

# Psychogenic non-epileptic seizure-an entity on the borderzones of neurology, psychiatry and clinical psychology: a case report with review of literature

## Abstract

Psychogenic Non-Epileptic Seizures (PNES) are a commonly encountered neurological entity, often misdiagnosed due to their resemblance to epileptic seizures. PNES episodes mimic epileptic seizures but stem from psychological factors, making accurate diagnosis essential for effective treatment. They are now included under the umbrella of Functional Neurological Disorders (FND). We report a case of PNES and review the medical literature with respect to the incidence and prevalence of this entity in the Indian population. Our case report highlights the complexities of PNES diagnosis- a disorder on the “border zone” between neurology, psychiatry, and psychology. A multidisciplinary approach involving neurologists, psychiatrists, and psychologists is crucial for effective PNES management in India, overcoming the stigma associated with this condition and improving patient outcomes.

**Keywords:** pseudoseizures, non-epileptic events, functional neurological disorders, neurology, psychiatry, clinical psychology

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## Case report

A 35-year-old married homemaker, presented to the neurology out-patient clinic with symptoms suggestive of seizures. Various abnormal movements were reported by the patient and her husband. The patient was admitted for video electroencephalography (video-EEG) for characterization of reported events. Multiple clinical events were recorded of varying semiology including side-to-side movements of the head, side-to-side tongue rolling movements, tongue thrusting, grunting noises and asymmetrical out-of phase thrashing movements of the arms and legs with retained consciousness. There was no surface EEG correlate to any of these movements and a diagnosis of PNES was made. Anti-convulsants were stopped and patient was referred to a psychologist for counseling.

## Discussion

Psychogenic nonepileptic Seizures (PNES), otherwise known as dissociative seizures or non-epileptic attack disorder (NEAD), are episodes that resemble epileptic seizures but are not associated with abnormal electrical activity in the brain, as seen on electroencephalography (EEG).<sup>1,2</sup> These seizures are just as real and debilitating as epileptic seizures, but they have a different underlying cause. PNES are often mistaken for epileptic seizures, leading to misdiagnosis and inappropriate treatment.<sup>1,2</sup>

In India, epilepsy is a significant health concern, with an estimated prevalence of around 1 to 2 percent of the population.<sup>3,4</sup> Misconceptions and stigmas surrounding epilepsy often hinder proper diagnosis, treatment, and support for those affected. Similarly likely a large number of people in India suffer from PNES, but many cases go unreported due to the stigma attached to the condition.<sup>3,5</sup> Patients with PNES often face higher levels of stigma compared to those with epilepsy, and this negatively impacts their quality of life.<sup>3,5</sup>

The cause of PNES cases can be attributed to either psychological conflicts or underlying psychiatric disorders, such as anxiety, post-traumatic stress disorder, history of physical, emotional, or sexual

abuse, family stressors or conflict, and psychosis.<sup>3,5</sup> When these stressors persist in an individual over a period of time with no resolution, PNES may develop. Hence it is important that these provoking factors and stressors be recognized in a timely fashion and be addressed by skilled specialists. The diverse range of potential causes contributes to the wide spectrum of psychopathology seen in PNES patients.<sup>3,5</sup>

Distinguishing PNES from epileptic seizures is crucial, as the treatment approaches are significantly different.<sup>1,2</sup> Misdiagnosis can lead to inappropriate treatment, further exacerbating the patient's condition and delaying proper management.<sup>1,2</sup> Addressing the misconceptions and improving access to proper diagnosis and treatment are essential to provide better care and support for individuals affected by PNES in India.

The role of the neurologist is crucial in the initial diagnosis of PNES. Electroencephalography (EEG) plays a crucial role in the identification of the reported events as PNES.<sup>6,7</sup> Usually admission to the epilepsy monitoring unit (EMU) for video-EEG is advised with the goal of capturing, characterizing and classifying the events.<sup>6,7</sup>

Once PNES is confirmed, the patient is often referred to a psychiatrist. The psychiatrist's focus is on uncovering the underlying psychological or psychiatric factors that may be contributing to the seizure-like episodes.<sup>6,7</sup> This could include conditions like anxiety, post-traumatic stress disorder, depression, or other mental health disorders. The psychiatrist will assess the cognitive and behavioral symptoms and may prescribe appropriate medications to manage the psychiatric component of PNES.<sup>6,7</sup>

The clinical psychologist plays a crucial role in the treatment of PNES. Psychotherapies such as cognitive-behavioral therapy (CBT), help the patient address the psychological factors driving the seizure-like episodes.<sup>6,7</sup> Psychotherapy aims to help the patient develop coping strategies, manage stress, and resolve any underlying psychological conflicts that may be triggering the PNES.<sup>6,7</sup> It is important to recognize that many PNES patients may self-discontinue

psychotherapy and psychotherapeutic drug interventions and relapse. Hence the importance of maintaining and ensuring continuity of care.

This multidisciplinary and collaborative effort between the neurologist, psychiatrist, and psychologist is essential for the accurate diagnosis and comprehensive treatment of PNES.<sup>6,7</sup> The neurologist's expertise in ruling out epileptic seizures, the psychiatrist's understanding of the psychiatric comorbidities, and the psychologist's therapeutic interventions work together to provide a comprehensive approach to managing this complex condition.<sup>6,7</sup>

This interdisciplinary approach is particularly important in the Indian context, where the stigma associated with PNES can often lead to underreporting and delayed diagnosis.<sup>3,5</sup> By working together, the healthcare team can help these patients overcome the psychological barriers, receive appropriate treatment, and improve their quality of life.<sup>3,5</sup>

Our case report delves into the complexities surrounding Psychogenic Non-Epileptic Seizures (PNES), a globally prevalent condition often misdiagnosed as epilepsy. While epilepsy arises from abnormal brain activity, PNES has psychological roots. This distinction is crucial, as epilepsy can stem from brain tumors, strokes, or injuries, requiring vastly different treatment approaches compared to PNES, which is often triggered by stress, anxiety, or past trauma (Amar Singh et al., 2018; Trobliger et al., 2024). The case study exemplifies the challenges of PNES diagnosis, particularly in regions with social stigma surrounding mental health. The patient's misdiagnosis by multiple physicians highlights a concerning trend, the potential underdiagnosis of PNES in India.<sup>3,5</sup> This underreporting is likely also fueled by a societal taboo against acknowledging psychological issues and seeking therapy. We hypothesize that the frequency of PNES in India is likely higher than that reported. However, due to the aforementioned social stigma, many cases likely go unreported or misdiagnosed. Individuals experiencing PNES episodes hesitate to seek help due to fear of judgment or a lack of awareness about the condition's psychological origins.<sup>3,5</sup>

## Conclusion

PNES lie at the intersection of neurology, psychiatry, and psychology. The patient's experience underscores the “border zone” phenomenon, where traditional medical structures may not adequately address the complexity of PNES. With no single department taking full ownership, patients can fall through the cracks.

The most plausible solution lies in a multidisciplinary approach. Neurologists, psychiatrists, and psychologists working together can effectively diagnose and manage PNES. Neurologists ensure proper EEG screening to rule out epilepsy. Psychiatrists evaluate potential mental health triggers. Psychologists can provide therapy to address underlying issues and develop coping mechanisms. This coordinated effort ensures patients receive the holistic care they need.

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## Conflicts of interest

The author declares that there are no conflicts of interest.

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