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PSYCHOSOCIAL FACTORS AND ASSOCIATED SYMPTOMS IN PATIENTS WITH FUNCTIONAL NEUROLOGICAL SYMPTOM DISORDER

FARAH RASHEED[1], ADEENA RASHEED[2], MUHAMMAD RIZWAN MUSHTAQ[3], KHIZRA IQBAL[4]

[1]Department of Psychiatry, Multan Medical and Dental College, Multan, Pakistan.
[2]Department of Applied Psychology, Bahauddin Zakariya University, Multan, Pakistan.
[3]Department Of Psychiatry, Al-Shifa Brain Hospital and Mental Health Institute, Muzaffargarh, Pakistan.
[4]Department of Psychiatry and Behavioural Sciences, Nishtar Medical University and Hospital, Multan, Pakistan.

CORRESPONDENCE: **KHIZRA IQBAL** E-mail: khizraiqbal018@gmail.com

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ABSTRACT

OBJECTIVE
To investigate the symptom type, sociodemographic factors and preceding events in patients with Functional Neurological Symptom Disorder (FNSD).

STUDY DESIGN
Cross-sectional study

PLACE AND DURATION OF STUDY
The study was conducted at Nishtar Medical University Hospital, Multan, Pakistan, from 1st January 2024 to 1st March 2024 (a three month period).

METHOD
Data were collected through a purposive sampling technique from 50 patients diagnosed with FNSD. The Conversion Disorder Questionnaire (Australian Paediatric Surveillance Unit) was used to assess symptom types, and a structured proforma gathered demographic information and psychosocial stressors.

RESULTS
Symptoms of FNSD occurred more frequently among females, unmarried individuals, those with lower education, low socioeconomic status, living in joint families, and belonging to rural areas. Most patients presented with acute symptoms.

CONCLUSION
Female gender, lower level of education, economic disadvantage, joint family structure, rural residence and single marital status appear to be the sociodemographic factors most commonly associated with FNSD in this study sample. Recognising these factors may support earlier detection and improved intervention.

KEYWORDS
Conversion Disorder; Family Characteristics; Functional Neurological Disorder; Life Change Events; Psychosocial Factors; Socioeconomic Factors.

INTRODUCTION
Functional Neurological Symptom Disorder (FNSD), historically termed Conversion Disorder, is characterised by neurological-like symptoms that lack compatibility with established medical or neurological diseases. The clinical picture is shaped by psychological, social, and cultural influences, particularly in communities where emotional expression is constrained by societal expectations. Freud originally proposed that unresolved psychological conflict may be manifested physically, forming the basis of early conceptual models of this disorder.[1]

Numerous psychosocial vulnerabilities, such as poverty, social disadvantage, and unstable caregiving conditions, can heighten susceptibility to FNSD.[2] The disorder is recognised in the DSM-5 as Functional Neurological Symptom Disorder,[3] and within the ICD classification under dissociative motor and sensory disturbances.[4] Symptoms can include abnormal movements, gait disturbances, tremors, sensory deficits, visual symptoms, pseudoseizures, and motor weakness.4

South Asian mental healthcare settings, including Pakistan, frequently encounter patients presenting with medically unexplained neurological symptoms, reflecting cultural norms surrounding the expression of emotional distress.[5,6] Studies indicate that FNSD is more common among females, with reported gender ratios ranging from 2:1 to 10:1 and is often observed in younger married females.[7] Accurate diagnosis requires careful assessment because functional symptoms may resemble neurological disease or, in rare cases, intentional fabrication of symptoms. Differentiating between these requires good clinical judgment and coordinated multidisciplinary evaluation.[8]

Family dynamics have a notable influence in South Asian cultures. In Pakistan's joint family systems, interpersonal tensions, collective decision-making, and emotional interdependence may increase vulnerability to somatic expressions of stress. Bowen's Family Systems Theory (FST) explains how family-based emotional pressures can influence symptom development.[9]

Meta-analytic evidence shows unpleasant life events often antecede the presentation of functional neurological symptom disorder (FNSD) more often than the other neuropsychiatric symptoms; but the aetiological role of these adverse life events is vague.10 Functional neurological symptom disorders are perceived to be more prevalent these days in Pakistani culture. Given these factors, the present study aimed to examine the sociodemographic and psychosocial correlates of FNSD, evaluate symptom profiles, and explore preceding stressors among patients presenting with this condition in a tertiary-care hospital on Pakistan.

METHOD

Procedure

The study was conducted after receiving formal approval from the Institutional Ethical Review Board of Nishtar Medical University, Multan, Pakistan (Ref. no. 3345). Patients with a confirmed clinical diagnosis of FNSD were approached and written informed consent was obtained. Participants then provided sociodemographic information and completed the assessment tools. All ethical considerations, which included confidentiality, voluntary participation, and the right to withdraw, were maintained.

Participants

A purposive non-probability sampling technique was used to recruit 50 patients diagnosed with FNSD at Nishtar Hospital, Multan. Inclusion required clear motor or sensory symptoms consistent with FNSD. Patients with substance dependence, neurological emergencies, or severe medical conditions were excluded to ensure reliability.

Instruments

The Conversion Disorder Questionnaire (Australian Paediatric Surveillance Unit) was used to record the type of symptoms from patients with Functional Neurological Symptom Disorder (FNSD). Life stressors of patients were inquired to obtain information on life stressors. Demographic variables (age, gender, marital status, socioeconomic background, educational level, residence, and family type) were recorded on a demographic sheet.

RESULTS

Table 1
Sociodemographic Characteristics of the Participants (N=50).

Demographics	Frequency (Percentage)	Demographics	Frequency (Percentage)
Gender		**Marital status**	
Male	14 (28.0%)	Married	18 (36.0%)
Female	36 (72.0%)	Unmarried	30 (60.0%)
Socioeconomic class		Divorced	2 (4.0%)
Lower	20 (40.0%)	**Education**	
Lower middle	18 (36.0%)	Illiterate	4 (8.0%)
Middle	12 (24.0%)	Primary to middle	27 (54.0%)
Residential area		Matric to intermediate	17 (34.0%)
Urban	12 (24.0%)	Graduation to masters	2 (4.0%)
Rural	38 (76.0%)	**Family System**	
Duration of illness		Joint	30 (60.0%)
Acute	40 (80.0%)	Nuclear	20 (40.0%)
Persistent	10 (20.0%)		

Table 1 presents the demographic characteristics of the participants. Out of 50 patients majority were females (72%), unmarried (60%), had a level of education from primary to middle school (54%). The lower socioeconomic class was represented by 40% and 76% belonged to rural areas and lived in joint families (60%).

Table 2
Frequency of Patients as per Type of Symptom.

Symptoms	Frequency (percentage)
Paralysis	22 (44.0%)
Anesthesia	18 (36.0%)
Abnormal movement	23 (46.0%)
Abnormal gait	15 (30.0%)
Hearing disturbances	16 (32.0%)
Visual disturbances	13 (26.0%)
Loss of speech	23 (46.0%)
Psychogenic cough	22 (44.0%)
Labelle indifference	7 (14.0%)
Pain	38 (76.0%)
Fatigue	31 (62.0%)
Dizziness	15 (30.0%)

Table 2 shows the symptom distribution. The most frequent complaints were pain (76%), fatigue (62%), abnormal movements (46%), loss of speech (46%), psychogenic cough (44%), and paralysis (44%). Sensory disturbances such as anaesthesia, visual changes, and hearing difficulties were also common.

Table 3
Frequency of Factors Preceding Symptoms.

Contributing Factors	Frequency (Percentage)
Parental separation	4 (8.0%)
Prolonged absence of parents	3 (6.0%)
Victim of bullying	8 (16.0%)
Victim of abuse	5 (10.0%)
Academic pressure	17 (34.0%)
Breakup	18 (36.0%)
Confusion regarding sex orientation	1 (2.0%)
Other events	30 (60.0%)

Table 3 lists preceding events. The most common stressors were relationship breakup (36%) and academic pressure (34%). A substantial subset (60%) reported other unlisted stressful events, indicating the broad psychosocial variability of FNSD.

DISCUSSION

The present study identified a higher number of female patients with FNSD, which is consistent with previous literature stating that women are disproportionately diagnosed with functional and somatic symptom patterns.[7,11] This gender imbalance may reflect a complex interplay of sociocultural expectations, restricted emotional expression, and healthcare-seeking patterns among women in South Asian societies. Prior literature also suggests that clinicians may unintentionally demonstrate provider bias, which may result in a greater attribution of somatic complaints to functional causes in females.[11] This highlights the need for more refined diagnostic approaches that consider both cultural context and gender-based influences on clinical judgment.

The sociodemographic trends illustrated by the current study, comprise lower education level, fewer socioeconomic resources, and rural residence, which align strongly with evidence from South Asian and international studies that show individuals with fewer socioeconomic opportunities have higher vulnerability to FNSD.[2,7] Poverty and long-term material insecurity may limit coping resources, escalate family conflict, intensify psychosocial stress, and restrict access to mental health services, collectively increasing the likelihood of functional symptom manifestation.[2] These sociodemographic disadvantages serve as chronic stressors, contributing to persistent emotional dysregulation and maladaptive somatisation patterns.

The large number of patients from rural settings and joint family systems in this study reflects sociocultural structures where interpersonal dynamics and collective decision-making strongly influence emotional expression. Research from Pakistan demonstrates that unresolved family conflict, rigid hierarchies, and diffuse emotional boundaries commonly observed in extended households may be potent contributors to psychological distress and functional symptom development.[5] Bowen's Family Systems Theory provides a useful framework, suggesting that chronic family tension and low differentiation can predispose individuals to somatic symptoms of internalised anxiety.[9] This perspective is particularly relevant in collectivist societies where emotional expression is often discouraged, and distress may instead emerge as bodily manifestations.

The symptom identified in the study, especially pain, fatigue, abnormal movements, and mixed motor-sensory deficits are consistent with global FNSD cohorts. Large-scale international data show that multisystem symptom clusters are common and often coexist with comorbid psychological features such as anxiety, depression, and post-traumatic stress.[12] This variation highlights the need for individualised biopsychosocial assessment and modified intervention strategies.

The finding that recent life events, particularly relationship breakup and academic stress were frequent triggers is in line with meta-analytic data demonstrating that FNSD frequently follows acute or cumulative emotional strain.[10] Morsy et al emphasised that adverse life events significantly increase the chance of FNSD onset, although the causal pathway is complex and likely mediated by maladaptive cognitive and emotional processes.[10] In the Pakistani context, where open discussion regarding psychological distress is often discouraged, these events may overwhelm coping mechanisms, leading to a functional neurological presentation.[6]

It is also important to emphasise the diagnostic challenges associated with differentiating FNSD from intentional symptom production. Kanaan's work demonstrates the fine clinical line between functional symptoms and feigned presentations, underlining the need for careful evaluation to avoid misdiagnosis and stigma.[8] This stresses upon the need for multi-disciplinary assessment integrating neurology, psychiatry, and psychology to ensure accurate diagnosis and timely intervention.

Overall, the findings of the present study reveal that FNSD in Pakistan is shaped by an assortment of factors like gendered social roles, socioeconomic adversity, cultural norms surrounding distress, family system dynamics, and emotionally significant life events. These elements support a biopsychosocial framework in understanding FNSD and highlight the need for culturally competent clinical approaches.

CONCLUSION

This study suggests that female gender, lower education level, economic disadvantage, rural living, joint family residence, and unmarried status are prominent correlates of Functional Neurological Symptom Disorder. A combination of psychosocial vulnerability, family stress, and life events likely contributes to symptom generation. Awareness of these factors can facilitate earlier detection, culturally appropriate assessment and targeted interventions leading to effective management of FNSD in clinical settings.

Limitations and Recommendations

The study has several limitations which include the single-centre design and relatively small sample size that may limit generalisability. The retrospective recall model introduces the possibility of recall bias, especially regarding symptom chronology and precipitating events. Limited access to mental health resources in rural areas may also influence who presents for care.

Future studies should use multi-centre sampling, larger sample sizes, and prospective designs, and also examine cultural beliefs that influence symptom interpretation and help-seeking behaviour. Training primary care and neurology staff in FNSD recognition could reduce unnecessary investigations and improve referral pathways.

CONFLICT OF INTEREST

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DISCLOSURE

None

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AUTHOR(S) CONTRIBUTION / UNDERTAKING FORM

Sr. #	Author(s) Name	Author(s) Affiliation	Contribution
1.	Farah Rasheed	Department of Psychiatry, Multan Medical and Dental College Multan, Pakistan.	Method, Data collection, Data entry, Data analysis
2.	Adeena Rasheed	Department of Applied Psychology, Bahauddin Zakariya University, Multan, Pakistan.	Manuscript preparation, review of study, results, and discussion.
3.	Muhammad Rizwan Mushtaq	Department of Psychiatry, **Al-Shifa Brain Hospital and Mental Health Institute,** Muzaffargarh, Pakistan.	Methodology, literature review and critical analysis
4.	Khizra Iqbal	Department of Psychiatry and Behavioural Sciences, Nishtar Medical University and Hospital, Multan, Pakistan.	Data collection, data analysis and manuscript drafting.