

Children of both young and old parents share risk for certain neurodevelopmental disorders

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Results of a new study in the *Journal of the American Academy of Child and Adolescent Psychiatry (JAACAP)*, published by Elsevier, reports that

parental age is linked to the risk for the development of neuropsychiatric disorders in children, including autism spectrum disorder (ASD); attention-deficit/hyperactivity disorder (ADHD); obsessive-compulsive disorder (OCD); and Tourette's disorder/chronic tic disorder (TD/CT).

Both young and old parental age, at conception, has previously shown an increased risk of several neuropsychiatric [disorders](#) in offspring, including ASD, ADHD and schizophrenia.

The study provides novel evidence about the connection between age at parenthood and risk for TD/CT and OCD in children, validating previously reported associations between younger parental age and ADHD, and older parental age and ASD.

"For the first time in a population-based sample, our research shows that parental age is connected to differential risks for pediatric-onset psychiatric disorders," said first author Magdalena Janecka, Ph.D., and Postdoctoral Fellow at the Seaver Autism Center for Research and Treatment, New York, NY, US. "These results are consistent with a model that includes shared and distinct risk architecture for childhood neuropsychiatric conditions and highlight that there are unique contributions of parental age to risk in the children."

Researchers at the Tics and OCD Program at the Seaver Autism Center for Research and Treatment, both at the Icahn School of Medicine at Mount Sinai, and the University of Aarhus' Lundbeck Foundation Initiative for Integrative Psychiatric Research (iPSYCH) performed a cross-diagnostic investigation of the effects of maternal and paternal ages at conception on childhood-onset neuropsychiatric conditions, using a large population-based sample.

The study cohort was made up of 1,490,745 individuals born in Denmark from 1980 through 2007 with detailed information on parental

ages. The cohort was followed through December 2013. Cases of ASD, ADHD, OCD, and TD/CT were identified in the Danish Psychiatric Central Register and the National Patient Register.

Through these approaches, the investigators simultaneously examined the risk relationships between age at parenthood and several different psychiatric conditions in the offspring. They found that younger parental age was significantly associated with an increased risk for ADHD and TD/CT, whereas older parental age was associated with ASD and OCD.

The study however also found that the increase in risk associated with parental age at conception is small and should not influence individuals' decisions on age to bear children.

According to Dr. Dorothy Grice, senior author and Director of the Tics and OCD Program at Mount Sinai, "We used a very large national cohort of 1.4 million children for this study and it allowed us more precision in examining the complex relationships between [parental age](#) and offspring risk for mental health conditions.

"Our study results will help guide the search for the specific mechanisms that affect risk for childhood psychiatric disorders."

More information: Magdalena Janecka et al, Parental Age and Differential Estimates of Risk for Neuropsychiatric Disorders: Findings From the Danish Birth Cohort, *Journal of the American Academy of Child & Adolescent Psychiatry* (2019). [DOI: 10.1016/j.jaac.2018.09.447](https://doi.org/10.1016/j.jaac.2018.09.447)

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