

Smoking during pregnancy fosters aggression in children

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Women who smoke during pregnancy risk delivering aggressive kids according to a new Canada-Netherlands study published in the journal *Development and Psychopathology*. While previous studies have shown that smoking during gestation causes low birth weight, this research shows mothers who light up during pregnancy can predispose their offspring to an additional risk: violent behaviour.

What's more, the research team found the risk of giving birth to aggressive children increases among smoking mothers whose familial income is lower than \$40,000 per year. Another risk factor for aggressive behaviour in offspring was smoking mothers with a history of antisocial behaviour: run-ins with the law, high school drop-outs and illegal drug use.

Psychiatry professor and researcher Jean Séguin, of the Université de Montréal and Sainte-Justine Hospital Research Center, co-authored the study with postdoctoral fellow Stephan C. J. Huijbregts, now a researcher at Leiden University in the Netherlands, as well as colleagues from Université Laval and McGill University in Canada.

"Mothers-to-be whose lives have been marked by anti-social behaviour have a 67 percent chance to have a physically aggressive child if they smoke 10 cigarettes a day while pregnant, compared with 16 percent for those who are non-smokers or who smoke fewer than 10 cigarettes a day," says Dr. Séguin. "Smoking also seems to be an aggravating factor, although less pronounced, in mothers whose anti-social behaviour is negligible or zero."

The research was carried out as part of a wider investigation of children, the Quebec Longitudinal Study, which examined behaviors of 1,745 children between the age of 18 months to three and a half years. Aggressive offspring were characterized by their mothers as quick to hit, bite, kick, fight and bully others.

Other risks for aggressive behaviour

Although physical aggression is most common in preschool children, the researchers identified other prenatal factors associated with aggressive behaviour in children: mothers who are younger than 21, who smoke and who coerce their children to behave. The researchers also found that children from families who earned less than \$40,000 per year were at an increased risk for aggressive behaviour.

In this category, heavy smokers had a 40 percent chance of having highly aggressive children, compared with 25 percent for other mothers who were moderate or non-smokers. When income was greater than \$40,000 annually, the gap between heavy smokers and others fell to 8 percent.

The effect of smoking on aggression in offspring remained significant - even when other factors were removed such as divorce, depression, maternal education and the mother's age during pregnancy. Smoking during pregnancy is one factor that could be curbed to decrease risks of aggression and violent behaviour.

The research team recommends that low-income women, who are heavy smokers and who have a history of anti-social behaviour become a screening criterion for prenatal testing to determine what families need extra support to prevent development of aggressive behaviour.

Source: University of Montreal

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