Attention-deficit/hyperactivity disorder symptom expression: a comparison of individual age at onset using item response theory.

Peyre H, Hoertel N, Cortese S, Acquaviva E, De Maricourt P, Limosin F, Delorme R.


Abstract
BACKGROUND:
The DSM-IV age at onset criterion for attention-deficit/hyperactivity disorder (ADHD) has been a subject of debate. In DSM-5, the required age at onset (ie, the age by which impairing symptoms must have been present) has increased from 7 years to 12 years. The present study examined measurement properties of ADHD symptoms according to age at onset.

METHOD:
Data were derived from the 2004-2005 National Epidemiologic Survey on Alcohol and Related Conditions, which included 34,653 US participants. Among participants with a lifetime DSM-IV diagnosis of ADHD (assessed using the Alcohol Use Disorder and Associated Disabilities Interview Schedule-IV), we compared the psychometric properties of the 18 ADHD symptoms according to 3 categories of age at onset (≤ 7 years, > 7 and ≤ 12 years, and > 12 and ≤ 18 years). A 2-parameter item response model was used to estimate differential item functioning (DIF) between these groups.

RESULTS:
364 participants with a lifetime DSM-IV diagnosis of ADHD had an age at onset ≤ 7 years, 252 had an age at onset > 7 and ≤ 12 years, and 148 had an age at onset > 12 and ≤ 18 years. In both dimensions of ADHD (ie, inattention and hyperactivity-impulsivity), there was no significant DIF between age at onset groups.

CONCLUSIONS:
Expression of DSM-IV ADHD symptoms was not affected by age at onset in the 3 groups considered. This study provides psychometric support to the change in the age criterion introduced by DSM-5 and further suggests that the age at onset criterion could be extended to 18 years without changing the psychometric properties of the ADHD symptoms.