



It is illegal to post this copyrighted PDF on any website. Psychotherapy for Functional Neurological (Conversion) Disorder: A Case Bridging Mind, Brain, and Body

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Presented here is a series that highlights the discussion of a complex case by several expert clinicians, faculty members of Massachusetts General Hospital/Harvard Medical School, from distinct fields of study. Cross Talk demonstrates that clinical challenges can often be improved upon by leveraging more, rather than fewer, clinical perspectives.

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ABSTRACT

Functional neurologic (conversion) disorder (FND) is a core neuropsychiatric condition directly at the intersection of psychiatry and neurology. Over the past several decades, renewed interest in FND has been catalyzed by use of a “rule-in” diagnostic approach leveraging positive clinical signs specific for the diagnosis. In parallel, advances have occurred in identifying mechanisms, etiologic factors, and evidence-based treatments for this population. While “one size fits all” formulations of the “conversion” of psychological distress into physical symptoms are no longer widely accepted, emotion processing and related psychological constructs (eg, alexithymia, dissociation, threat avoidance) remain central to the conceptual understanding of FND. Furthermore, the biopsychosocial model (foundational to psychiatry) is the prevailing model through which to guide longitudinal treatment, with psychotherapy as an emerging first line intervention for FND. Nonetheless, there is a striking dearth of psychotherapists and mental health providers more broadly that feel well versed in the clinical assessment and management of patients with FND. In this article, we seek to address this gap by presenting the psychotherapy treatment narrative of a woman experiencing paroxysmal functional speech and gait disorder symptoms who had a positive clinical outcome. Our goal with this case presentation and related discussion is to increase the proficiency of psychotherapists in providing treatment to patients with FND.

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Functional neurologic disorder (FND), also known as conversion disorder, is a core neuropsychiatric condition.¹ FND is the second most common outpatient neurologic referral, with high health care costs, multiyear diagnostic delays, and frequent disability.^{2–5} Individuals with FND can experience abnormal movements, convulsions, limb weakness, speech/voice difficulties, and sensory deficits that display clinical features incompatible with other neurologic conditions. While early leaders across the clinical neurosciences were immensely interested in this condition (eg, Freud, Janet, Briquet, Charcot, Babinski),⁶ FND has been called “psychiatry’s blind spot.”⁷ This is in contrast to renewed interest occurring among some neurologists—as well as observations that psychotherapy is an emerging first line treatment and that the biopsychosocial model (foundational to psychiatry) is the prevailing conceptual framework for FND.^{8–12}

The renaissance occurring in some circles within the FND field has been catalyzed by the ability to use positive “rule-in” signs on examination (eg, variability and distractibility, Hoover’s sign) to make the diagnosis^{4,13–15} (Table 1). Data have accumulated that certain neurologic examination signs and features are specific to the diagnosis of FND,^{4,14,15,18} with historical concerns for high misdiagnosis rates no longer supported by the available evidence.^{19,20} Appropriate caution should be exercised when making a diagnosis of FND (see Perez et al²¹ and Table 2 for cautionary notes in making a diagnosis of FND). In parallel, progress has also been made in elucidating mechanisms, etiologic factors, and treatments for FND.^{22–26} Importantly, while “one size fits all” conceptualizations of the “conversion” of psychological distress into physical symptoms are no longer the prevailing model, emotion processing and related psychological constructs (eg, alexithymia, dissociation, threat avoidance) remain central to the mechanistic understanding of FND.²⁷ To promote education in the psychotherapeutic approach to this population, we present the naturalistic psychotherapy course for a woman with paroxysmal FND.

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Table 1. Examples of Rule-In Positive Neurologic Examination Signs and Semiological Features Guiding the Diagnosis of Functional Neurologic Disorder^a

Functional neurologic sign	Description
General sign	
Prominent variability/distractibility	Neurologic abnormality is demonstrated across observation periods to widely fluctuate, with observed instances of normal or near normal abilities. Symptom variability can be highlighted with use of cognitive or motor distractors (eg, functional gait symptoms improve when patient is asked to perform serial seven subtractions while walking).
Functional limb weakness	
Hoover's sign	Patient seated; place hand under paretic thigh and ask patient to push down—individual cannot; now ask patient to flex contralateral/normal leg up against resistance; test is positive if there is now strong downward pressure in paretic leg.
Hip abductor sign	In a seated position, ask patient to abduct weak leg verifying apparent weakness. Thereafter, test bilateral hip abduction strength and if there is now good bilateral hip abduction strength, the test is positive.
Collapsing/giveaway weakness	Full strength briefly evident on examination, but limb collapses from normal position thereafter. Caution in interpreting this sign in the presence of pain (which may be more suggestive of pain-limited weakness).
Motor inconsistency	Motor performance of a muscle or muscle group varies between two tests (eg, unable to flex leg on confrontation testing but readily able to lift leg when putting themselves in bed or putting on their shoes).
Functional movement disorder	
Tremor variability/distractibility	Marked variability in frequency, rhythmicity, and pattern of movements. For example, demonstration of improvement, pauses, or complete tremor resolution with distraction.
Tremor entrainment	Functional tremor adopts rhythmicity of paced volitional movements performed elsewhere in the body (can be demonstrated via finger tapping or hand opening/closing).
Sudden knee buckling	Knees buckle with standing or ambulation, rarely leading to falls; sign can also be coupled with motor inconsistency such as a lack of knee buckling on backward tandem gait.
Noneconomical gait (astasia-abasia)	Markedly exaggerated compensatory and uneconomical movements, often with flailing arms or trunk appearing to be unstable; however, compensatory maneuvers demonstrate significant preserved coordination.
Dragging monoplegic gait	Patient with unilateral leg weakness drags leg behind them like an inanimate object, often with externally rotated foot.
Functional (dissociative) seizures	
Long duration	Duration over 2 minutes. Use with caution, as alternative is status epilepticus.
Fluctuating course	Intervening pauses, waxing/waning event tempo.
Specific ictal movements or characteristics	Asynchronous or side-to-side movements of the head or trunk.
Forced eye closure	Often against resistance of examiner.
Increased ictal awareness	Postictal recall of information presented ictally.
Postictal features	Absence of postseizure confusion.
Response to external stimuli	Bystanders may be able to alleviate or intensify the ictal event.

^aAdapted with permission from McKee et al¹⁶ and Perez and LaFrance.¹⁷

Table 2. Cautionary Notes in Making a Diagnosis of Functional Neurologic Disorder (FND)^a

- Marginally (weakly) positive physical examination signs suggestive of FND should be interpreted with caution—encouraging the clinician to remain vigilant for other diagnostic possibilities.
- FND can coexist with other neurologic comorbidities, and appropriate consideration should be given to this possibility—particularly when other aspects of the symptom complex are not explained by rule-in positive signs (eg, a patient with Parkinson's disease and a functional movement disorder or an individual with both epileptic and functional seizures).
- "Bizarre" neurologic presentations should not be labeled as FND simply because the clinician has not previously encountered such a range of symptoms.
- The diagnosis of FND based on rule-in positive signs should be made by a physician with expertise in diagnosing neurologic conditions, generally a neurologist, neuropsychiatrist, or other clinician with neurologic training.
- The clinical assessment of patients with FND can take more time than for other patients seen in general neurology or general psychiatric clinics.
- In early phase diagnostic discussions, focus on the "what" of diagnosis based on rule-in signs and avoid explicitly linking FND to "stress" or "traumatic experiences." Relationships between FND, emotion processing, and life experiences—when relevant—are often indirect and nuanced.
- The assumption of intentionality and secondary gain, that the patient wants to be sick, is misguided in FND.

^aFor additional discussion on this topic, see Perez et al.²¹

CASE HISTORY AND TREATMENT COURSE

Ms Ellen J. Godena and Dr David L. Perez: Jane is a 37-year-old, white, single, employed female with a history of depression and lumbar stenosis status post laminectomy evaluated in the Massachusetts General Hospital FND Clinic for gait and speech difficulties. She reported symptom onset 15 months prior when she began experiencing walking difficulties and clouded thinking. Symptoms continued intermittently, including occasionally experiencing her legs giving out. Several months into her symptom complex, she also noticed intermittent slowed and effortful speech. She verbalized that "stress" at times potentially triggered or worsened symptoms. Conversely, she had a 5-month asymptomatic interval. Psychiatric and psychosocial screenings were performed at intake (detailed in the psychotherapy narrative later in this section). Past psychotropic medication trials included escitalopram (no benefit). She reported that her mother had "undiagnosed" anxiety and an aunt had depression; there was no family history of movement disorders or other neurologic conditions. On mental status evaluation, she was awake, alert, well-groomed, and linear in her thought process. There was no evidence of agrammatism or language comprehension deficits, yet she exhibited an intermittent stuttering speech that was variable and distractible (with distinct periods of intact speech output without stutter). New onset stuttering speech in adulthood that also shows other prolonged instances of intact speech production with normal rate, rhythm, and prosody is consistent with functional speech symptoms.¹⁸ Gait testing revealed noneconomical swaying when walking forward that improved considerably with more difficult tasks (ie, tandem gait backward). These gait findings clearly demonstrated features of motor inconsistency (ie, performing better on a more

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CASE HISTORY AND TREATMENT COURSE (continued)

difficult motor task) and distractibility, observations consistent with functional gait symptoms.^{4,14} The remainder of her elemental neurologic examination was normal, showing intact cranial nerves, preserved muscle confrontation strength testing, intact light touch and proprioception, normal reflexes, and preserved isolated limb coordination. As part of her prior workup in the community, she had 2 outpatient visits with a neurologist that raised concern for FND by physical examination (similar to findings above), and brain magnetic resonance imaging (MRI) and blood work (complete blood count, basic metabolic panel) were normal. FND with mixed features was diagnosed based on rule-in positive signs^{4,14,18} that have been demonstrated to have high diagnostic specificity. Importantly, concern for a relevant neurologic comorbidity was low, supported by the lack of other neurologic examination abnormalities and a normal brain MRI.

The diagnosis of FND was framed as real, common, and treatable—at the intersection of neurology and psychiatry. She agreed to physiotherapy and speech therapy referrals.^{18,28} She also wanted to identify a community psychotherapist. Longitudinal follow-up in the FND clinic was also scheduled (both to gauge treatment response and to remain vigilant if her clinical picture evolved). By the fourth follow-up (18 months after the initial consultation), Jane had completed brief physical rehabilitation and expressed interest in newly available psychotherapy for FND within our program²⁹; she had been unable to connect with community-based psychotherapy for FND. Psychotherapy leveraging cognitive behavioral therapy was framed as working to understand her own personal equation for FND by exploring potential connections between physical symptoms, thoughts, behaviors, emotions, and life factors.²⁹ Pharmacologically, sertraline was started at the first FND Clinic visit and titrated upward to 150 mg—with Jane reporting modestly reduced anxiety. No medication changes were made during psychotherapy.

Psychotherapy

At her psychotherapy evaluation with Ms Ellen Godena, Jane presented as intelligent

and friendly, with self-deprecating humor and sarcastic framing of her life experiences. She reported avoiding interpersonal conflicts and endorsed a mixed anxious-depressed mood. Her FND symptoms had not been active for 4 months, with her last episode including gait difficulty, generalized weakness, fatigue, and slurred speech occurring toward the end of a family gathering.

Jane spent her childhood in Europe, where her father was stationed as an army officer and her mother a homemaker. She initially reported memories of a happy and social childhood with her older brother. However, her father was often away, and when home was frequently angry and physically abusive toward Jane's mother. When Jane was 10, her father was re-assigned back to the United States and her parents divorced shortly thereafter—with her mother gaining primary custody. Jane described several years of "unbearable" weekends with her father in which he criticized her appearance and occasionally hit her. She felt her brother was favored and remembers calling her mother to pick her up early from paternal visits.

At school, Jane "became a loner" and experienced depression in her teens. She had few close friends and tried not to draw attention to herself for fear of being bullied. She often self-soothed with food, and her weight increased to over 300 pounds. She saw an outpatient therapist and was prescribed an antidepressant. Following graduation, Jane attended college and reported having an easier time making friends and enjoyed being part of the campus community. Despite this, her depression worsened along with binge alcohol misuse. In college, she was sexually assaulted while intoxicated. A few weeks later, she swallowed a handful of antidepressant pills and drank excess alcohol before leaving for a party. She felt uneasy about what she had done and was brought to the emergency department by friends. She was discharged that evening to her mother's care and spent 6 weeks in bed, leaving largely to go to psychotherapy appointments. Jane reported never talking to her mother about this incident.

Throughout her twenties, Jane remained depressed, dated infrequently, and

changed jobs often. At 32, she enrolled in a graduate screenwriting program in the UK. She moved into an apartment with other students and started exercising. She lost weight, felt "fit and strong," and enjoyed a sense of personal freedom. She unsuccessfully applied to stay and reluctantly moved back to her hometown, where she obtained an administrative job while living in a studio apartment. She is enrolled in graduate school for commercial art and plans to relocate to Europe after graduation. Her few close friends live out of state.

At the first treatment session, Jane arrived tearful and with speech difficulties. She recounted being placed on unpaid leave after inadvertently being noncompliant with COVID-19 protocols. She appreciated connections between her symptoms and emotions, thoughts, and behaviors, including endorsing triggering anxiety around the perception that others judged her as selfish. In parallel, she also minimized the concerns work colleagues might have experienced. During the next few sessions, we discussed strategies for addressing her work status and practiced anxiety-reduction techniques (ie, diaphragmatic breathing). She returned to work on probation.

Next, we covered material around patterned emotional and bodily stress/arousal responses that can occur in FND. Jane reported breath-holding, muscle tension, fatigue, panic, low mood, and depersonalization as markers of stress and feeling overloaded. She observed a tendency to ignore (or be unaware of) her affective and bodily responses to activating events until after physical symptoms had arisen. Jane struggled to practice even brief meditation due to emotional flooding or concentration difficulties. Given her enjoyment of music, we incorporated this into her daily mindfulness-based relaxation practice.

During the third month, we began a weekly activity log examining how behaviors interacted with her FND. We noted "boom and bust" activity patterns and discovered that she often crashed at home while overexerting at work. She expressed an interest in improving self-care routines—but was unsure where to begin. We identified short-term activities

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for improving her sleep patterns, exercise, and relaxation practices. Initially, Jane had some success though she experienced emotional challenges when exercising. For example, she noted feeling “out of shape” while walking. These negative thoughts led her to “push harder,” ignore fatigue, and subsequently “crash” for a few days.

During the fourth month, we reviewed core beliefs, negative automatic thoughts, and emotions. Jane shared that she often felt rejected by others and recalled this began early in life when she was criticized by family members for her appearance. Jane shared a belief that her family wished for her to “be someone I am not.” She felt expected to “keep up the appearance that everything is okay.” Family members became distressed by her FND symptoms in public, and she often attempted to hide symptoms. We used role-play to examine a typical conversation with her mother centered on the topic of Jane’s weight.

Mom: You know, if you just went to the gym a few times a week and cut your carbs, you would lose weight.

Jane: Yeah Mom, and then you wouldn’t have to be embarrassed by me.

Mom: I’m just trying to help you; everyone thinks you would be such a pretty girl if you lost weight.

Jane: Who’s everybody?

Mom: Well, your Aunt June, your cousins...

Jane: Yeah, and then would they take me seriously?

Thereafter, we explored an alternative, assertive communication approach:

Mom: You know, if you just went to the gym a few times a week and cut your carbs, you would lose weight.

Jane: Mom, when you constantly bring up my weight, it makes me feel that you don’t accept me for who I am.

Mom: I’m just trying to help you.

Jane: I know, but it would be more helpful if you trusted me to make the right decisions about my health. I’d like for you to stop making comments about my weight or how I look.

Jane shared that expressing her feelings directly in role-play was empowering but also anxiety-provoking. She noted, “I often think that if I ask my mother for

what I need, I will drive her away.” Jane utilized both passive and aggressive communication styles, acknowledging that this way made it difficult to get her needs met.

Jane reported similar issues at work, feeling underappreciated by colleagues and singled out for small mistakes. Her communication with customers could be edgy and at times rude. It was challenging to “break through” the wall of her remarks, which seemed to have been constructed as a protection from criticism. When she expressed a belief that the others’ behaviors were the cause of her rudeness, we explored the vulnerability she felt in the moment. At times, Jane would make jokes to avoid these discussions, yet in other instances she reflected on the emotional impact these interactions had on her self-esteem. She noted that her edginess emerged when she felt overwhelmed and unsupported. A day before her annual work evaluation, she experienced panic and FND symptoms. We used cognitive restructuring to examine thoughts such as, “This evaluation will be the end of my job.” Conversely, Jane shared that she had received prior positive evaluations and that her supervisor had recently reassured her that she would not be terminated. Jane noted decreased anxiety following this restructuring work.

After 6 months in psychotherapy, Jane received unexpected news that she would need a hysterectomy for uterine fibroids. This would prevent her from having children, and she felt shocked and anxious following the gynecology appointment. Jane expressed ambivalence regarding her agency in making a decision about surgery and revealed her desire that someone else “make the decision for her.” She reported feeling responsible for “continuing the family line” and worried that she would otherwise be seen as a failure. Of note, her mother strongly favored surgery. We devised questions for her physician, including whether there were less invasive treatments. As her therapist, I worried that her mother might urge Jane to make a decision prematurely. However, at the appointment, Jane felt empowered to move forward with surgery after her concerns were addressed compassionately.

As she prepared for surgery, Jane shared what her decision meant for her as a woman. She noted that content around families and motherhood seemed to be “popping up” on television or the internet and that feelings of sadness that arose in response quickly turned to anger or dismissiveness. She shared, “I tend to focus on my anger, so I don’t get sad.” We made space for sadness and anticipatory grief that arose during the weeks leading up to her procedure. Jane went on to have a successful surgery and felt that her mother had been supportive and helpful during her recovery.

Thereafter, Jane became more future-oriented. She enrolled in her final semester of graduate school, expressing renewed motivation to work in a field she found meaningful. In the following months, she understood better how her FND symptoms arose when feeling emotionally and physically overloaded and took steps to manage them. Her regularly used tools included pacing, tracking, and managing autonomic arousal driven by affective states, and diaphragmatic breathing.

In our 11th and final month of psychotherapy (50 sessions total), Jane decided to relocate back home closer to her mother to save money. As her therapist, I felt ambivalence toward Jane’s framing of the situation, yet also wanted to be supportive. We discussed the possibility that the move might provide a sense of “coming home.” At our next session, Jane shared having an FND episode following our discussion, stating “I think we touched on something we haven’t touched on before in-depth.” The following weeks, Jane spoke to her mother about concrete tasks related to the move that she was “unwilling to take on” and noted being more assertive in expressing her needs and expectations. As her move approached, Jane endorsed feeling more ready to address family dynamics, but also anxious about how conversations would unfold. We continued to review the skills and insight gained in treatment to maintain balance, concluding treatment 1 year after her first session. Jane noted, “I finally have figured out a lot of things.” She reported that her body had become a new unexpected ally reminding her, “I need to rest, I need to take care of myself.”

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Psychodynamic Perspective

Dr Laura D. Crain

The central pattern/transference theme for Jane is her experience that her pain is not believed. Jane recalls being physically hit by her father during unbearable visitations spent with him during childhood. Jane was left to languish in bed by her minimally responsive mother, after an overdose precipitated by a traumatic sexual assault. Traumatic remembered and unremembered experiences are unconsciously repeated as Jane visits doctors who send her away, telling her that there is nothing wrong with her. When Jane meets her therapist from a new team of treaters who seek to validate her symptoms, she talks with great emotion about how she was reprimanded at work for being noncompliant with COVID-19 protocols. Here, she is telling us about her belief that, in this treatment, she will again experience the feeling of always being on probation, and not believed.

In his writings on hysteria,³⁰ Freud introduced his concept of “somatic compliance,” which proposes that the relationship between a physical conversion symptom and unconscious thought is not arbitrary. Freud’s Dora, who also had a complicated rivalry with her brother and conflicts around closeness to one parent, presented to Freud with speech difficulties and a cough. In the same way, does Jane stutter to avoid facing the fear of speaking and not being heard? Jane can be facile in her clever and witty speech, and also cutting—does she use her words to ward people off? In her swaying, does Jane seek containment? Does she fall to stay put, to remain a child, to metaphorically “stay in Europe,” where she saw herself as “free, fit, and strong”?

The therapist’s important intervention of paying close attention to the implications of a hysterectomy challenges Jane’s unconscious solution to see herself as not heard or believed. Regarding the possibility of childbearing, Jane says, “The choice has been made for me”; to the contrary, Jane has made this sad and difficult decision herself. Having an attentive therapist challenges Jane’s core belief that she will not be heard, but it also fuels the resistances that lead her to leave the treatment. If Jane engages in treatment again, I would expect she could make even more progress toward her goal of having a freer, more fulfilled life.

Family Therapy Perspective

Dr Anne K. Fishel

I’m struck by the paucity of family interventions for FND³¹ given that its symptoms are responded to by family members, are exacerbated by stressful family interactions, and may be attributable to previous family-related traumas.^{32,33} There are at least 3 family approaches that could be used adjunctively in Jane’s treatment:

1. **Psychoeducational:** FND is a difficult illness for many to understand.³⁴ A family therapist could explain the bidirectional impact of FND on family relationships and reduce the distress that comes from misunderstanding this illness.³⁵
2. **Updating the past:** Jane experienced traumas, including her sexual assault and drug overdose, that she coped with alone, feeling that her mother was not emotionally available.
 - If the mother can hear what Jane would have needed after previous traumas, can she respond now with a meaningful apology?
 - Perhaps considering that mother is someone with her own history might make her limitations more forgivable³⁶; eg, “Think of your mother as your grandparents’ daughter.”
 - Mother and Jane could reenact the role-play conducted in therapy with a family therapist intervening to rescript the hurtful exchanges about her appearance. Helping Jane assert her feelings as an adult might help heal old wounds.
3. **Explore setting boundaries:** Jane and her mother are moving closer to one another.
 - Concretely: How often do they each expect or want to see each other when they live close by?
 - Metaphorically: What kind of “fence” do they envision between their two houses? One made of bushes or a high stockade with a few knotholes for peering through?
 - Hypothetically: If living close were to go swimmingly, what would they each want their relationship to be like?

Neurology/Pharmacotherapy Perspective

Dr Alice Flaherty

Why do both neurologists and psychologists/psychiatrists find psychosomatic symptoms so difficult? One reason is that our brains process psychological and physical causality separately. This can go wrong, as in people with autism, who are better at explaining how things work, and people with Williams syndrome, who are better at explaining how people work. Neurologists and psychotherapists tend to show milder versions of those mindsets.

Traditionally, when patients visited neurologists like me, we treated FND as a diagnosis of exclusion. After putting patients through exhaustive and frightening medical tests with ominously negative results, we tried to reassure patients that their problem was “just” anxiety and discharged them with a psychotherapy prescription. Even when patients who had gone through such a bait-and-switch could form an alliance with their therapists, their treatment was often derailed by symptom migration. In that

phenomenon, somatically hypervigilant patients who finally accept that their index symptom is not dangerous, but who still fear that their body is at risk, become preoccupied with a new symptom. The therapist can't be sure that the new symptom isn't "real," the patient sees a new neurologist, and their ordeal begins again.

Jane's case shows us a modern, more humane, and effective model for FND treatment. The neurologist makes a positive diagnosis of FND without a long workup, meets with Jane often enough to help her accept the new diagnosis, and refers her to a psychotherapist who is a close collaborator. Neither treater presumes the patient is unconsciously seeking the primary or secondary gain that were so closely tied to the classical notion of conversion disorder.

Nonetheless, the legacy of conversion disorder lives on—not only in this case's title, but in its framing of FND as a condition that differs from "purely" medical disorders by its psychological component. That dualism falsely splits FND from her obesity, back pain, and abdominal pain—all classic stress-related problems. Why are they considered medical in a way that FND is not?

One reason health care distinguishes between FND and Jane's other diagnoses is financial: the medical-surgical treatments for the latter are more profitable. But fiscal incentives can change, and, as health-sector costs approach 15% of the US GDP, they probably will. Some HMOs now use intensive behavioral therapies for diabetes and back problems to decrease their long-term medical cost. Early psychotherapy might have helped prevent not only Jane's FND but also her obesity and chronic pain and made her 2 surgeries unnecessary. Even the biological roots of our mind-body distinction are something that reeducation can help clinicians rewire. That can open our minds to real-world benefit for both patients and the economy.

Dialectical Behavior Therapy Perspective

Dr Rebecca Harley

The biosocial theory of dialectical behavior therapy (DBT) proposes that borderline personality disorder (BPD) is a disorder of emotion dysregulation that develops via a transaction between a child's inborn emotional temperament and an invalidating early environment. By DBT's definition, an invalidating environment is one in which a child's attempts to communicate her inner experience are met with responses that teach her that her feelings are not acceptable or understandable. As a result, the child does not learn to accurately label emotion, tolerate distress, and trust her own emotional responses as valid and useful.

I think about DBT's biosocial theory in Jane's case because much of her therapeutic work pertains to emotion and its dysregulation. Through treatment, we see Jane becoming more aware of her feelings and learning about connections between her feelings, physical symptoms, and interpersonal

world. As she observes these connections, she also learns new coping skills and begins to learn about the role her early invalidating environment played (and is still playing) in the development of her adult struggles.

Reading Jane's case, it strikes me that FND and BPD are both delicate, complex interactions between mind and body for which treatment, in parallel, must be a delicate, complex dance between the change orientation of a skills-based cognitive behavioral therapy approach and the acceptance orientation of an approach rooted in mindfulness and dialectical awareness. On the change side, the skills Jane learned in therapy map well onto DBT's 4 skill sets—emotion regulation, distress tolerance, interpersonal effectiveness, and mindfulness. On the acceptance side, we can imagine Jane's therapist working to model dialectical awareness in each of their therapeutic interactions.

When modeling dialectical awareness as therapists, we invite ourselves and our patients to see all that is real in any given moment. As we contend with reality in its ever-changing complexity, we need to allow that more than one thing—especially opposite things—can be true. Examples of this dialectical tension include Jane's simultaneously wanting to be more close and less close to her mother, as well as the likelihood that Jane wishes for and also fears improvement of her FND symptoms. If Jane returns to therapy someday, her therapist could help her to recognize dialectics such as these as both normal and tolerable, thereby further increasing her ability to engage effectively with her feelings, her physical symptoms, and the cognitive behavioral therapy skills she has learned.

Summary: Integrative/Generalist Perspective

Dr Jonah N. Cohen

Cross Talk exemplifies how thinking about a case from multiple perspectives can potentially facilitate treatment that is more than the sum of its parts. Jane presents with diverse symptoms (ie, interpersonal, motor, affective) and across 2 domains of medicine (ie, neurology, psychiatry). I can imagine it being difficult to know where to start treatment. Does one rule out other potential medical causes? How does one communicate to Jane the cause of her symptoms? Does one try to offer coping strategies to target Jane's FND symptoms? Is it possible that her family dynamics are perpetuating her symptoms, or do Jane's symptoms stem from traumatic events that need to be the target of her care? As with most cases of clinical complexity, the answer is probably yes to all these possibilities.

From an integrative viewpoint, particularly when care must be short term, as in Massachusetts General Hospital's Department of Psychiatry, I like to think about treatment from a top-down perspective, in which interventions are symptom focused, but also inextricably informed by systemic and unconscious dynamics. As Dr Crain suggests,

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Jane may feel consistently not believed and/or not expecting her needs to be met. Similarly, Dr Flaherty discusses how the medical system may propagate these dynamics by being skeptical of the legitimacy of FND symptoms or by labeling such patients as seeking secondary gain. But how do we address these causes in the shorter-term model that Jane's care exists within? How do we not propagate Jane feeling unsure about her diagnosis and not adequately cared for with an endless stream of referrals?

Dr Fishel and Dr Harley discuss several interventions that may address some of the intrapsychic dynamics Dr Crain discusses and systematic dynamics Dr Flaherty identifies. By providing psychoeducation about Jane's symptoms or suggesting Jane's mother bear witness to Jane's trauma, Jane may have the opportunity to experience her mother as more attuned, a potentially corrective experience. Similarly, one can imagine how DBT tools such as interpersonal effectiveness might give Jane a means to more effectively ask for what she needs or how distress tolerance might be used when Jane feels invalidated by someone else (or the system). Overall, Jane's case is an example of how treating patients with humane and wholistic understanding requires thinking both deeply and pragmatically, putting aside theoretical allegiances.

Clinical Points

- Psychotherapy for FND, particularly cognitive behavioral therapy, is centered around exploring relationships between physical symptoms, thoughts, behaviors, emotions, and life factors. Anecdotally, encouraging patients to explore factors that relate to their own "personal equation" for developing functional neurologic symptoms (across physical and mental health considerations) can be another useful framing of the psychotherapeutic approach to FND.
- Published psychotherapy manuals based on clinical trials can assist psychotherapists in using cognitive behavioral therapy approaches to manage FND.^{29,37}
- There is no "one size fits all approach to FND" and use of the biopsychosocial formulation can aid the development of a patient-centered psychotherapy treatment plan.³⁸

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REFERENCES

1. Perez DL, Aybek S, Nicholson TR, et al. Functional neurological (conversion) disorder: a core neuropsychiatric disorder. *J Neuropsychiatry*

Clin Neurosci. 2020;32(1):1–3.

2. Espay AJ, Aybek S, Carson A, et al. Current concepts in diagnosis and treatment of functional neurological disorders. *JAMA Neurol.* 2018;75(9):1132–1141.
3. Baslet G, Bajestan SN, Aybek S, et al. Evidence-based practice for the clinical assessment of psychogenic nonepileptic seizures: a report from the American Neuropsychiatric Association Committee on Research. *J Neuropsychiatry Clin Neurosci.* 2021;33(1):27–42.
4. Perez DL, Aybek S, Popkirov S, et al; on behalf of the American Neuropsychiatric Association Committee for Research. A review and expert opinion on the neuropsychiatric assessment of motor functional neurological disorders. *J Neuropsychiatry Clin Neurosci.* 2021;33(1):14–26.
5. Stephen CD, Fung V, Lungu CI, et al. Assessment of emergency department and inpatient use and costs in adult and pediatric functional neurological disorders. *JAMA Neurol.* 2021;78(1):88–101.
6. Trimble M, Reynolds EH. A brief history of hysteria: from the ancient to the modern. *Handb Clin Neurol.* 2016;139:3–10.
7. Keynejad RC, Carson AJ, David AS, et al. Functional neurological disorder: psychiatry's blind spot. *Lancet Psychiatry.* 2017;4(3):e2–e3.
8. Bègue I, Nicholson TR, Kozłowska K, et al. Psychiatry's modern role in functional neurological disorder: join the renaissance. *Psychol Med.* 2021;1–3.
9. Gutkin M, McLean L, Brown R, et al. Systematic review of psychotherapy for adults with functional neurological disorder [published online ahead of print November 5, 2020]. *J Neurol Neurosurg Psychiatry.* 2020.
10. Goldstein LH, Robinson EJ, Mellers JDC, et al; CODES study group. Cognitive Behavioural Therapy for Adults With Dissociative Seizures (CODES): a pragmatic, multicentre, randomised controlled trial. *Lancet Psychiatry.* 2020;7(6):491–505.
11. Espay AJ, Ries S, Maloney T, et al. Clinical and neural responses to cognitive behavioral therapy for functional tremor. *Neurology.* 2019;93(19):e1787–e1798.
12. Dallochio C, Tinazzi M, Bombieri F, et al. Cognitive behavioural therapy and adjunctive physical activity for functional movement disorders (conversion disorder): a pilot, single-blinded, randomized study. *Psychother Psychosom.* 2016;85(6):381–383.
13. Stone J, LaFrance WC Jr, Levenson JL, et al. Issues for DSM-5: conversion disorder. *Am J Psychiatry.* 2010;167(6):626–627.
14. Nonnekes J, Růžička E, Serranová T, et al. Functional gait disorders: a sign-based approach. *Neurology.* 2020;94(24):1093–1099.
15. Daum C, Hubschmid M, Aybek S. The value of "positive" clinical signs for weakness, sensory and gait disorders in conversion disorder: a systematic and narrative review. *J Neurol Neurosurg Psychiatry.* 2014;85(2):180–190.
16. McKee K, Glass S, Adams C, et al. The inpatient assessment and management of motor functional neurological disorders: an interdisciplinary perspective. *Psychosomatics.* 2018;59(4):358–368.
17. Perez DL, LaFrance WC Jr. Nonepileptic seizures: an updated review. *CNS Spectr.* 2016;21(3):239–246.
18. Baker J, Barnett C, Cavalli L, et al. Management of functional communication, swallowing, cough and related disorders: consensus recommendations for speech and language therapy [published online ahead of print July 1, 2021]. *J Neurol Neurosurg Psychiatry.* 2021;jnnp-2021-326767.
19. Stone J, Smyth R, Carson A, et al. Systematic review of misdiagnosis of conversion symptoms and "hysteria." *BMJ.* 2005;331(7523):989.
20. Gelauff JM, Carson A, Ludwig L, et al. The prognosis of functional limb weakness: a 14-year case-control study. *Brain.* 2019;142(7):2137–2148.
21. Perez DL, Hunt A, Sharma N, et al. Cautionary notes on diagnosing functional neurological disorder as a neurologist-in-training. *Neurol Clin Pract.* 2020;10(6):484–487.
22. Ludwig L, Pasmán JA, Nicholson T, et al. Stressful life events and maltreatment in conversion (functional neurological) disorder: systematic review and meta-analysis of case-control studies. *Lancet Psychiatry.* 2018;5(4):307–320.
23. Drane DL, Fani N, Hallett M, et al. A framework for understanding the pathophysiology of functional neurological disorder. *CNS Spectr.* 2020;1–7.
24. LaFaver K, LaFrance WC, Price ME, et al. Treatment of functional neurological disorder: current state, future directions, and a research agenda. *CNS Spectr.* 2020;1–7.
25. Perez DL, Edwards MJ, Nielsen G, et al. Decade of progress in motor functional neurological disorder: continuing the momentum. *J Neurol Neurosurg Psychiatry.* 2021;92(6):668–677.
26. Carson AJ, Brown R, David AS, et al; UK-FNS. Functional (conversion) neurological symptoms: research since the millennium. *J Neurol Neurosurg Psychiatry.* 2012;83(8):842–850.
27. Pick S, Goldstein LH, Perez DL, et al. Emotional processing in functional neurological disorder: a review, biopsychosocial model and research agenda. *J Neurol Neurosurg Psychiatry.* 2019;90(6):704–711.

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28. Nielsen G, Stone J, Matthews A, et al. Physiotherapy for functional motor disorders: a consensus recommendation. *J Neurol Neurosurg Psychiatry*. 2015;86(10):1113–1119.

29. Sharpe M, Walker J, Williams C, et al. Guided self-help for functional (psychogenic) symptoms: a randomized controlled efficacy trial. *Neurology*. 2011;77(6):564–572.

30. Freud S. *A Case of Hysteria, Three Essays on Sexuality and Other Works*. In: *The Complete Psychological Works of Sigmund Freud*, vol 7. Hogarth Press; 1953.

31. Griffith JL, Polles A, Griffith ME. Pseudoseizures, families, and unspeakable dilemmas. *Psychosomatics*. 1998;39(2):144–153.

32. Van der Feltz-Cornelis CM, Allen SF, Van Eck van der Sluijs JF. Childhood sexual abuse predicts treatment outcome in conversion disorder/functional neurological disorder: an observational longitudinal study. *Brain Behav*. 2020;10(3):e01558.

33. Keynejad RC, Frodl T, Kanaan R, et al. Stress and functional neurological disorders: mechanistic insights. *J Neurol Neurosurg Psychiatry*. 2019;90(7):813–821.

34. Rawlings GH, Reuber M. What patients say about living with psychogenic nonepileptic seizures: a systematic synthesis of qualitative studies. *Seizure*. 2016;41:100–111.

35. Nielsen G, Buszewicz M, Edwards MJ, et al. A qualitative study of the experiences and perceptions of patients with functional motor disorder. *Disabil Rehabil*. 2020;42(14):2043–2048.

36. Fishbane M. Healing intergenerational wounds: an integrative relational-neurobiological approach. *Fam Process*. 2019;58(4):796–818.

37. LaFrance WC Jr, Baird GL, Barry JJ, et al; NES Treatment Trial (NEST-T) Consortium. Multicenter pilot treatment trial for psychogenic nonepileptic seizures: a randomized clinical trial. *JAMA Psychiatry*. 2014;71(9):997–1005.

38. Perez DL. The CODES trial for dissociative seizures: a landmark study and inflection point. *Lancet Psychiatry*. 2020;7(6):464–465.

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