

Writing and Hand Posture in Developmental Disorders of Attention and Right Hemispheric Dysfunction

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Hand posture in holding a writing instrument typically evolves with development. A spectrum of writing hand postures occur in the general population.¹ Whether anomalous hand posture itself correlates with motor speed, specific disorders of academic achievement or of attention is unclear. This pilot report is from a large longitudinal study of school-age children, adolescents and adults referred for behavioral neurologic assessment.²

Retrospective analysis included 25 control children, 18 male mean age 12-6/12 years; 29 ADHD children, 25 male of similar age; 21 right hemisindrome dysfunction children, 13 male of similar age. Compared were writing wrist posture: inverted, partial inverted or noninverted and writing hand posture: normal, tight, grasp and brush stroke. All subjects were photographed while writing.

Results for wrist posture: pediatric control – 12% partial inverted, 88% noninverted vs. 48% and 52% in ADHD and 43% and 52% (5% inverted) in right hemisindrome; $p = <.05$ control vs. each of the above. Hand posture (normal, tight, grasp, brush) pediatric control – 80%, 12%, 8%, and 0 vs. 24%, 28%, 10% and 38% in ADHD ($p = 0.005$ vs. control), 24%, 24%, 38% and 14% in right hemisindrome ($p = 0.005$ vs. control). There is no significant difference between ADHD or right hemisindrome for either wrist or hand posture. Anomalous hand and wrist posture is more prevalent in children with disorders of attention or right hemisphere function and may persist into adulthood.² The correlates of this observation and its etiology are under investigation.

References:

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