Further Evidence of Morbidity and Dysfunction Associated With Subsyndromal ADHD in Clinically Referred Children

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Abstract

BACKGROUND:
While the diagnostic criteria for attention-deficit/hyperactivity disorder (ADHD) have evolved over the years, some children with impairing ADHD symptoms fail to meet the full diagnostic threshold for the disorder. The main aim of this study was to evaluate the morbidity and dysfunction of subsyndromal ADHD in the clinical setting.

METHODS:
Subthreshold and full ADHD subjects were derived from consecutive referrals (n = 2,947) to a pediatric psychopharmacology program at a major academic center. Subjects were diagnosed with subthreshold ADHD if they met at least 1 of the following criteria: (1) their age at onset for ADHD was ≥ 7 years; (2) they had ≥ 5 but < 8 ADHD symptoms using the DSM-III-R or ≥ 4 but < 6 ADHD inattentive or hyperactive/impulsive symptoms using the DSM-IV. Healthy controls were derived from 2 identically designed longitudinal case-control studies of youth with and without ADHD. Psychiatric assessments relied on clinical structured interviews and measures of psychopathology, social functioning, cognitive ability, and academic achievement.

RESULTS:
Of the 1,931 children diagnosed with ADHD, 140 (7%) were diagnosed with subthreshold ADHD. 48% of subthreshold ADHD subjects had an age at onset ≥ 7 years, and 73% had insufficient symptoms. Reanalysis of findings using DSM-5 criteria showed that only 21% of our subthreshold ADHD subjects would have met DSM-5 criteria based on age at onset of < 12 years, while 79% would have maintained their subthreshold diagnoses. Subjects with subthreshold ADHD differed from controls in the mean number of comorbid disorders; rates of mood, anxiety, and elimination disorders (all P < .001) and substance use disorders (P < .05); scores on all Child Behavior Checklist clinical and social functioning scales; scores on 7 of the 10 Social Adjustment Inventory for Children and Adolescents scales; rates of requiring extra help in school and being placed in a special class; and scores on 4 of the 5 Wechsler Intelligence Scale for Children-Revised Version subscales (excluding Digit Span) as well as in Freedom from Distractibility Index score (P < .001). Subthreshold and full ADHD subjects had similarly elevated Global Assessment of Functioning scores versus controls (P < .001), but subjects with subthreshold ADHD had fewer perinatal complications and better family functioning scores and were more likely to be female and older and to come from families of higher socioeconomic status than subjects with full ADHD.

CONCLUSIONS:
Clinically referred children failing to meet full-threshold diagnosis for ADHD due to either insufficient symptoms or later age at onset have patterns of clinical features highly similar to those with the full syndrome. These results extend to previously reported findings in nonreferred samples documenting the high morbidity and disability associated with subthreshold ADHD.