

Differences in diagnosis, treatment of nonepileptic seizures in US, Chile

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Epileptic and psychogenic nonepileptic seizures (PNES) may look similar, but actually have different causes and treatments. Up to 20 percent of patients diagnosed with epilepsy actually have PNES, which are not treated by antiepileptic drugs (AEDs). According to a new study by Rhode Island Hospital researcher W. Curt LaFrance Jr., M.D., M.P.H., director of neuropsychiatry and behavioral neurology, increasing access to video electroencephalography (video-EEG) may aid in distinguishing between epilepsy and PNES. The study is published online in advance of print in the journal *Epilepsy & Behavior*.

This is the first study to compare how clinicians diagnose and treat PNES in a North American country and a South American country, and underscores the importance of access to video-EEG to conclusively make the [diagnosis](#) of PNES. It compared diagnosis and treatment practices among clinicians in the U.S. and Chile who treat [epilepsy](#) and PNES to assess standard medical care for PNES.

In the U.S., 89 percent of clinician respondents reported using inpatient video-EEG to diagnosis PNES, which is the gold standard for diagnosis. However, this diagnostic tool is not always available in other parts of the world. Video-EEG has been used in Chile for more than two decades, but is not easily accessible in many parts of the country, and 25 percent of respondents in Chile used inpatient video-EEG. Video-EEG is more readily available in the U.S., with 95 percent of respondents having access, compared to 40 percent of the respondents from Chile having access.

"Video-EEG monitoring or ambulatory EEG with video can capture the brainwaves along with a video of the patient's seizure, which, when reviewed together greatly helps make the proper diagnosis," LaFrance said. "Relying on just the patient history or seizure description may lead to an incorrect diagnosis, and subsequently, inappropriate treatment."

Describing the disorders, LaFrance said, "Epilepsy is caused by abnormal brain cell firing, and psychogenic nonepileptic seizures are caused by underlying psychological conflicts or stressors. Effective treatments for PNES are being developed, and data suggests that cognitive behavioral therapy can reduce seizures and improve other symptoms in [patients](#) with PNES – but only if it's properly diagnosed. Without proper diagnosis, patients with PNES may receive treatment with AEDs which could worsen PNES, and possibly even harmful aggressive treatment in emergency situations."

Respondent clinicians in Chile often attributed PNES to anxiety, whereas most U.S. respondent clinicians in the study attributed PNES to stressors and trauma or abuse. In fact, respondents in Chile attributed PNES to trauma just 5 percent of the time, as compared to 44 percent of the time in U.S. respondents. "From our treatment studies, addressing the trauma history and other symptoms may help improve the lives of our patients with PNES," LaFrance commented.

"Research funding that links investigators in different countries may help improve our understanding of patients with epilepsy and PNES, cross-culturally," LaFrance noted. "Proper treatment for PNES begins with accurate diagnosis and is followed by engaging in therapy for PNES in order to gain control of the seizures. Video-[EEG](#) is critical to that first step of making the diagnosis in patients with seizures."

Provided by Lifespan

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