Parental Age and the Risk of Attention-Deficit/Hyperactivity Disorder: A Nationwide, Population-Based Cohort Study

Roshan Chudal, MBBS, MPH, Petteri Joelsson, MD, David Gyllenberg, MD, PhD, Venla Lehti, MD, PhD, Susanna Leivonen, MD, Susanna Hinkka-Yli-Salomäki, MSc, Mika Gissler, PhD, Andre Sourander, MD, PhD

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Objective
An increasing number of studies have shown an association between parental age and psychiatric disorders. However, there are inconsistent results regarding whether age at parenthood is associated with attention-deficit/hyperactivity disorder (ADHD). The aim of this study is to examine whether low or advanced parental age is associated with ADHD.

Method
In this nested case-control study, we identified 10,409 individuals with ADHD born in Finland during 1991-2005 and diagnosed between 1995 and 2011 and 39,125 controls matched on sex, date, and place of birth from nationwide population-based registers. Conditional logistic regression was used to examine the association between parental age and ADHD in offspring adjusting for potential confounding due to parental psychiatric history, maternal socioeconomic status, marital status, maternal smoking during pregnancy, number of previous births, and birth weight for gestational age.

Results
Fathers younger than 20 years had a 1.5-fold (OR=1.55, 95% CI: 1.11-2.18, \( p=.01 \)) increased risk of having offspring with ADHD as compared to fathers aged 25-29 years. Mothers of the same age group had a 1.4-fold (OR= 1.41, 95% CI: 1.15-1.72, \( p =.0009 \)) increased risk. Advanced maternal age was inversely associated with ADHD (OR=0.79, 95% CI: 0.64-0.97, \( P=.02 \)).

Conclusion
ADHD was associated with young fathers or mothers at the time of birth. Health professionals working with young parents should be aware of the increased risk of ADHD in offspring. This will improve early detection, but for the development of preventive measures and appropriate interventions, more information on the developmental pathways is needed.