Children's prenatal growth mostly unaffected by mother's stress levels

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There are many factors influencing fetal growth—genetic, nutritional, environmental, uteroplacental, and fetal factors. In a new doctoral thesis from Karolinska Institutet, the aim was to further the understanding of

the consequences of stress and smoking during pregnancy, the causes of intrauterine growth and asthma as well as the consequences of asthma on school performance and to explore explanations of observed associations.

"We have investigated if a child's prenatal growth is influenced of by the mother's stress levels or the grandmother's smoking during pregnancy," says Cecilia Lundholm, statistician and doctoral student at the Department of medical epidemiology and biostatistics, MEB.

In the four constituent papers of the thesis, the researchers have also investigated if smoking or nicotine exposure during pregnancy increases the risk of asthma in the child and if children with asthma have worse school results than children without.

"Most of our results showed either no associations or that associations could be explained by other factors, confounders," says Cecilia. "Our results may be comforting for stressed pregnant women and parents of children with asthma. However, it should be noted that smoking during pregnancy has many other negative effects than those we have investigated and should always be avoided."

Further studies

Cecilia first became interested in these questions as she had been involved in research in this field for many years as biostatistician before starting her doctoral studies and found it fascinating. It was therefore a natural choice of topic for her thesis. After the public defense on March 26, Cecilia will continue to help others with their research as a biostatistician at MEB, but also hopes to have some time to continue her own research.

More information: "Causes and consequences of stress and tobacco

exposure in utero on birth size, asthma and academic achievement." Cecilia Lundholm, Karolinska Institutet (2021), ISBN: 978-91-8016-086-5. openarchive.ki.se/xmlui/handle … 606639190.1606310600

Provided by Karolinska Institutet

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