Patterns of Comorbidity Among Girls With ADHD: A Meta-analysis

Irene Tung, James J. Li, Jocelyn I. Meza, Kristen L. Jezior, Jessica S.V. Kianmahd, Patrick G. Hentschel, Paul M. O’Neil, Steve S. Lee

Pediatrics Sep 2016, e20160430
DOI: 10.1542/peds.2016-0430

Abstract

CONTEXT:
Although children with attention-deficit/hyperactivity disorder (ADHD) are at elevated risk for comorbid psychopathology, the clinical correlates of ADHD in girls are far less understood relative to boys, despite ADHD being one of the most common childhood disorders in girls.

OBJECTIVE:
To meta-analytically summarize rates of comorbid internalizing (anxiety, depression) and externalizing (oppositional defiant disorder [ODD], conduct disorder [CD]) psychopathology among girls with and without ADHD.

DATA SOURCES:
Literature searches (PubMed, Google Scholar) identified published studies examining comorbid psychopathology in girls with and without ADHD.

STUDY SELECTION:
Eighteen studies (1997 participants) met inclusion criteria and had sufficient data for the meta-analysis.

DATA EXTRACTION:
Odds ratios for each comorbid disorder were calculated from available data. Demographic (eg, age, race/ethnicity) and study characteristics (eg, referral source, diagnostic method) were also coded.

RESULTS:
Compared with girls without ADHD, girls with ADHD were significantly more likely to meet Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition criteria for each comorbid disorder assessed. Relative odds were higher for externalizing (ODD: 5.6×; CD: 9.4×) relative to internalizing disorders (anxiety: 3.2×; depression: 4.2×). Meta-regression revealed larger effect sizes of ADHD on anxiety for studies using multiple diagnostic methods, featuring younger children, and including clinic-referred (versus community-referred) girls; the effect of ADHD on ODD varied based on diagnostic informant.

LIMITATIONS:
Findings were derived from cross-sectional studies, precluding causal inferences.

CONCLUSIONS:
Girls with ADHD frequently exhibit comorbid externalizing and internalizing disorders. We discuss future research priorities and consider intervention implications for ADHD and comorbid psychopathology in girls.