

## Study finds children with ADHD also at risk for writing difficulties

August 26 2011, by Bob Yirka

(Medical Xpress) -- Researchers from the Mayo Clinic have just completed a study to find out if children with Attention Deficit Hyperactivity Disorder (ADHD) also have problems with writing. It has long been known that children with the disorder have problems with reading, but until now, little research has been done to find out if the same is true for writing. The team has published their results in *Pediatrics*.

The American Centers for Disease Control's (CDC) latest estimates say that approximately 10% of American children between the ages of four and seventeen have been diagnosed as having <u>ADHD</u> (though some suggest that ADHD is widely over-diagnosed in the United States) and notes that each time a census is taken the number rises. It's currently not known if more children actually have the disorder or if it's just being diagnosed more than in the past.

Children with ADHD quite often have problems keeping focused on any one thing for very long and often resort to behavior that lands them in trouble due to their inability to remain still for the time it takes to teach them something. The cause of ADHD is unknown.

To find out how the disorder impacts children's ability to write, the team performed an analysis of all of the people born in Rochester Minnesota (home of the Mayo Clinic) between the years 1976 and 1982, who were still living in the area. To find out which of those people suffered from ADHD, the team scoured school, tutoring and medical records and then



compared the data with how children in the area did on reading, writing and intelligence tests during their high school years.

The team found that 379 children fit the criteria established for a diagnosis of ADHD and of those, 57% of girls had writing problems compared to just 10% of those girls who did not have ADHD. For boys, it was even worse; nearly two thirds of them had some form of writing problems compared with approximately 17% of boys that did not have ADHD.

One aspect of note in the study is that it appears that writing ability, grammar, usage etc. was tested, not the ability to learn to write, which is a whole different matter. Thus, it appears that it's more probable that the symptoms of the disorder prevent the <u>children</u> from learning to write rather than a lack of ability.

**More information:** Written-Language Disorder Among Children With and Without ADHD in a Population-Based Birth Cohort, *Pediatrics*, Published online August 22, 2011. doi: 10.1542/peds.2010-2581

## **ABSTRACT**

Objective: We determined the incidence of written-language disorder (WLD) among children with and without attention-deficit/hyperactivity disorder (ADHD) in a population-based birth cohort.

Methods: Subjects included a birth cohort of all children born in 1976 - 1982 who remained in Rochester, Minnesota, after 5 years of age (N = 5718). Information from medical, school, and private tutorial records was abstracted. Cumulative incidences of WLD with or without reading disability (RD), identified with any of 3 formulas, among children with and without ADHD and hazard ratios (HRs) were calculated.

Results: For both genders, the cumulative incidence of WLD by 19 years of age was significantly higher for children with ADHD than for children without ADHD (boys: 64.5% vs 16.5%; girls: 57.0% vs 9.4%).



The magnitude of association between ADHD and WLD with RD was significantly higher for girls than for boys (adjusted HR: girls: 9.8; boys: 4.2; P Conclusions: ADHD is strongly associated with an increased risk of WLD (with or without RD) for both boys and girls. Girls with ADHD are at higher risk of having WLD with RD compared with boys with ADHD, whereas boys and girls are at the same risk of having WLD without RD.

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