

**TITLE:** Pediatric Non-Epileptic Seizures: Risk Factors

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**Objective:**

Nonepileptic seizures (NES) involve alterations in behavior, motor activity, consciousness and sensation that resemble epileptic seizures but are not associated with epileptiform activity as measured with electroencephalography. To date, retrospective studies have examined risk factors associated with the development of NES and have found psychological, social, cognitive and familial variables. This multisite study examines the psychological, social and cognitive risk factors in pediatric patients diagnosed with NES as compared to their siblings. It was hypothesized that children who develop NES experience greater incidents of psychopathology, undiagnosed learning challenges and tend to report more somatic symptoms, daily hassles and sensitivity to anxiety than their siblings.

**Method:**

Twenty-two children with NES (8 years – 18 years) and twenty-two sibling controls underwent structured psychiatric interviews and brief cognitive, linguistic, and achievement evaluations.

**Results:**

DSM-IV psychiatric diagnoses were prevalent in more NES subjects (95.5%) than siblings (72.7%) ( $p=0.04$ ). Significantly more children with NES than siblings (95.5% vs. 40.9%,  $p=0.0005$ ) had multiple diagnoses and a higher mean number of diagnosis (4.1 vs. 1.5,  $p<0.0001$ ). A high incidence of Learning Disorder NOS was found in 59.1% NES and in 45.5% siblings. Parents were unaware, or did not report learning difficulties, in all except one NES and one sibling subject. Standardized cognitive testing was in the average range for the majority of the NES group and siblings. NES subjects had significantly more psychiatric diagnoses ( $X_2(1)=4.2$ ,  $p=.04$ ) than their siblings. However, no single diagnosis was associated with the LD diagnosis in the NES group. While in the sibling group, those with LD, 44.4% had a disruptive behavior diagnosis compared to 7.7% of sibs without LD ( $X_2(1)=4.1$ ,  $p=.04$ ). Youth with NES reported increased anxiety sensitivity ( $p=0.008$ ) and more somatic symptoms ( $p=0.0004$ ) than sibling subjects.

**Conclusions:**

Compared to their siblings, children with NES experience higher rates of psychiatric disorder. A high incidence of undiagnosed LD is present in NES children and their siblings. The lack of parent recognition of these difficulties and normal scores on standardized tests underscores the difficulty diagnosing subtle learning challenges in NES children. In addition, children with NES illustrated more sensitivity to anxiety provoking situations and illustrated more somatic complaints as compared to their siblings.