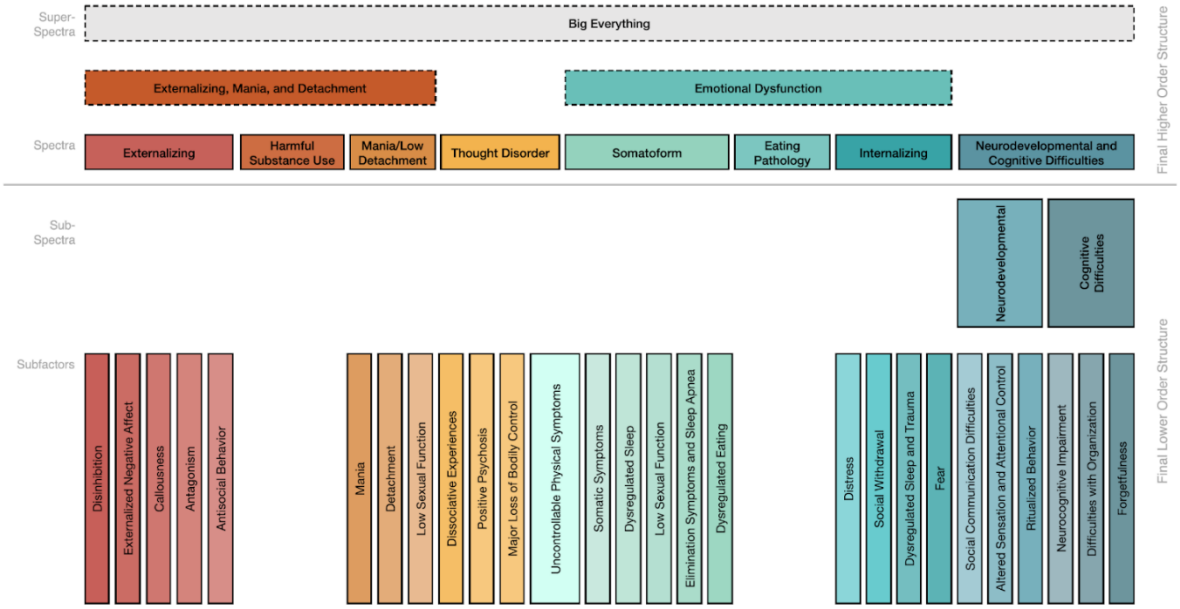


Figure 2. Summary model based on the points of agreement across methods (extended bass-ackwards and hierarchical clustering) and samples (primary and hold out). Constructs outlined with dashed edges emerged in all solutions but were less consistent in their content across the methods and samples. The ordering of the constructs from left to right does not carry systematic meaning.

To examine FND via HiTOP, in both the original formulation and in Forbes' et al.'s recent reformulation, "somatoform" constitutes a distinct cluster, or spectra. However, in Forbes et al., the somatoform spectra is nested under the larger spectra of emotional dysfunction, which corresponds roughly to the negative affectivity/neuroticism personality trait in Big Five personality research (Watson et al., 2022). This could offer a hint about underlying causes and treatment targets of somatoform disorders, which will be discussed later in this chapter. Forbes et al. have yielded quantitatively distinct subfactors of uncontrollable physical symptoms, somatic symptoms, elimination symptoms and sleep apnea, dysregulated sleep, low sexual function, and dysregulated eating (although the latter three were cross-loaded under other domains as well). FND most closely corresponds to the "uncontrollable physical symptoms" subfactor, which spans both the *thought disorder* and *somatoform* spectra. Forbes et al. comment that this maps onto understandings of FND that incorporate a dissociative element (thought) and a somatic element (somatoform).

The question of whether somatoform is a distinct domain or a subfactor of the internalizing domain has been investigated, and research has found it to be a distinct domain, independent from other dimensions of psychopathology (Marek et al., 2020; Watson et al., 2022). This means there is something quantitatively distinct about somatizing, although its close relationship with internalizing reflects the high comorbidity of anxiety and depression in FND patients. The somatoform spectra also corresponds with the inclusive definitions offered by Clark & Schubiner and the EURONET-SOMA. While using different language, all of these researchers understand mind-body illnesses to belong together under one large umbrella.

Assessment tools have been developed and validated for the somatoform dimension. One of which, the Somatic Symptom Scale-8 (SSS-8), is an eight-item patient questionnaire with the severity categories of minimal, low, medium, high, and very high somatic symptom burden (Gierk et al., 2014). For every increase in severity, there was a 53% increase in health care visits (Gierk et al., 2014).

While HiTOP attempts to offer a more research based and valid diagnostic system, other voices in the field argue against a diagnostic approach to mental health entirely. One major contributor in this direction is the Power Threat Meaning Framework (PTMF), developed by the British Psychological Society's Division of Clinical Psychology (2018). It is an "overarching structure for identifying patterns in emotional distress, unusual experiences and troubling behaviour, as an alternative to psychiatric diagnosis and classification" (Johnstone & Boyle, 2018, p. 5). They critique the medical model's underlying assumption that mental distress and troubling behaviour are symptoms of mental disorders that have a physical basis, a belief they claim is so strongly held it is assumed to be fact. They argue that this premise is fundamentally incorrect and should be replaced by a different way of thinking about mental and behavioural health. Therefore, any attempts to "improve" the current categorical model by working toward greater accuracy, reliability,

or more cultural sensitivity will continue to fail, as the underlying medical model assumptions will remain the same.

The PTMF's core assumption is that "emotional distress and troubling behaviour are intelligible responses to social and relational adversities and their cultural and ideological meanings" (Johnstone & Boyle, 2018, p. 8). The authors review and synthesise vast amounts of evidence and conclude that there is a causal relationship between relational and social adversities and emotional distress and troubled or troubling behaviour (e.g. psychopathology), mediated by bodily responses (biology). Humans have core needs including experiencing "a sense of justice and fairness within their wider community", "to have a sense of security and belonging in a family and social group", "to be safe, valued, accepted, and loved in their earliest relationships", and "to have a sense of hope, belief, meaning and purpose in their lives" (Johnstone & Boyle, 2018, p. 189). When these basic needs are not met, the human being feels threatened and responds with evolved and learned threat responses. The PTMF organises these threat responses into six general patterns such as "surviving rejection, entrapment, and invalidation" and "surviving disrupted attachments and adversities as a child/young person".

The PTMF can be seen as a more comprehensive, less biologically-biased version of the widely accepted and used biopsychosocial(spiritual) model. It replaces the typical question behind psychopathology of "what's wrong with you" or "what disorder do you have" with the questions "what happened to you?" and "how is power operating in your life?". I will apply this framework to the question of FND at the end of this chapter.

Based on the above, one can imagine how confusing it could be to receive any of the above diagnoses as a patient. You may also feel confused as a practitioner anticipating the need to

explain and treat clients with FND and related disorders. The following section discusses current theories and research about the cause of FND.

Etiology/Explanatory Models

Freud and Janet

The phenomenon of unexplained physical disability related to mental distress was the focus of early psychiatry. Two pioneers in the field, Sigmund Freud and Pierre Janet, developed their own theories in the late 19th century: Freud developed the conversion hypothesis and Janet focused on dissociation (Kanaan & Craig, 2019). Both agreed that the patient has experienced an event that creates an idea in the patient that produces the symptoms of the illness. For Janet, the patient dissociates the event or idea from the rest of their consciousness; for Freud, the idea is so painful to the patient that it is repressed from the patient's consciousness, and "converted" into somatic symptoms (Kanaan & Craig, 2019). The emotional relief resulting from this conversion was called *primary gain* by Freud; *secondary gain* described the other benefits the patient may experience as a result of their physical symptoms, such as avoiding an obligation or environment that was unbearable for them (Kanaan & Craig, 2019). Secondary gain was included in the ICD criteria until its most recent version (WHO, 1992). This psychogenic explanation persisted for much of the 20th century and continues to be influential today.

Challenging the Psychogenic Model

However, in the past two decades, there has been a reduced emphasis on the emotional and psychological factors in the etiology of FND, with an increasing focus on neurobiological explanations (Pick et al., 2019). This has been described as a "tectonic shift" from the psychogenic hypothesis to a disease model based in brain circuitry (Spagnolo et al., 2021). Some clinicians and researchers have found the neuroscience complimentary with the prior conversion model (e.g.

Cretton et al., 2019); others have argued that the disorder can develop in the absence of major stressors (Ludwig et al., 2018). Still others have noted that this debate perpetuates a false mind-body dualism (Cretton et al., 2019).

About ten years ago, a flurry of position papers were published over the argument to decenter the psychogenic label; a paradigmatic example is the 2014 paper by Edwards, Stone, & Lang. They argued that language matters for effective communication with patients and families, which itself has been shown to be an important factor in recovery from FND, citing data that the term "functional" has far less negative connotation for patients than other terms (Edwards, Stone, & Lang, 2014). They also noted that the "psychogenic" label connotes a particular etiology to the disorder, one that reinforces mind-body dualism and excludes other mechanisms that may be involved. Importantly, the authors do not deny the relevance of psychological factors in FND but argue for a term that is inclusive of a broad range of mechanisms and is based on the positive clinical features now known to be reliable for identifying the condition (described below). In fact, they note that concern for patient acceptability should not prevent clinicians from discussing possible psychological factors in their symptoms.

The "Agnostic" Approach

After the heated debates of ten years ago, the field seems to be settling into a less dualistic, biopsychosocial perspective (Baizabal-Carvallo et al., 2019; Espay et al., 2020; Pick et al., 2019; Cretton et al., 2019) which has been described by some as "agnostic" (Scamvougeras & Castle, 2024). Leading groups of researchers and clinicians such as the FND society and the EURONET-SOMA Group embrace taking a neutral stance toward etiology, favouring neither psychological nor biological explanations (Burton et al., 2020). Patient support groups also embrace this approach, sometimes even arguing against psychological causes (Scamvougeras & Castle, 2024). The

multifactorial origin of FND is captured in the stress-diathesis model, which integrates predisposing, precipitating and preceding risk factors and suggests that individuals have varying levels of vulnerability to developing disorders based on their biology (Weber et al., 2023; Nicholson et al., 2016). However, the debate over the cause of FND is far from settled. A strongly worded paper by Scamvougeras & Castle (2024) argues that there is little evidence against the psychogenic explanation for FND and related conditions, and that the agnostic position "hinders a clear understanding of these conditions in clinical settings and thus leads to poorer treatment outcomes" (p. 1).

Positive Neurological Signs

A recent development in our understanding of FND has been the identification of positive neurological signs – transitioning FND to a "rule-in" diagnosis rather than an exclusionary one (Spagnolo et al., 2021). Symptoms are known to be distractible and to require some degree of attention toward the movement or symptom for it to be exhibited and maintained (Spagnolo et al., 2021). For example, patients with functional tremor show changes in the tremor frequency when asked to tap with another limb at a different rhythm (Schwingenschuh et al., 2011). Patients with functional leg weakness will exhibit normalized hip function when asked to flex their unaffected hip (Ziv et al., 1998). Evidence has emerged for the requirement of attention and selective information monitoring to sustain symptoms. For example, patients with functional tremor direct greater attention toward the affected limb than patients with organic tremor (van Poppelen et al., 2011), and significantly overestimate the presence of tremor in a self-report estimate that also collected objective data via a wristwatch device, more so than patients with organic tremor (Pareés et al., 2012a).

Neuroimaging and Biology

The 1990s and beyond brought major advances in neuroimaging technology, such as functional MRIs, that have led to a proliferation of neuroscientific findings for FND (Carson et al., 2012). Evidence has emerged for the alteration of many brain functions in patients with FND, including motor planning and coordination, emotional processing, regulation, and awareness, cognitive control and motor inhibition, and self-referential processing and perceptual awareness (Spagnolo et al., 2021). This has been described by some as evidence for a "biological basis" for FND (Spagnolo et al., 2021), which will be critically discussed in the following section.

Bayesian Predictive Processing

One of the major contemporary brain-based theories of FND is Bayesian predictive processing, specifically errors of predictive processing influenced by attentional and belief-driven processes (Edwards et al., 2012). A Bayesian network is a probability theory that evaluates a hypothesis based on prior beliefs and current evidence (Edwards et al., 2012). The brain assembles predictions in order to conserve energy, manage an enormous amount of data, and allow for rapid responses to an ever-changing world (McLaughlin et al., 2023). It is widely accepted that the brain functions in a hierarchical way, with top-down predictions conveyed to lower levels in the hierarchy, and bottom-up sensory evidence passed up the hierarchy to test and correct its predictions (Edwards et al., 2012). In FND, it appears that abnormal attentional focus and expectations, mediated by limbic and affective processes, overweighs the "top-down" prediction, resulting in abnormal somatic symptoms such as movement that is experienced as involuntary (McLoughlin et al., 2023). Therefore, FND is an extreme version of the everyday phenomenon of prior beliefs overpowering sensory data, seen for example in optical illusions and the placebo effect (Edwards et al., 2012). However, it is important to note that Bayesian predictive processing is one theory in neuroscience, and is still the subject of ongoing debate and development (e.g. Kwisthout & van Rooij, 2020).

Neural Circuits

Drane et al. (2021) assessed relevant neural circuits and their related constructs that are impacted in FND. They identify several important constructs responsible for FND.

- Emotion processing, including "increased emotional reactivity, heightened arousal and avoidance, impaired top-down emotion regulation, amplification of FND symptoms during negatively valenced or psychologically-threatening mood states…deficits in emotional awareness…aberrant salience processing, and errant activation of learned/innate defensive responses" (p. 556)
- Agency, defined as "a person's belief that they are the agent of their action or thought" and "the sense of volition and free will that characterize voluntary movement" (p. 557)
- Attention, often attentional perseveration – an overfocus on a particular physiological system and an impaired ability to voluntarily shift attention. There may be a relationship between attention regulation and emotion processing in FND.
- Interoception, "the process by which the nervous system senses, interprets, and integrates internal bodily signals" (p. 557), generating an ever-evolving map of the body's internal landscape that is present both on conscious and unconscious levels. Interoception functions bidirectionally, with feedback and feedforward loops both contributing to the construct.
- Perceptual inference and predictive processing. Perceptual inference refers to the process by which a person generates beliefs or expectations about the causes and effects of events. It is strongly impacted by implicit and explicit expectations. Problems with perceptual inference in FND arise with sensorimotor and emotionally laden phenomena. Related,

predictive processing is a concept arising from computational neuroscience (described in above section). It describes a process in which neurons transmit a prediction of sensory states, and interact with neurons detecting deviations from these predictions, generating prediction errors when the information does not align. It has been argued that in FND, predictions outweigh sensory information, meaning that prior history dominates new perceptions.

Critique of Neuroscientific Lens

The neurobiological mechanisms described above do not arise in a vacuum - the brain does not exist separately from the mind and the person it is part of. The predictive processing theory described above does not account for how and why some individuals develop problematic prior beliefs or bodily attentional processes. Scamvougeras & Castle (2024) make the important point that all psychiatric disorders can be described as being "disorders of brain network dysfunction" (citing Cock & Edwards, 2018) or "maladaptive changes in neural computation" (citing Finkelstein & Popkirov, 2023). In fact, all of human functioning is mediated by brain circuitry, so it is arguably meaningless to attribute something to a neural circuit function or malfunction. Similarly, Cretton et al. (2019) point out that all psychological processes have physiological substrates. As PTMF states, "there is no practical difference/boundary between the nervous system and the brain; the brain is embodied, and the body is "embrained" (Johnstone & Boyle, 2018, p. 154).

It has also been pointed out that much of the neuroimaging data for FND collected thus far has used healthy controls; therefore, many of the findings could be nonspecific to FND, especially given the high rates of psychiatric co-morbidity in this population (Scamvougeras & Castle, 2024; Perez et al., 2021). While we have preliminary data about neurobiological factors in FND, this data must be seen in context. Just like a psychosocial stressor, neurobiology could be a predisposing,

precipitating, or perpetuating factor and is a reflection of the lived experience of the patient. Trends in the neuroscientific findings in FND can serve as information for future study, or hints about its cause, but should not be taken as explanatory in and of themselves.

Trauma History in FND

It is widely acknowledged in the literature on FND that stress, trauma, and emotion are relevant in the development and mechanisms of FND (Pick et al., 2019; Weber et al., 2023; Jungilligens et al., 2022); less clear is what kind of role these factors play in the development and maintenance of FND (Jungilligens et al., 2022). The prevalence of childhood trauma and life stressors has been widely investigated with this population, and despite variability in the findings, the overarching theme is a higher prevalence of trauma and life stressors in patients with FND, but with consistent minorities of patients (around 10%) who do not meet this criteria (Nicholson et al., 2016).

A major systematic review and meta-analysis of reported trauma in FND, published by Ludwig et al. in 2018, examined evidence for the link between stressful life events and maltreatment and the development of FND. They found that there is a substantial group of patients with FND who do not report recent or remote life adversity; however, the presence of childhood and adult stressful life events and maltreatment is higher in patients with FND than controls – eight times more prevalent than in healthy controls, and two times more prevalent than in psychiatric or neurological controls (Reuber, 2018). Additionally, there is a relationship between the magnitude of prior life events and the severity of FND symptoms (Jungilligens et al., 2022). Ludwig et al. (2018) conclude that stressors are relevant in the development of FND, and should be considered a potential target of treatment, but should not be considered an essential diagnostic feature.

Kranick et al., 2011, found that only 13% of FND patients reported a traumatic event prior to symptom onset, as defined by the Distressing Event Questionnaire. However, this questionnaire was developed for use with PTSD and looks at only particular types of stressful events – the kind sometimes referred to as "big-T" or Type 1 trauma (Courtois & Ford, 2013). The kinds of stressors clinically observed to be relevant in FND are much wider and can include more everyday interpersonal events such as disappointments and rejections in combination with other factors such as one's life history and vulnerabilities (Kanaan & Craig, 2019). Methods to capture these kinds of stressors have been developed, notably the "Life Events and Difficulties Schedule" (LEDS) that uses a blind panel to evaluate how a typical person would evaluate the event if they were in the same circumstances as the subject (Brown & Harris, 1978). Studies have found that detailed interviewing of patients will yield more information, and more frequent trauma incidence, than questionnaires (Ludwig et al., 2018); for example, Nicholson et al. (2016) found four times more relevant stressors for patients with conversion disorder using the LEDS than standard clinical interviews.

A meta-analysis found a pooled odds ratio of 2.94 [95% confidence interval (CI) 2.29-3.77) for the likelihood of historical stressors such as childhood abuse in patients with conversion disorder compared with various controls (Sharpe & Faye, 2006). A recent review found that patients with psychogenic nonepileptic seizures (PNES), a specific manifestation of FND, report greater childhood emotional abuse, emotional neglect, physical abuse, sexual abuse, and physical neglect in comparison to patients with epilepsy (Yang et al., 2022). Another study found significantly elevated rates of severe life events and "escape events" (events for which symptom development would provide secondary gain) in patients with conversion disorder (FND) compared with healthy controls at 91% of patients (Nicholson et al., 2016). They acknowledge the sizable 9% minority of patients without traumatic or severe life events, stating this is congruent with the DSM-V's

downgrading of this as diagnostic criteria. Overall, the data for adverse events is compelling and should not be ignored; however, clinicians should also be cautious not to make assumptions about the presence or relevance of prior adverse events in a particular patient.

Developmental Trauma and the Brain

Neuroimaging studies have investigated the relationship between childhood trauma and FND. Findings include a link between childhood abuse, particularly emotional neglect, and structural alterations in limbic and motor regions seen in FND (Weber et al., 2023). Downregulation of the body's major stress response system, the hypothalamic-pituitary-adrenal (HPA) axis, is also found in patients with FND, which is typically a response to chronic stress such as prolonged emotional neglect (Weber et al., 2023). Evidence shows that early life adversities influence brain development via epigenetic mechanisms (Weber et al., 2023). Childhood physical abuse has been found to cause trauma-related brain reorganisation in the cortico-limbic network (Diez et al., 2020). The impact of childhood trauma is mediated by biological factors that impact resilience; these factors are still being studied, but likely include biological and social-environmental influences (Weber et al., 2023).

Traumatic experiences in early life shape the brain's development, including salience, emotion processing, and sensorimotor circuits, which impact the nervous system and cause a vulnerability to developing FND (Drane et al., 2021). Our brains are shaped by our early attachment experiences, especially the right brain, which develops first and is dominant in the first three years of life (Schore, 2022). In general, the right brain is more emotional, intuitive, social, implicit, and unconscious (Schore, 2022). Infants' emotional distress is co-regulated with their caregivers' brains, and when this experience is lacking, the ability to regulate emotions can be compromised (Schore, 2022). Therefore, implicit beliefs about self, safety, others, and the world, as well as

emotion processing, are influenced by attachment trauma. Additionally, early trauma has cumulative effects when the individual develops negative beliefs about themselves and others and survival-based behaviours and beliefs (defence/coping mechanisms) (Courtois & Ford, 2013). These defence mechanisms and beliefs about self can then impact the nervous system themselves by creating a sense of hypervigilance and arousal (Clarke & Schubiner, 201).

Emotional Processing and Neuroticism

Pick et al. (2019) conducted a comprehensive review of emotional processing abnormalities in FND, identifying a need to integrate the growing neurobiological perspective with the wealth of evidence that exists for the presence of psychosocial stressors in patients with FND. They argue that altered emotional processing may be a link between psychosocial risk factors and FND, and conclude that "the literature to date indicates heightened preconscious processing of emotionally significant stimuli, increased affective arousal, disrupted 'top-down' regulation and altered interoception of bodily emotional responses in people with FND" (p. 10). Therefore, both "top-down" conscious mental processes and "bottom-up" implicit, unconscious/preconscious processes are relevant in FND. The review finds that emotional processing is strongly implicated as a causal and maintaining factor in FND. Some examples of the emotional processing abnormalities cited by Pick et al. include attentional bias toward emotional facial expressions such as anger, which also disrupted cognitive functioning; increased activity in affect-related areas of the brain during facial expression processing tasks; and increased activity between the amygdala and motor circuits. There is also evidence for altered or heightened patterns of nervous system arousal in patients with FND, particularly during emotional processing tasks.

Quantitative research into psychopathology has revealed that FND and other mind-body disorders are related to emotional dysfunction, and emotional dysfunction is closely related to the

trait of negative affect/neuroticism (NA/N) (Watson et al., 2022; Forbes et al., 2024). NA/N is a construct that describes an individual's propensity to experience negative emotions and to be more sensitive to emotional experience in general (Barlow et al., 2014). NA/N, or simply neuroticism, is essentially fungible, or isomorphic, with internalising (Watson et al., 2022; Barlow et al., 2014). Vulnerability to developing this trait is partly hereditary, and partly due to early relational trauma and its impact on brain development, including a heightened sense of unpredictability and uncontrollability (Barlow et al., 2014). The trait of neuroticism can lead to emotional disorders/dysfunction. Individuals with emotional disorders find the experience of negative emotions more unpleasant and report less emotional clarity and less acceptance of emotional experiences (Barlow et al., 2014). Therefore, these individuals develop strategies and behaviours to avoid, control, or suppress emotional experience (Barlow et al., 2014). Ironically, these attempts are known to prolong and increase negative emotions (Barlow et al., 2014). This pattern (driven by neuroticism) of experiencing negative emotion, appraising it as aversive, and engaging in avoidant coping strategies, which paradoxically increase the frequency and intensity of the negative affect, is proposed to be the core of all emotional disorders (Barlow et al., 2014). Neuroticism is strongly positively associated with the development of functional somatic disorders including FND (Petersen et al., 2022).

Psychological Factors

Negative psychological factors are acknowledged to be highly relevant in the development and severity of FND and other somatic disorders (Mewes, 2022). Alongside the more "unspecific" factors of childhood trauma and adversity, specific negative psychological factors relevant in somatic disorders include catastrophizing, rumination, avoidance, negative affectivity, health anxiety, or a negative physical self-concept (Mewes, 2022). A study found several negative psychological factors to function as predictors of the development of a somatoform disorder:

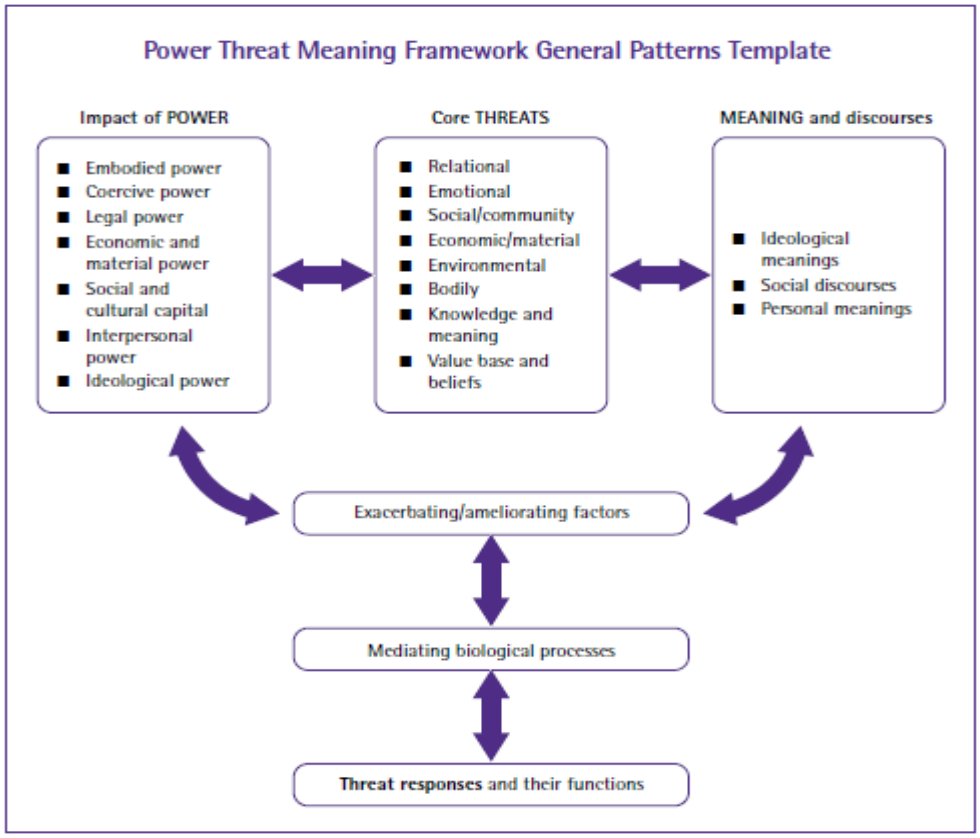
frequent body checking, a self-concept of bodily weakness and reassurance seeking, catastrophizing of physical symptoms, avoidance of physical activities, and negative affectivity (Klaus et al., 2015). Persons with one or more of these psychological features had a 2.4 to 9.8 higher odds ratio for developing a somatoform disorder (Klaus et al., 2015).

PTMF Analysis of FND

This chapter has reviewed many disparate influences and dimensions of FND. How might the PTMF conceptualise these? As depicted in the figure below, the PTMF sees threat responses (symptoms of psychopathology) developing from the influence of power, core threats, and meaning, mediated by biological processes and exacerbating/ameliorating factors. Under this model, there seems to be a place for all of the diverse influences relevant in FND. Power would acknowledge the relevance of female gender, lower socioeconomic status, and the types of adversity that arise from social prejudice. Core threats would include the impact of trauma and adverse events, which are cumulatively impactful in the case of FND. Meaning would address the role of prior beliefs in predictive processing theory, including the influence of cultural beliefs on somatic symptoms. Mediating biological processes would address any heritable aspect in trait neuroticism and other biological predisposing factors. The PTMF describes somatic symptoms as serving the function of “regulating overwhelming feelings”, which is present to greater or lesser degrees in all six of its general patterns and corresponds with the above discussion of neuroticism.

Seen through the complex, multifactorial lens of FND, PTMF offers a comprehensive container for organising the many influences that are relevant in FND without privileging one particular theory over another, except for the overarching premise that symptoms arise in response to the operation of power, threat, and meaning in people’s lives. It provides a tool for clinicians and patients to gather relevant data and create a narrative case conceptualisation. This may support

patients in accepting and understanding their diagnosis, which is known to be important in facilitating recovery from FND.



Johnstone & Boyle, 2018, chapter 7, fig. 2.

Conclusion

In this chapter, I have discussed many aspects of functional neurological disorder. Starting with its definition, I described its prevalence, predisposing and precipitating factors, and prognosis. I then explored the issues with a categorical model of psychopathology and discussed two prominent alternatives, HiTOP and PTMF. Finally, I reviewed many of the etiological factors in FND, including neurobiological and psychological factors. I offered a critical discussion of an overreliance on neurology that may miss the totality of human experience. I concluded by applying

the overarching framework of the PTMF to FND, finding that this framework captures the many relevant aspects of FND. In the following chapter, I will build off this information and discuss the treatment of FND in psychotherapy.

Chapter 3: Treatment of FND With Psychotherapy

In Chapter 2, I reviewed and discussed the construct of functional neurological disorder, including current evidence on its etiology. I found that while the cause of FND is likely multifactorial, there is strong evidence for the role of trauma, psychological factors, and emotional dysregulation in the development and maintenance of FND. While remaining open to the unique makeup of each patient, including the possibility that these factors do not play a significant role, it appears that psychotherapy should be considered for patients with FND. Indeed, it is one of the primary treatments recommended for FND, along with physiotherapy and occupational therapy (Aybek & Perez, 2020). In this chapter I will review psychotherapy for FND, beginning with a discussion of evidence-based therapy in general, followed by a review of specific treatments for FND with a particular emphasis on emerging therapies that specifically target the emotional dysregulation relevant in FND.

Evidence-Based Psychotherapy with FND: General Principles

In considering the question of how best to treat patients with FND, it is important to consider the now iconic question in the field of "what treatment, by whom, is more effective for this individual with that specific problem, and under which set of circumstances?" (Paul, 1967, p. 111, as cited by Norcross & Wampold, 2018). The question of evidence-based treatment in psychotherapy is fraught with challenges. While registered clinical trials (RCTs) are considered the gold standard of research evidence, they typically look at a particular therapeutic modality for a specific DSM diagnosis, which creates conditions far from the real world of psychotherapy practice. For example, exclusion criteria for these studies usually include comorbidities of other mental health disorders that are common in clinical populations, a pronounced attribute of patients with FND (Shedler, 2018). Estimates suggest that up to two-thirds of patients seeking treatment are

excluded from research studies (Shedler, 2018). Of these, about half show improvement on average, comprising only 16% of those who initially presented for treatment (Shedler, 2018). It is important to be aware of this limitation because of the field's strong emphasis on "evidence-based practice". Another limitation is their basis in categorical diagnosis, which has been discussed above. For these reasons, evidence from RCTs should not be the only guide for practice in the real world. However, there are some general principles of evidence-based practice that are relevant to the discussion of effective psychotherapeutic treatment for FND. I will discuss several general principles, applying their usage to the treatment of FND.

Personalised

Firstly, therapy should be personalised to each patient according to the specifics of their personality, preferences, culture, readiness, and other characteristics (Norcross & Wampold, 2018). In their introduction to a special journal issue on the APA Task Force on Evidence-based Relationships and Responsiveness, Norcross & Wampold (2018) summarize that "no theory is uniformly valid and no mechanism of therapeutic action is equally applicable to all individuals" (p. 5). Therefore, the field has decisively moved away from the norm of manualized treatments (although insurance companies and large bureaucratic healthcare systems may be slower to catch up). As an example of personalization, research suggests it is best for therapists to adopt a complimentary style to their client; a resistant client benefits from less directiveness, whereas a passive client may benefit from more direction (Beutler et al., 2018, as cited by Norcross & Wampold, 2018). This is relevant in psychotherapy for FND: due to its multifactorial etiology, is best practice when treating a patient with FND to tailor the treatment to their characteristics (Myers et al., 2021).

One analysis of psychotherapy with FND concluded that it may be beneficial to choose treatment approaches based on where a patient is in their journey or based on their personality and understanding of their symptoms (Myers et al., 2021). For example, they suggest that a patient with "pragmatic tendencies" might naturally be more open to a cognitive-behavioural approach, whereas a patient who sees their symptoms as being related to trauma history may be more invested in a depth-oriented approach. In terms of the patient's longitudinal journey, they offer a trajectory of beginning with psychoeducation and CBT to support the patient's understanding and acceptance of their condition, then using mindfulness-based approaches to support emotional regulation and awareness, and finally moving into psychodynamic depth approaches to work on interpersonal issues and the impact of trauma (Myers et al., 2021).

Scamvougeras & Howard (2018) point out that there are two aspects to FND (or somatoform disorders): the physical symptoms and the underlying emotional distress. They urge clinicians to keep this distinction in mind, as people with similar physical symptoms will have different psychological/emotional factors perpetuating their symptoms. This is another aspect of personalizing treatment: not lumping patients together and making assumptions about the factors contributing to their symptoms.

Therapeutic Alliance

The therapeutic alliance (also called the working or helping alliance) is the most researched common factor in psychotherapy (Wampold, 2015). The concept has been discussed since Freud and elaborated significantly by Carl Rogers and many others (Flückiger et al., 2018). It has many aspects and definitions vary, but in general it refers to the mutual and collaborative aspect of therapy, including agreement on goals and a bond between client and therapist (Flückiger et al., 2018). It has a moderate, but robust impact on therapeutic outcome (Flückiger et al., 2018). In a

meta-analysis, researchers arrived at a number of evidence-based recommendations for therapists to nurture therapeutic alliance, including arriving at shared therapy goals, creating a warm bond or attachment, addressing therapeutic ruptures, and assessing the quality of the alliance from the patient's perspective (Flückiger et al., 2018).

Since patients with FND often experience stigma including from healthcare providers (McLoughlin et al., 2023), it may take more care and skill to build an effective therapeutic alliance with this patient population. Taking a collaborative, consensual approach is also a key tenet of trauma-informed practice (SAHMSA, 2014), which is relevant for this patient population. Therapists should take extra care to ensure the patient is actively choosing the nature of their participation in therapy. This buy-in is likely to improve outcomes.

Therapist Contribution

Another factor in evidence-based therapy is the therapist's contribution. Prominent researchers state that therapist factors, particularly the ability to build a strong therapeutic alliance, are more impactful on treatment outcome than therapeutic modality (Wampold & Owen, 2021). Research shows that therapists differ in their effectiveness and that the most effective therapists spend time outside of therapy practicing skills, express professional self-doubt, have better facilitative interpersonal skills, and are able to form stronger alliances across a range of patients (Wampold, 2015). In the case of FND, some areas of practice to improve outcomes could be how to communicate the diagnosis to patients, how to help the patient feel believed and understood, and how to support the therapeutic alliance as discussed above.

Communicating the Diagnosis

Research consistently indicates that the initial communication of the diagnosis of FND is an important opportunity for intervention (Scamvougeras & Howard, 2018; Aybek & Perez, 2020). There

is even evidence that a “satisfactory” explanation of the diagnosis leads to substantial decreases in healthcare utilization and therefore, cost, and conversely, an unsatisfactory explanation significantly increases healthcare utilization and cost (Lagrand et al., 2023).

Unfortunately, there are many barriers to successful communication. Stigma is one major barrier, with the vast majority of patients stating that they have been treated poorly, disrespected, dismissed, and feel concerned they will be prevented from accessing medical care due to their diagnosis (Stone, 2023). Some errors clinicians can make include introducing risk factors before explaining the problem (e.g. asking about stress before communicating the diagnosis); only telling the patient what they don’t have (e.g. no neurological disease); or rushing the assessment so that patients are less likely to trust that other medical disorders have not been ruled out (Stone, 2023). As therapists, we will not be the first healthcare provider to communicate the diagnosis to our patient, but we may be picking up the pieces following an unsuccessful communication attempt. If this is the case, the therapist must work even harder to create a strong therapeutic alliance with the patient. This will likely include establishing a shared understanding of the diagnosis or respecting that the patient is ambivalent about accepting it. Motivational interviewing techniques can be helpful in the case of ambivalence about the diagnosis (Gutkin et al., 2019).

Like the above section on personalized therapy, it is important to be flexible in one’s approach to communicating about the diagnosis, depending on the patient’s current understanding and preferences. Clinicians and researchers have offered suggestions for how to approach this. It can be helpful to explain that because there is no damage to the nervous system, the patient has the potential to get better (Stone, 2023). Using validation to ensure the patient knows you believe their symptoms are real and not feigned can be very important and at times, therapeutic for patients (Řiháček & Čevelíček, 2020). One prominent example is the use of metaphor, for example “a software problem, not a hardware problem” to explain the meaning of a “functional” disorder

(distinguishing it from a structural illness or injury) (Stone, 2023). It can be helpful to educate the patient about the mind-body connection and how everyone experiences physical symptoms that are related to mind/brain processes, for example feeling butterflies in your stomach, a pounding heart or nausea before a job interview, muscle tension when angry, or a headache when stressed. Since patients with FND are more likely to attribute physical sensations to physical problems rather than emotions, this education can help the patient gain insight and develop emotional awareness. This will help the patient normalize their symptoms and consider the possibility that, despite their increased severity, they are generated by similar mechanisms.

Common Clinical Strategies

Řiháček & Čevelíček (2020) conducted an analysis of common clinical strategies in psychotherapy for medically unexplained somatic symptoms (MUSS). They define clinical strategies as existing at a level of abstraction above specific interventions, but below theory. Analysing 135 resources including articles, studies, and treatment manuals, they used qualitative methods to identify eight common clinical strategies shared across multiple treatment approaches. Each strategy contains two to three subcategories and is summarized by a general treatment principle. For example, the category of "Patient's Relationships and Communication" includes the subcategories of "Understanding symptoms as produced and/or maintained by the interpersonal context" and "Improving communication and regulation of social relationships". The category is summarized by the principle "MUSS are often connected with unmet relational needs. Improving communication and regulation of relationships helps patients satisfy these needs." (p. 539). Other strategies include "Validation of Symptom-Related Experience", "Body Awareness and Relaxation", and "Meaning of Symptoms", each with sub-categories and a summarizing principle. While I have limited space to delineate all of these categories and subcategories, this article offers

a transtheoretical set of principles to guide treatment decisions and is of value to any clinician seeking to treat a patient with somatic symptoms.

Specific Treatment Approaches

Due to its developmental history, the field of psychotherapy is often divided into "schools" of therapy such as cognitive-behavioural, psychodynamic, and humanistic-experiential. It is beyond the scope of this capstone to discuss the shortcomings of this system and the need to move toward a more integrative and transtheoretical approach, but suffice it to say I will use these categories for their recognisability, but with the caveat that I believe we should be (and are) moving beyond this formulation as a field. It is also worth mentioning the "dodo bird effect", that is, the tendency for all bona fide therapies to average out to about the same efficacy (Flückiger et al., 2024), which is at least in part the result of studying therapy "packages" that contain many mechanisms, rather than isolating particular change processes (Ciarrochi et al., 2021). Improvements in psychotherapy research could lead to clearer information about what therapeutic approaches work best with which patients.

The primary therapies that have been studied for use with FND are cognitive behavioural therapy (CBT) and psychodynamic approaches (Myers et al., 2021). They each focus on different factors relevant to FND, based on their theoretical premises (Gutkin et al., 2019). In a review from 2019, it was found that patients with FND benefit from psychotherapy in general, with evidence for moderate gains in mental health, wellbeing, and functioning (Gutkin et al., 2019). At this time there is no evidence to support one modality over another for treating FND (Gutkin et al., 2019), but there are reasons to consider one over the other depending on the features of the patient and the preferences of the clinician, as discussed above. CBT is the dominant approach, but there is strong evidence to support the use of, and more research into, emotion- and trauma-focused modalities

such as short-term psychodynamic therapies (STPPs). In the following section, I will first review the use of CBT for FND and then discuss emotion-focused approaches that seem to hold promise.

Cognitive-Behavioural

Cognitive-behavioural therapies, with CBT being paradigmatic, are the most easily and commonly studied in clinical trials (Shedler, 2018). Therefore, there is typically more evidence for CBT than other therapies, and this is true for FND (Gutkin et al., 2019). CBT focuses on the here and now as opposed to the past, and targets conscious thought as well as core beliefs and unconscious schemas in some cases (Henriques, 2017). Patients are taught to notice how their thoughts effect their feelings and behaviours, including behavioural avoidance (Henriques, 2017). It is an approach that focuses on "empiricism", using trial and error to gain insight into how one's thoughts are adaptive or maladaptive (Henriques, 2017). "Third wave" approaches such as dialectical behavioural therapy (DBT) and acceptance and commitment therapy (ACT) incorporate mindful awareness and acceptance along with, or instead of, an effort to change thoughts (Gutkin et al., 2019).

CBT for FND targets illness beliefs that perpetuate symptoms, as described in the "psychological factors" section in Chapter 2 (Gutkin et al., 2019). Patients learn to observe their distorted or unhelpful thoughts that trigger symptoms, and to change unhealthy responses such as avoidance (Myers et al., 2021). CBT also teaches many coping skills such as relaxation techniques and communication strategies (Myers et al., 2021). It is possible that this approach could influence prior beliefs that result in the predictive processing errors discussed in Chapter 2.

Evidence for CBT to treat FND is mixed. Many studies have found evidence for the use of CBT in FND (Myers et al., 2021). However, the largest RCT for FND, the CODES trial, showed no significant difference in symptoms at 12-month follow-up (Myers et al., 2021). This has led some

researchers to suggest that therapies that target cognition may miss important emotional, relational, and trauma-related factors in FND (Russell et al., 2022).

Short-term Psychodynamic Therapies and Emotional Awareness and Expression Therapy

Psychodynamic therapies focus on connecting past experiences and unconscious feelings or conflicts to present symptoms and suffering (Gutkin et al., 2019). Many contemporary psychodynamic therapies are "relational", meaning that they focus on the power of the therapeutic relationship as a source of healing and transformation. They tend to focus on facilitating emotional expression and encouraging the patient to turn toward reality and away from their defenses (Shedler, 2018). The goal of psychodynamic therapy is to impact underlying personality structure and enable positive thriving (Myers et al., 2021; Shedler, 2010). Psychodynamic therapies for FND focus on identifying the underlying emotional, interpersonal, and trauma-related causes of FND symptoms (Gutkin et al., 2019). Psychoanalysis has traditionally resisted empirical study, but contemporary psychodynamic clinicians are embracing the benefit of scientific evidence (Shedler, 2010), and evidence is growing for the efficacy of short-term psychodynamic therapies for somatic conditions (Russell et al., 2022).

Short-term dynamic therapies such as Intensive Short-Term Dynamic Psychotherapy (ISTDP) and Accelerated Experiential Dynamic Psychotherapy (AEDP) follow the principles described above but also focus on increasing the efficacy and efficiency of treatment with therapists taking an active stance. ISTDP in particular has been developed to treat medically unexplained/functional symptoms, and research in this area is ongoing (Russell et al., 2022). A 2022 review on the treatment of FND with ISTDP discussed how ISTDP targets the maladaptive emotional processing thought to be at the core of FND (Russell et al.). ISTDP posits that the physical symptoms of FND are products of the patient's avoidance of their emotions (Russell et al.,

2022). This avoidance creates anxiety in the brain and nervous system that perpetuates symptoms (Russell et al., 2022). A meta-analysis of seventeen RCTs of short-term dynamic psychotherapies (STPPs) for functional disorders found that STPPs significantly outperformed treatment as usual, minimal treatment, and waitlist controls (Abbass et al., 2020).

One strength of ISTDP is its use of diagnostic interviewing, in which the relationship between symptoms, emotions, and anxiety are explored in real time in the therapy beginning with the first session (Russell et al., 2022). The therapist encourages the patient to experience feelings, observes whether anxiety or symptomology rise, and subsequently mirrors that back to the patient so they gain awareness of the pattern and allow their anxiety to regulate. This allows the therapist to establish whether the patient would benefit from ISTDP and generates data about whether their FND symptoms are related to unconscious emotion. If the patient has too much difficulty tolerating emotional experience, then the graded format of ISTDP is used, which slowly builds the patient's ability to experience unconscious emotion by using cognitive recapping to regulate anxiety (Russell et al., 2022).

A related therapy, emotional awareness and expression therapy (EAET), is largely derived from ISTDP and pain reprocessing therapy, and has been developed specifically to treat somatic symptoms including chronic pain (Yarns et al., 2020). As the title indicates, EAET emphasises the importance of becoming aware of unconscious emotion and expressing it (Yarns et al., 2020). This can include work on becoming more assertive or communicative in current relationships in the patient's life. It also incorporates elements of pain reprocessing therapy (PRT), which educates the patient about neural circuits in the brain and, like CBT for FND, encourages the patient to challenge their illness beliefs and take on more adaptive beliefs (Ashar et al., 2022). PRT has been found to be highly effective for treating chronic back pain and other syndromes (Ashar et al., 2022).

Research into EAET is growing and accumulating promising results. For example, a new study comparing EAET and CBT for chronic pain in older veterans found significantly greater improvements for the EAET group (Yarns et al., 2024): 63% of EAET participants had at least a 30% reduction in pain, compared with 17% in the CBT group. A 2021 trial of EAET with somatic symptom disorder found large improvements in symptoms, with 27% of patients achieving a 50% or greater reduction in symptoms and 70% experiencing some improvement (Maroti et al., 2021). Given the similar etiological factors in various somatic conditions, it is reasonable to assume that these results could apply for patients with FND, but further evidence is needed.

Due to the relevance of emotional dysregulation and trauma in FND, these approaches are promising options for the treatment of FND. In the growing research area of emotional dysregulation, there have been two major types delineated: under- and over-regulation (van Dijke et al., 2010). Over-regulation is thought to be more relevant in somatoform disorders, and includes emotional numbing and suppression, lack of awareness of emotion, and low insight about emotions (van Dijke et al., 2010). Therefore, therapy that can facilitate emotional awareness and expression may be especially relevant for FND. Further, there is growing evidence that emotional expression is a key factor in the efficacy of psychotherapy. An impressive meta-analysis by Peluso & Freund (2018) found a significant medium-to-large effect size between client emotional expression and therapy outcome. For comparison, this effect size is larger than that of the therapeutic alliance, but the latter is discussed far more often than emotional expression. Therapist expression of emotion also yielded a significant medium effect size. In short, therapy that facilitates emotional experiencing should be considered in treating FND, particularly when emotional over-regulation appears to be present.

Conclusion

In this chapter, I have built on the research done in chapter 2 to discuss the treatment of FND with psychotherapy. Reviewing general principles of treatment, I emphasised the importance of personalised treatment, therapist skill, the therapeutic alliance, communicating the diagnosis, and common clinical strategies in treating FND and other mind-body illnesses. I then discussed the specific treatment approaches of CBT, ISTDP and EAET, noting that the latter two approaches are particularly promising for treating FND due to their emphasis on emotional factors.

One key theme of this capstone has been the relevance of emotional factors in FND. In my research, I found that emotional expression in therapy is more powerful than the therapeutic alliance in generating positive outcomes for clients. This is surprising, given that in graduate school, I had many professors repeat that the therapeutic alliance is the most important element in therapy, but I cannot recall a discussion about the importance of emotional expression. I hope to raise awareness of the importance of emotional expression in therapy so that more therapists can bring this powerful healing process to their clients.

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