

**Conclusions:** Consistent with findings in bilingual healthy youth and ESL adults with epilepsy, naming in ESL youth with epilepsy was weaker than in monolingual children. The groups did not differ on other aspects of language. Thus, unlike other expressive verbal functions, naming is adversely affected in the second language of bilingual people with epilepsy across the age span. These results suggest that poor naming in ESL patients cannot be used to infer a naming deficit, and/or left (dominant) temporal lobe dysfunction.

**Categories:** Epilepsy/Seizures

**Keyword 1:** bilingualism/multilingualism

**Keyword 2:** pediatric neuropsychology

**Keyword 3:** epilepsy / seizure disorders

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### 37 Cognitive Disengagement Syndrome (CDS; Sluggish Cognitive Tempo) in Pediatric Epilepsy

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**Objective:** Cognitive disengagement syndrome (CDS; previously known as “sluggish cognitive tempo” or SCT) refers to a set of behavioral symptoms characterized by slowed thinking/behavior, daydreaming, and mental fogging or confusion. It has been described as related to, yet separate from, symptoms associated with Attention-deficit Hyperactivity Disorder (ADHD) inattention. There is a paucity of research on CDS within pediatric epilepsy populations despite substantial risk factors inherent to the disorder and a large proportion of patients with comorbid ADHD. This study therefore describes CDS as reported by parents for a large sample of children with epilepsy. Relationship between epilepsy variables (e.g., number of antiepileptic drugs [AEDs], seizure frequency, seizure type) and CDS symptoms was explored. Additionally, considering the negative association between CDS and academic performance in other populations, the relationship between parent-

rated CDS and academic risk factors was examined.

**Participants and Methods:** Participants included 151 children with epilepsy (mean age = 11y, range 6-18y; 55% male; IQ>70), referred for outpatient neuropsychological assessment. As part of routine clinical care, parents completed the Penny Sluggish Cognitive Tempo Scale (SCT) and the Colorado Learning Difficulties Questionnaire (CLDQ). Scores and basic demographic information were extracted from an IRB approved clinical database; the IRB granted approval for retrospective chart review to extract additional medical variables. Parent report of CDS included total CDS score and three subdomains: Sleepy/Sluggish, Low Initiation, and Daydreamy. Higher scores represent greater parent-reported difficulties. Independent samples t-tests compared the participants' means on total CDS and each subdomain to the normative sample. Analysis of variance was conducted to determine differential impact of seizure type (Generalized, Focal, or Multifocal) on total CDS and each subdomain. Correlations between other medical variables, scores on the CLDQ, and parent ratings on the SCT were examined.

**Results:** Parents of children with epilepsy rated overall CDS total and subdomain scores as significantly higher compared to the normative means with highest elevation in symptoms of Low Initiation ( $p = <.001$ ). Total CDS was associated with increased parent-reported academic difficulties; however, of the three subdomains, only Low Initiation was significantly associated with concerns for academic functioning. Number of AEDs was associated with increased symptoms on the Sleepy/Sluggish subdomain only. Seizure frequency was associated with total CDS and Sleepy/Sluggish symptoms, though this finding is likely mediated by increased number of AEDs for those with more frequent seizures. Seizure type was not associated with significant differences in Total CDS or CDS subdomains.

**Conclusions:** Children with epilepsy are at increased risk for experiencing slowed thinking and cognitive disengagement. Low initiation is particularly elevated in pediatric epilepsy populations, which may lead to increased academic difficulties. Potential interventions targeting low initiation may therefore have benefit in the academic setting for children with epilepsy, regardless of epilepsy type.

**Categories:** Epilepsy/Seizures

**Keyword 1:** pediatric neuropsychology

**Keyword 2:** academic skills

**Keyword 3:** everyday functioning

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### 38 Fine Motor Skills in Pediatric Frontal Lobe Epilepsy are Associated with Executive Dysfunction and ADHD Symptomatology

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**Objective:** Pediatric patients with frontal lobe epilepsy (FLE) have higher rates of attention deficit hyperactivity disorder (ADHD), as well as executive functioning (EF) and fine motor (FM) challenges. Relations between these constructs

have been established in youth with ADHD and are supported by FM and EF skill involvement in frontal-subcortical systems. Still, they are not well understood in pediatric FLE. We hypothesized that poorer FM performance would be related to greater executive dysfunction and ADHD symptomatology in this group.

**Participants and Methods:** 47 children and adolescents with FLE (AgeM=12.47, SD=5.18; IQM=84.07; SD=17.56; Age of Seizure OnsetM=6.85, SD=4.64; right-handed: n=34; left-handed: n=10; Unclear: n=3) were enrolled in the Pediatric Epilepsy Research Consortium dataset as part of their phase I epilepsy surgical evaluation. Participants were selected if they had unifocal FLE and completed the Lafayette Grooved Pegboard (GP). Seizure lateralization (left-sided: n=19; right-sided: n=26; bilateral: n=2) and localization were established via data (e.g., EEG, MRI) presented at a multidisciplinary team case conference. Patients completed neuropsychological measures of FM, attention, and EF. Parents also completed questionnaires inquiring about their child's everyday EF and ADHD symptomatology. Correlational analyses were conducted to examine FM, EF, and ADHD relations.

**Results:** Dominant hand (DH) manual dexterity (GP) was related to parent-reported EF (Behavior Rating Inventory of Executive Function, Second Edition [BRIEF-2]–Global Executive Composite [GEC]:  $r(15) = -.70, p < .01, d = 1.96$ ). While not statistically significant, medium to large effect sizes were found for GP DH and parent-reported inattention (Behavior Assessment System for Children, Third Edition [BASC-3]–Attention Problems:  $r(12) = -.39, p = .17, d = .85$ ) and hyperactivity/impulsivity (BASC-3–Hyperactivity:  $r(11) = -.44, p = .13, d = .98$ ), as well as performance-based attention (Conners Continuous Performance Test, Third Edition – Omission Errors:  $r(12) = -.35, p = .22, d = .41$ ), working memory (Wechsler Intelligence Scale for Children – Fifth Edition [WISC-V]–Digit Span [DS]:  $r(19) = .38, p = .09, d = .82$ ) and cognitive flexibility (Delis-Kaplan Executive Function System (D-KEFS) Verbal Fluency Category Switching:  $r(13) = .46, p = .08, d = 1.04$ ); this suggests that these relations may exist but that our study was underpowered to detect them. Non-dominant hand (NDH) manual dexterity was related to performance-based working memory (WISC-V–DS:  $r(19) = .50, p < .01, d = 1.12$ ) and cognitive flexibility (D-KEFS–Trails Making Test Number-Letter Switching:  $r(17) = .64, p < .01, d = 1.67$ ). Again, while underpowered, medium to