Associations Between Adverse Childhood Experiences and ADHD: Analysis of the 2011 National Survey of Children's Health

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BACKGROUND: Children exposed to adverse childhood experiences (ACEs) often exhibit many of the behaviors that occur in ADHD. Clinicians risk focusing on ADHD as the primary diagnosis and overlooking the possible presence of a trauma history, which may alter treatment course. Little is known about the prevalence of ACEs among children with ADHD and associations between ACEs and ADHD severity and medication use.

OBJECTIVE: To describe the prevalence of ACEs in a national sample of children with and without ADHD, and to examine associations between ACEs and ADHD diagnosis, severity, and medication use.

DESIGN/METHODS: Using cross-sectional data from the 2011 National Survey of Children's Health, we identified children aged 2-17 years whose parents responded to queries about ADHD diagnosis, severity, and medication use, and nine ACEs (poverty, divorce, death of a parent/guardian, domestic violence, neighborhood violence, substance abuse, incarceration, familial mental illness, and discrimination). Multivariable logistic regression was used to estimate associations between the number of ACEs and the prevalence and severity of ADHD and ADHD medication use, adjusting for child sociodemographic and mental health factors.

RESULTS: In our sample of 85,637 children, 6,758 (7.9%) had a current ADHD diagnosis. 42.6% of children with a current ADHD diagnosis reported exposure to 2 or more ACEs compared to 19.6% of children without ADHD. The odds of ADHD medication use increased significantly by number of reported ACEs, with children with 2 or more ACEs more likely to use ADHD medications (aOR 2.7, 95% CI: 2.4-3.1) compared to those with no ACEs (reference) or 1 ACE (aOR 1.7, 95% CI: 1.5-1.9). Children with 2 or more ACEs were more likely to have a parent rate their ADHD as moderate to severe (aOR 2.6, 95% CI: 2.4-2.8) compared to children with no ACEs (reference) or 1 ACE (aOR 1.7, 95% CI: 1.6-1.8).

CONCLUSIONS: Children with ADHD have a higher prevalence of adverse childhood experiences compared to those without ADHD, and there is a graded relationship between number of adverse childhood experiences, current ADHD medication use, and ADHD severity. An enhanced understanding of the prevalence and types of ACEs among children diagnosed with ADHD may inform efforts to develop trauma-informed care delivery systems and improve ADHD screening, diagnostic accuracy, and management.

Brown: "We need to think more carefully about screening for trauma and designing a more trauma-informed treatment plan."
The American Academy of Pediatrics is currently developing new guidance on ADHD that will include a section on assessing trauma in patients, though it won’t be completed until 2016.