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AN EXPLORATION OF FUNCTIONAL NEUROLOGICAL SYMPTOM DISORDERS FROM A PSYCHOTHERAPEUTIC PERSPECTIVE; SYMPTOM CAUSATION AND POTENTIAL IMPLICATIONS FOR THE THERAPEUTIC RELATIONSHIP.

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ABSTRACT

Functional Neurological Symptom Disorders (FNSDs) are one of the most common presentations in outpatient neurology clinics and FNSDs are associated with considerable disability and healthcare cost. Despite its prevalence, there are still misconceptions amongst healthcare professionals regarding etiological theories of FNSDs, which results in widespread public stigma of the people who live with the condition. In this theoretical dissertation, the literature surrounding etiological theories is examined and a case is put forward for the integration and use of biological, psychological and social models by psychotherapists. The literature is also explored to examine potential implications for the establishment of a successful psychotherapeutic alliance when a person has a diagnosis of Functional Neurological Symptom Disorder (FNSD). In the absence of research, the concepts of bias, stigma, transference and counter-transference are explored. Unique points to consider in the psychotherapeutic assessment and treatment of a person with a diagnosis of FNSD are raised, and suggestions for future directions of research are put forward.

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Chapter 1

INTRODUCTION

It is widely accepted in international literature that Functional Neurological Symptom Disorders (FNSDs) are common conditions seen in neurology clinics (Stone *et al.,* 2010). It is also acknowledged that FNSDs are associated with considerable medical, economic and psychosocial costs (Cock and Edwards, 2018; Rommelfanger, *et al.,* 2017). The term Functional Neurological Symptom Disorder (FNSD) is the most contemporary description for medically unexplained neurological symptoms, however, the nomenclature used to describe these symptoms (for example, conversion disorder, somatisation disorder, non-organic disorder, psychosomatic disorder, psychogenic disorder, somatoform disorder, dissociative neurological symptom disorder, medically unexplained symptoms, hysteria, and so on) can be confusing, as well as misleading, for both the patient and health care professional (Ding and Kanaan, 2017; Cooper, Abbass and Town, 2017).

FNSDs tend to be heterogeneous disorders in terms of cause, course and treatment (Luyten, Van Houdenhove, Lemma, Target and Fonagy, 2012). Historically, FNSDs have been described as a physical manifestation of psychological conflict and are often explained to patients as being stress-related (Cock and Edwards, 2018). However, research has shown low incidence of physical or psychological trauma to directly explain symptoms, with a systematic review conducted by Roelofs and Spinhoven (2007) showing that trauma was only present in a third of individuals with medically unexplained symptoms. New emerging evidence indicates that psychological stress or trauma are not essential prerequisites for the development of FNSD

(Fobian and Elliot, 2018). Rather, research suggests that biological and psychosocial factors are involved in both the cause and maintenance of FNSD (Luyten *et al.,* 2012).

As a result of this misconception, people with FNSDs often feel stigmatised and misunderstood, which has led to the establishment of many support groups and charities for people living with FNSD. FNDhope.org (2019), a non-profit advocacy organisation for people with FNSD, encompasses this in their mission statement where they aim to "envision a world where Functional Neurological Disorders (FND) patients can expect to be treated with dignity, care and respect, regardless of the cause of their symptoms". Interestingly, people with symptoms that are medically unexplained are often considered difficult to treat (Fischoff, 2003), and this can often lead to turbulent encounters and relationships with health professionals (Luyten *et al.,* 2012). As such, there is a need for a better understanding of FNSDs and its underlying causes.

Onward referral of people living with FNSDs to a psychotherapist has recently become commonplace in order to assess for potential psychological causes of physical symptoms, as well as risk and reinforcing factors for symptom development (Espay, *et al.,* 2018, Fobian and Elliot, 2018). Psychotherapy is now accepted as an essential component in a multidisciplinary treatment approach of FNSD (Demartini *et al.,* 2014) and as such, there is an impetus on psychotherapists to be informed regarding etiological models of the condition, and of potential implications the diagnosis may have on the successful establishment of a therapeutic alliance. The aim and objectives of this theoretical dissertation are as follows:

Aim

The purpose of this paper is to explore the literature to examine what is understood of FNSD, from a psychotherapeutic perspective.

Objectives

- To understand the causation and maintenance of symptoms of FNSD.
- To explore whether a diagnosis of FNSD can impact the development of a successful psychotherapeutic alliance.

Chapter 2

SYMPTOMS OF FNSD; CAUSATION AND MAINTENANCE

Individuals who present with FNSD will often have diverse symptoms with varying degrees of severity. The fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) (American Psychological Association ((APA)), 2013) describes FNSD as an acute or chronic alteration in motor or sensory functioning which cannot be attributed to an organic cause, and which subsequently causes significant physical and mental distress to an individual. Symptoms can include paresis, paralysis, abnormal movement, dysphagia, dysphonia, dysarthria, sensory disturbances and seizures. Features which support, but do not conclusively diagnose FNSD, can include a positive history of similar somatic symptoms (for example, the pre-morbid presence of an organic neurological disorder) and a history of stress or trauma (APA, 2013).

Prognostically, short duration of illness and an acceptance of the diagnosis are positive prognostic indicators, while maladaptive personality traits, receipt of disability allowance, and the presence of a co-morbid disease are negative prognostic indicators (APA, 2013). In addition to the wide-ranging symptoms of FNSD, anxiety disorders and depression disorders also frequently co-occur with FNSD (APA, 2013). Other supportive features of FNSDs include the phenomenon of “la belle indifférence” which is an observable lack of concern for the symptom(s) or the results of the symptom(s), as well as the concept of “secondary gain” (APA, 2013). Secondary gain is described as an unconscious intrinsic or extrinsic benefit to the illness, which can maintain or reinforce symptoms (examples include, increased attention from partners and family, or sick leave from a stressful work environment), (Fobian and Elliot, 2018).

Given the breadth and scope of FNSDs, it is likely the condition develops through a combination of biological, psychological and social frameworks, which are discussed in turn below.

Biological Framework

From a body-oriented perspective, it is acknowledged that individuals who have endured trauma can have physical symptoms as a result of dysregulation of the Autonomic Nervous System (ANS) (van der Kolk, 1994; Levine, 1997; Ogden, 2006; Rothschild, 2000). Dysregulation of the ANS can cause individuals with trauma-related presentations to describe that they feel too much or feel too little (van der Kolk, 1994), which of itself can be highly distressing.

The primary function of the ANS is to establish regulation or "homeostasis" within the body (Crossman and Neary, 2000). In times of stress, the adrenal glands secrete adrenaline and noradrenaline which sustain or relax the stress response (Waugh and Grant, 2001). Neurobiologically, stress responses cause a reaction in the hypothalamus-pituitary-adrenal (HPA) axis, causing the body to enter what is known as the "fight, flight or freeze" response (Selye, 1976). It is accepted that over exposure to high levels of stress over time can have a negative impact on an individuals' health and well-being (Seyle, 1976). As such, dysregulation of the ANS and attentional dysregulation are believed to be major features in FNSDs (Espay *et al.*, 2018).

When regulated, the central nervous system works to integrate sensory information by means of bottom-up sensory reception and top-down or cognitive interpretation of sensory information. The top-down approach describes how an individual perceives their environment, and how one interprets their environment determines how one thinks and feels about it (Payne,

2000). When there is an uneven distribution of focus on top-down, or bottom-up processing (thinking too much or too little, or feeling too much or too little), abnormal predictions of sensory data can occur. This results in abnormal body focused attention, which in turn can cause abnormal sensory perceptions or abnormal movements (Espay *et al.*, 2018). In light of this and given the high sensitivity to threat signals in FNSDs, authors hypothesise that neurological symptoms represent forms of defensive behaviour in response to a perceived (emotional or physical) threat (Blakemore, Sinanaj, Galli, Aybeck and Vuilleumier, 2016). To support this, studies have been conducted in functional Magnetic Resonance Imagery (fMRI) to establish a neurobiological explanation of FNSDs, which led to findings of higher functional connectivity between the amygdala (which processes emotions and lays down emotional memories) and the supplementary motor cortex (responsible for the control of movement in the body) during emotional stimuli (Aybeck, *et al.*, 2015).

In addition, Edwards, Fotopoulou and Parées (2013) describe people with FNSD as having an abnormal sense of agency of their body, especially in regard bodily movements and sensations. Edwards *et al.* (2013) state that a key feature that distinguishes patients with FNSD from those with organic movement disorders is that attention is necessary for FNSD symptoms to manifest. This is apparent in clinical examinations of individuals with FNSD, where when the individual's attention is distracted there is typically a reduction, and even a disappearance, of the symptom (Edwards *et al.,* 2013). Research has also been conducted on individuals' own beliefs of the severity of their symptoms and sense of agency when it comes to movement, whereby individuals with FNSD perceive that their symptoms are more severe than they actually are, and that such individuals tend to perceive that they do not have control or agency over their movements (Edwards *et al.*, 2013).

Altered interoception is also believed to be a component of FNSDs, which results in dysregulation of emotion and subsequent development of somatic symptoms and alexithymia (Sojka, Bares, Kasparek and Svetlak, 2018). Indeed, studies have amply shown that there is a negative relationship between stress and an individual's self-awareness of emotions and bodily sensations (Luyten, Fonagy, Lowyck, and Vermote, 2012). Stress is believed to cause a deactivation of neural circuits involved in self-awareness and an understanding of social causality in general, leading to impairments in affect and nervous system regulation (Luyten et al., 2012).

Biological etiological models are important to consider from a psychotherapeutic perspective, as this knowledge may influence the therapist to consider sensorimotor techniques as an approach to treatment, in order to integrate and calibrate mind and body.

Psychological Framework

Until recently, it was considered that FNSDs were purely a physical representation of psychical conflict (Cock and Edwards, 2018). This theory was heavily influenced by early psychoanalytic theories, namely the publication "Studies of Hysteria" by Breuer and Freud (1895). In the famous case study of Anna O, who had symptoms which included paralysis, involuntary eye movements, fatigue, and aphasia, Breuer and Freud proposed that hysterics "suffer mainly from reminiscences" (1895, p. 34) and hypothesised that physical symptom formation was caused by resistance and repression of prior painful memories in the unconscious. They were of the view that by accessing and speaking about these painful memories, catharsis could occur. Following the psychoanalytic vein, Lacan believed that the symbolic nature of the unconscious is structured like a language, and the body is the means by which the unconscious expresses itself (Nasio, 1998). When expression by means of the symbolic fails, that is, when a person does not have the

language to represent what is in the unconscious, Lacan held the view that expression can occur in physical symptoms that surface in the body.

From a psychological point of view, operant and classical conditioning are thought to play a part in the development of FNSD (Carson *et al.,* 2016). Classical conditioning may explain FNSD symptoms in certain people who have prior experience of neurological symptoms, for example, a person whose family member has a neurological condition (Fobian and Elliot, 2018). Operant conditioning is thought to be linked to the steps an individual takes to avoid physical manifestations of anxiety (Carson *et al.,* 2016). The psychotherapist needs to be aware of these avoidant behaviours and past experiences, as they may be maintaining the symptoms of FNSD.

Similarly, the cognitive model for FNSDs proposes that factors such as inherent responses to emotions and illness beliefs contribute to the formation of a symptom, which are brought on by internal or external stimuli that are deemed as threatening to an individual (Espay *et al.,* 2018). In addition, symptoms of FNSDs may be further exacerbated by illness hyperawareness, health anxiety, and excessive threat vigilance. There is also empirical evidence to suggest that individuals with FNSD are less likely to interpret emotional states with the corresponding physical sensations, for example, tightness in the chest caused by anxiety or fear (Luyten *et al.,* 2012). Fobian and Elliot (2018) state that such misinterpretation of physical symptoms is influenced by conditioned beliefs, expectations and experiences. This misinterpretation of physical sensations in turn leads to anticipatory reactions and/or anxiety, which can produce additional physical symptoms, which further generate FNSD (Fobian and Elliot, 2018). People with medically unexplained illnesses, such as FNSD, also reportedly have a

strong belief that they should be able to control emotions and that experiencing strong emotions is a sign of weakness (Rimes and Chalder, 2010).

An understanding of this model should encourage the psychotherapist to focus on helping the person with FNSD to find the words to articulate how they feel, in order to explore the thoughts regarding their illness and treatment to date.

Social Framework

From a social perspective, Buck, Losow, Murphy and Costanzo (1992) propose that emotional expression influences the behaviour of others and that emotions are influenced by social context. As psychoanalytic theory developed, it was hypothesised that rather than the unconscious being made up of libidinal desires, it is a desire for attachment and interpersonal connection that drives a person. Fairbairn, Winnicott and Bowlby are among some of these theorists who posited that attachment is a central tenet of human emotional regulation and development (as cited in Carson, Ludwig and Welsh, 2016). Fairbairn (1944) was of the belief that somatic symptoms could arise from insecure attachments, and that the purpose of psychopathological symptoms was to suppress emotion, to enhance interpersonal relationships, or to escape or resolve a conflict (as cited in Carson, Ludwig and Welsh, 2016).

From an interpersonal perspective, when faced with stress people tend to seek reassurance from attachment figures and such proximity seeking is associated with the effective regulation of stress, whether this is external in the form of others or internalised in the form of self-belief (Luyten *et al.*, 2012). By contrast, insecure attachment experiences are related to increased vulnerability to stress-related disorders (Gunnar and Quevedo, 2007). There is a growing body of evidence to suggest a correlation in the occurrence of early attachment issues

and the development of FNSDs later in life (Lumley, *et al.*, 2011). This supports the need for psychotherapists to be curious about the social context of the individual living with FNSD.

With regard to individuals with insecure attachment styles, Luyten *et al.* (2012) propose that to deal with stressful situations, individuals will use "secondary attachment strategies" to regulate stress. People with FNSD who use "deactivation" attachment strategies tend to regulate stress by denying attachment needs and instead assert their autonomy despite feeling quite vulnerable (Houdenhove and Luyten, 2008). On the contrary, people with FNSD who rely on "hyperactivating" attachment strategies have tendencies to be demanding of others to find support and reassurance, which can often lead to resentment from others. (Luyten *et al.*, 2012). Strategies such as these may regulate stress in the short term, however, in the face of chronic stress "deactivation" strategies will often fail and are associated with costs to interpersonal relationships, as well as immune system functioning (Luyten et al., 2012). Being aware of the use of attachment styles and the implications of same on the development and maintenance of FNSD are important for the psychotherapist to consider.

Furthermore, FNSD symptoms are often preceded by "escape events", which may indicate that FNSD is influenced by social context, with one such example being the threat or signal that a relationship may be coming to an end (Aybeck *et al.*, 2015). In terms of general psychopathology, Rycroft (1995) states that it is important for a psychotherapist to consider the primary and secondary gain when it comes to a psychopathological symptom. Primary gain is the psychological defense against internal psychological conflict, whereas secondary gain is considered the unconscious advantage that is gained from being ill, which could be situational avoidance, or financial gain (Rycroft, 1995). By way of an illness developing, this can incite

social support and nurturing as well as reducing aggression or hostility in a social context (Sojka *et al.,* 2018).

An integrated model of etiology

Research indicates that there are certain people who are more susceptible to the development of FNSDs (O'Connell, Nicholsen, Wessely and David, 2019), and this is due to predisposing, precipitating and perpetuating factors (Fobian and Elliot, 2018). Fobian and Elliot (2018) propose a model which explains FNSD as conditioned reflexes to stimuli, with psychological factors being only potentially influential, and not completely necessary in the development and maintenance of FNSD. Fobian and Elliot (2018) describe internal and external predisposing factors which include possible psychological influences and previous illness experiences, for example, childhood experiences of parental anxiety of illness or working in a healthcare setting. Factors that increase the risk of developing FNSD include the presence of psychological or physical trauma, prior presence of mental health conditions, exposure to stressful life events, personal exposure to illness or exposure to the illness of others, heightened awareness and self-monitoring, and structural brain abnormalities (Fobian and Elliot, 2018). Studies also suggest that precipitating factors typically involve chronic psychological stress, which disturbs ANS regulation (Tak & Rosmalen, 2010). Perpetuating or reinforcing factors include possible secondary gain which include exemptions from normal social responsibilities, increased attention from others and the relief that comes from the release from obligations such as employment or schooling (Fobian and Elliot, 2018). It should be noted that regardless of the cause of FNSD, once symptoms begin to form, they can be embedded over time due to neuroplastic changes in the brain and can be reinforced by avoidant behaviours and mood disorders (Espay *et al.,* 2018).

There are many etiological theories that a psychotherapist must be cognisant of when establishing a therapeutic relationship with a person who has been given a diagnosis of FNSD. These include the presence of nervous system dysregulation, altered interoception, cognitive distortions, alexithymia, possible presence of trauma, insecure attachment styles, as well any signs of secondary gain which may unconsciously maintain symptoms. As a starting point, knowledge of these frameworks is essential from a psychotherapeutic perspective, as this will help the therapist when it comes to identifying possible predisposing, precipitating, and perpetuating factors in symptom development, and ultimately, in devising a treatment plan.

Chapter 3

DOES A DIAGNOSIS OF FNSD IMPACT THE DEVELOPMENT OF A SUCCESSFUL PSYCHOTHERAPEUTIC ALLIANCE?

It is accepted that FNSD can be a challenging condition to treat, for both medical and mental health professionals alike (Mobini, 2015; Rommelfanger *et al.*, 2017; Verhaeghe, Vanheule and De Rick, 2007). Several studies have indicated that people with FNSD can be hostile and ambivalent to the idea of psychological treatment for their symptoms (Stone, 2016). Howlett, Grunewald, Khan and Reuber (2007) examined the barriers to engagement and participation of people with FNSD in psychotherapy. Of 77 people referred to a free psychotherapeutic service, 23.4% did not attend the initial appointment, and only 66.6% completed their treatment. It is thought that the reasons for the lack of engagement are due to an upheld belief among people with FNSD that there is an organic cause to their symptoms. The above study recommends paying attention to the manner of communication of the diagnosis from the doctor, as it can alleviate anxiety and or ambivalence surrounding the concept of psychotherapy. As retention in therapy is considered low, Howlett *et al.* (2007) suggest that it is vital for the therapist to be proactive in the detection of potential challenges in the therapeutic relationship, and these challenges should be approached in an open and non-defensive way (Safran, Muran, Samstag and Stevens (2001).

Clinician perspectives

O'Connell (2017) conducted a mixed-methods study with 122 health professionals that were working as part of a multidisciplinary team within a stroke unit, where people with FNSDs frequently present with acute neurological symptoms. The questionnaire showed that 77.9% of

respondents agreed or strongly agreed that people with FNSD are "difficult to manage". Within this study, 14 staff members were subsequently interviewed. While the majority of the professionals interviewed appeared to understand the central tenets of FNSD etiology, a small minority of professionals held the opinion that people with FNSDs were malingering, attention-seeking and that their symptoms were within their conscious control. This resonates with a study which conducted semi-structured interviews with five Irish psychotherapists in 2018, where there was a consensus amongst psychotherapists that there are varying skills amongst medical professionals in how the diagnosis of FNSD is delivered to a person with the condition. Frequently, this results in people not knowing why they are attending therapy, which is believed to cause resistance to the therapeutic process to arise from the start (Bustarviejo, 2018).

Patient perspectives

O'Connell (2017) also conducted interviews with 30 people who had been given a diagnosis of FNSD. Many participants spoke about feelings of uncertainty around why they had become unwell, and that they received a lack of concrete information or clear explanation about their condition. Most participants spoke about a feeling of not being taken seriously or not being believed by health care professionals. These sentiments are echoed in online supports forums for people with FNSDs (FNDhope.org, 2019). This highlights the need for the psychotherapist to be aware of potentially negative interactions with the healthcare system that the person with FNSD may have experienced, prior to coming to their first psychotherapy session.

The therapeutic relationship

The relationship between a person and their psychotherapist is paramount and the positive correlation between good therapeutic alliance and successful therapy outcomes are documented

across a variety of different psychotherapies (Horvath and Luborsky, 1993). To create a strong alliance, the therapist aims to create a safe space for the client to explore and express difficult emotions which the therapist contains. Casement (1985) describes this process as "analytic holding", where the therapist becomes attuned to the needs of the client, and aims to tolerate the overwhelming emotions of the client, while all the while remaining grounded in the process. Through this process, the therapist allows the client to see that their emotions can be tolerated by another person, making the emotions more acceptable to the client. This is what is expected of a "good enough therapist" as per Winnicott's "good enough mother" theory of attachment (Winnicott, 1960).

Transference, counter-transference and the therapeutic alliance

Transference refers to how a person's past experiences are said to influence current relationships and how one engages with certain situations (Clarkson, 2014). Counter-transference, on the contrary, is the emotional reaction of one individual in response to another (Rowan, 2016). Clarkson (2014) would state that awareness of transference and counter-transference in a relationship, and communication of the occurrence of transference, is a must in changing human behaviour. This is especially important when psychopathology is present in relationships, as it aids in breaking the cycle of maladaptive behaviours. It is vital for the therapist to be aware of their own emotional process when this occurs, especially when working with people with FNSD (Carson, *et al.*, 2016; Rowan, 2016). Clarkson (2014) states that when it comes to transference in the therapeutic relationship, that the person engaging in therapy may enter the relationship with expectations of a repeat of attitudes from former care-givers or professionals, which can be positive or negative. In a meta-analytic study completed by Hayes, Gelso, Goldberg and Kilvighan (2018), the awareness, acknowledgement and appropriate management of

countertransference in a psychotherapeutic relationship was shown to be statistically significant in terms of better therapy outcomes.

Threats to the successful creation of the therapeutic alliance

Awareness of the therapist's own emotional response to their client is essential. According to Burgess, Van Ryn, Dividio and Saha (2007), there is significant evidence that health care providers hold stereotypes of patients, which in turn influence the interpretation of behaviours and symptoms, which can influence their clinical decisions. Burgess *et al.* (2007) stress that for the majority, bias or stereotyping is an unconscious process and to this end, many health care providers are unaware of their biases. Burgess *et al.* (2007) stress that bias is a natural phenomenon in society, and health care providers should be encouraged to examine what they are bringing into their working relationships, to acknowledge these biases and to explore strategies to counteract them. Goldyne (2007) wrote a practical guide for psychiatrists in assisting the clinician to minimise the influence of unconscious bias. He states that bias can arise from past experiences, the opinions of others, the present situation of the clinician as well as professional and non-professional experiences (Goldyne, 2007). Feeling strong emotions in some cases is understandable, however if the clinician is not aware or does not check their personal bias this can be very damaging to the alliance. It can be difficult to maintain vigilance when it comes to being aware of bias but Goldyne (2007) would argue that the clinician should presume that objectivity is compromised, unless proven otherwise.

As mentioned above, health care professionals' opinions of people with FNSD can be negative, especially in the absence of an informed knowledge base of the disorder. Furthermore, Luyten *et al.* (2012) believe that many people with FNSD are at the hands of health and helper professionals who rigidly adhere to their current knowledge base of FNSD in order to understand

the person's condition. Burgess, *et al.* (2007) state that it is vital that health care providers take the cognitive strategy of "individuation", rather than "categorisation" where the health care provider focuses on the unique characteristics of the person, rather than what group or minority they belong to. Therefore, it is important for the psychotherapist to slowly gather information, while empathising with the individual, to help them to understand factors that may be involved in the exacerbation and maintenance of FNSD.

Rommelfanger *et al.* (2017) highlight the key challenges and issues in the diagnosis and treatment of people with FNSDs. Stigma (both public and stigma of the self) is strongly associated with FNSD, which can lead to negative evaluations and emotions felt by health care professionals, which worryingly leads to poorer healthcare outcomes (Rommelfanger *et al.*, 2017). Public stigma can manifest in the form of the clinician avoiding or withdrawing from working with this patient cohort, as people with FNSDs can be seen as requiring an inordinate amount of time and can cause personal discomfort to clinicians when they feel they lack the knowledge or expertise in helping these people (Rommelfanger *et al.*, 2017). Self-stigma, where people with FNSDs internalise prejudices and discrimination they have experienced, can result in a person trying to distance themselves from the label of FNSD (Rommelfanger *et al.*, 2017). Interestingly, Rommelfanger et al. (2017) note that professionals working with people with FNSDs can experience feelings of vulnerability, helplessness, shame and frustration. Thematic analysis of qualitative data gathered in semi-structured interviews conducted with 74 health care professionals shed light on how it is understandable for health care professionals to feel strong negative emotions in the face of medically unexplained seizures, with themes arising including patient complexity, acceptance of diagnosis, ambiguity around treatment options, lack of evidence base, and poor team working (McMillan *et al.*, 2014).

In addition to the stigma associated with FNSDs, secondary attachment strategies can cause people with FNSDs to display stoic or highly critical tendencies, or clinging behaviours depending on their type of attachment style (Luyten *et al.,* 2012). As a result, evidence would suggest that professional relationships with people with FNSDs can be difficult, in the face of avoidant, resistant or clinging behaviours, which can be misinterpreted for malingering. This can result in clinicians feeling anxious, helpless, angry or irritated by the person and many professionals can become entangled in transference-countertransference dynamics if they are not aware of the mechanisms at play (Luyten *et al.*, 2012).

Chapter 4

CONCLUSION

In a study which looked at referrals to neurology clinics across the United Kingdom in a 15-month period, of the 3781 people referred, 16% of those referred were deemed to present with a FNSD. As such, FNSDs were the second most common presentation to neurology clinics (Stone *et al.,* 2010). Despite the frequency of FNSDs, misconceptions into the complexities of the disorder are pervasive amongst health professionals. Many health professionals still believe that FNSDs are simply a physical manifestation of psychical trauma, with a minority believing that their symptoms are being feigned or are within the conscious control of the individual. This is evidenced in the common occurrence of poorly explained diagnoses (Espay *et al.,* 2018), leading people with FNSDs to feel misunderstood (O'Connell, 2017), which in turn can cause turbulent clinician-patient relationships (Luyten *et al.,* 2012).

In terms of etiological theories, no single theory appears to satisfactorily explain FNSDs and there appears to be a movement towards integrated etiological approaches (Espay *et al.,* 2018, Fobian and Elliot, 2018). Biologically, there is evidence to suggest that individuals with FNSDs can have dysregulation of their ANS, abnormal body focused attention, altered interoception, and increased functional connectivity between the amygdala and the supplementary motor context in response to emotional stimuli. Psychologically, there is evidence to suggest a correlation exists linking the development of FNSDs with traumatic experiences, however it is important to acknowledge that correlation does not indicate causation. There is also evidence which links classical and operant conditioning in the development of maladaptive illness beliefs and misinterpretation of physical symptoms. Socially, it is believed that secondary

gain from FNSDs may become entrenched as a result of early attachment issues and there is an established correlation linking FNSD development and interpersonal difficulties.

From a psychotherapeutic point of view, this dissertation highlights the importance of understanding the different models of FNSD development. The dangers of not being aware of up-to-date evidence can be seen in a recent paper by Kaplan (2014), where the author states that with the development of FNSDs, it is safe for the psychotherapist to assume that a childhood traumatic experience is revived by a more recent trauma. This assumption has the potential to be damaging to people with FNSDs who present for psychotherapy, as a psychotherapist may become preoccupied with uncovering a trauma which does not exist, instead of being attuned to the present needs of the client. Knowledge of different etiological models will ultimately aid the therapist in their assessment of a person, especially when it comes to identifying possible predisposing, precipitating, and perpetuating factors in symptom development. An individualised therapy programme can then be tailored to the person with a FNSD. Although it is outside of the scope of this dissertation, based on etiological models, it is reasonable to consider sensorimotor techniques, Cognitive Behavioral Therapy, and Interpersonal Therapy as potential psychotherapeutic treatment approaches for a person with a FNSD.

Due to the wide-ranging terminology which can potentially be used to describe medically unexplained neurological symptoms, it is acknowledged that some literature pertaining to etiological models and establishment of a therapeutic alliance may have been omitted from review. However, there is a distinct paucity of well-designed studies which specifically look at the presence of FNSD and the significance of the diagnosis on the establishment of a successful therapeutic alliance. This dissertation has explored literature in bias, transference and counter-transference, as well as clinician and patient perspectives for consideration. Transference and

counter-transference in the therapeutic relationship, in the presence of FNSD, is an area which requires further research.

When it comes to the establishment of a successful psychotherapeutic alliance, the psychotherapist must be aware of a person's prior experience of the healthcare system. Focus should be paid to the manner in which the diagnosis of a FNSD was delivered to the person, the person's understanding of how psychotherapy may help them and previous experiences of the healthcare system. By taking the time to listen to the person's experience, not only will it allow a rapport to be established, but it will also allow identification and exploration of any potential resistances that may arise in the therapeutic process.

To conclude, not only do behaviours, thoughts, emotions and relationships change with FNSD onset, structures within the brain change also. It is important to always remember that with treatment, these changes are reversible. The psychotherapist, being a specialist in behaviour and cognitive change, is a key team member of the multidisciplinary treatment of FNSDs. Understanding the lived experience of the person with a FNSD is vital in order to offer person-centered, respectful and empathetic care.

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