

Intellectual disability found to be more common in families with substance use disorder

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Children of a parent with alcohol or drug use disorder have a greater risk of intellectual disability, even if the problem only lies with the father,

researchers from Karolinska Institutet report. According to the study, which is published in the journal *eClinicalMedicine*, preventive measures should be directed at both parents.

It is well known that a woman's alcohol consumption during pregnancy can increase the risk of her child developing an intellectual disability. Research from Karolinska Institutet now shows that all forms of substance abuse, both in the mother and the father, and not only during pregnancy, can constitute a risk factor.

"Preventative measures, such as educating health care professionals and public health recommendations, have focused for decades on mothers with [alcohol-related problems](#)," says Lotfi Khemiri, researcher at the Departments of Medical Epidemiology and Biostatistics and Clinical Neuroscience, Karolinska Institutet. "Our findings highlight the importance of also directing such measures towards fathers with different types of [substance use disorder](#)."

The study, which is based on data from Swedish registries, comprised almost 2 million babies born between 1978 and 2002 and their parents. The researchers found that 1.2% of babies born to parents without such a disorder were diagnosed with an intellectual disability, compared with 3% of the babies who had one parent with a diagnosis related to a substance use disorder (alcohol or drug abuse).

Higher risk before birth

The elevated risk was greater if the parent had received a diagnosis before or during pregnancy rather than after birth. A substance use disorder diagnosis registered before birth was associated with more than twice the risk of intellectual disability in the baby, regardless of which parent had the diagnosis. The correlation was weaker but still statistically significant after adjustment of socioeconomic factors and psychiatric

comorbidity in the parents.

"Since it was an [observational study](#), we can draw no conclusions about the underlying mechanism, but we suspect that both genetic and environmental factors, including harmful effects of substance abuse on fetal development, may play a part," says Dr. Khemiri.

"We hope that the results will contribute to the preventative efforts, as well as to the improved diagnosis of children with an [intellectual disability](#) and to timely intervention directed both to the child as well as parents in need of substance use disorder treatment."

Intellectual disability was observed to be much more likely in alcohol-related problems during pregnancy, where the risk was five and three times higher depending on whether it was the mother or father who had the alcohol use disorder diagnosis.

More information: Lotfi Khemiri et al, Parental substance use disorder and risk of intellectual disability in offspring in Sweden: a national register study, *eClinicalMedicine* (2023). [DOI: 10.1016/j.eclinm.2023.102170](#)

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