Parental age and attention-deficit/hyperactivity disorder (ADHD).

Hvolgaard Mikkelsen S, Olsen J, Bech BH, Obel C.


Abstract

BACKGROUND:
Previous studies have suggested that young mothers more often have children with ADHD. We used sibling comparisons to examine the nature of this association and to investigate if this association is explained by early environment or genetic and socioeconomic factors.

METHODS:
A large population-based cohort including all singletons born in Denmark from 1 January 1991 through 31 December 2005 was followed from birth until 30 April 2011. Data were available for 94% (N = 943,785) of the population. Offspring ADHD was identified by an ICD-10 diagnosis of Hyperkinetic Disorder (HKD). We used sibling-matched Cox regression to control for genetic and socioeconomic factors.

RESULTS:
In the population cohort we found that children born by parents aged 20 years or younger had more than twice the risk of being diagnosed with ADHD compared with children with parents between 26 and 30 years of age. When comparing full siblings the associations were attenuated, but we found a trend of increased risk of ADHD with decreasing maternal age, which was not seen for paternal age.

CONCLUSIONS:
Sibling comparisons suggested that the associations between both maternal and paternal age and ADHD are partly explained by common genetic and socioeconomic factors. The trend of increased risk of ADHD with decreasing maternal age, but not with paternal age, may be linked to pregnancy or early-life environmental factors. Even though only a smaller part of the association can be attributed to environmental factors, there is a public health interest to support young parents through their first years of parenthood.