Attention-Deficit/Hyperactivity Disorder Trajectories From Childhood to Young Adulthood - Evidence From a Birth Cohort Supporting a Late-onset Syndrome

Arthur Caye; Thiago Botter-Maio Rocha, MD, MSc; Luciana Anselmi, PhD; Joseph Murray, PhD; Ana M. B. Menezes, PhD; Fernando C. Barros, PhD; Helen Gonçalves, PhD; Fernando Wehrmeister, PhD; Christina M. Jensen, MSc; Hans-Christoph Steinhausen, MD, PhD, DMSc; James M. Swanson, PhD; Christian Kieling, MD, PhD; Luis Augusto Rohde, MD, PhD

JAMA Psychiatry. Published online May 18, 2016. doi:10.1001/jamapsychiatry.2016.0383

ABSTRACT

Importance
The requirement of a childhood onset has always been a key criterion for the diagnosis of attention-deficit/hyperactivity disorder (ADHD) in adults, but recently this requirement has become surrounded by controversy.

Objective
To investigate whether impaired young adults with ADHD symptoms always have a childhood-onset disorder in a population-based longitudinal study.

Design, Setting, and Participants
Participants belonged to the 1993 Pelotas Birth Cohort Study, including 5249 individuals born in Pelotas, Brazil, in 1993. They were followed up to 18 to 19 years of age, with 81.3% retention. The data analysis was performed between August 8, 2015, and February 5, 2016.

Main Outcomes and Measures
The ADHD status was first ascertained at 11 years of age using a screening instrument (hyperactivity subscale of the Strength and Difficulties Questionnaire) calibrated for a DSM-IV ADHD diagnosis based on clinical interviews with parents using the Development and Well-Being Assessment. At 18 to 19 years of age, ADHD diagnosis was derived using DSM-5 criteria, except age at onset. We estimated the overlap between these groups assessed at 11 and 18 to 19 years of age and the rates of markers of impairment in these 2 groups compared with those without ADHD.

Results
At 11 years of age, childhood ADHD (C-ADHD) was present in 393 individuals (8.9%). At 18 to 19 years of age, 492 individuals (12.2%) fulfilled all DSM-5 criteria for young adult ADHD (YA-ADHD), except age at onset. After comorbidities were excluded, the prevalence of YA-ADHD without comorbidities decreased to 256 individuals (6.3%). Children with C-ADHD had a male preponderance not observed among children without ADHD (251 [63.9%] vs 1930 [47.9%] male, P < .001), whereas the YA-ADHD group had a female preponderance (192 [39.0%] vs 1786 [50.4%] male, P < .001). Both groups had increased levels of impairment in adulthood, as measured by traffic incidents, criminal behavior, incarceration, suicide attempts, and comorbidities. However, only 60 children (17.2%) with ADHD continued to have ADHD as young adults, and only 60 young adults (12.6%) with ADHD had the disorder in childhood.

Conclusions and Relevance
The findings of this study do not support the assumption that adulthood ADHD is necessarily a continuation of childhood ADHD. Rather, they suggest the existence of 2 syndromes that have distinct developmental trajectories.