

Research links secondhand smoke exposure during pregnancy to developmental delays in children and adolescents

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Credit: Florida International University

The Centers for Disease Control and Prevention have long documented the health consequences of secondhand smoke. Now, a new study by

FIU criminal justice professor Ryan Meldrum links prenatal exposure to cigarette smoke to lower levels of self-control in children and adolescents.

Low self-control is one of the strongest known causes of delinquent and criminal behavior in adolescents and adults and researchers have devoted considerable attention to identifying potential causes of low self-control.

"Most studies have focused on the social causes of low self-control, particularly parenting practices, but an emerging group of scholars has started to consider the early-in-life biological and neurological causes of low self-control," Meldrum said.

In a study published recently in the *Journal of Developmental and Life Course Criminology*, Meldrum and co-author J.C. Barnes of the University of Cincinnati found a link between prenatal exposure to [secondhand smoke](#) and lower self-control during childhood and adolescence.

The more frequently a non-smoking mother reported being around smokers during her pregnancy, the lower the developmental trajectory of self-control was for her child between ages 4 and 15. The connection was found even when researchers accounted for other factors, such as maternal IQ, maternal self-control, maternal education and family income.

Their conclusions were drawn from data collected on a sample of 750 non-smoking mothers and their children who participated in the Study of Early Child Care and Youth Development, a 15-year study funded by the National Institute of Child Health and Human Development.

Meldrum points to two reasons why this study is important. "First, it draws greater attention to the consequences of [maternal exposure](#) to

secondhand smoke during pregnancy that go beyond health concerns by linking such exposure to factors like [low self-control](#) that are relevant to broader discussions of antisocial behavior. Second, it highlights the fact that differences in self-control between individuals are not due simply to socialization that takes places within families and peer groups during adolescence."

By focusing on the behavioral consequences of exposure to secondhand smoke early in life, Meldrum said he hopes his research and other studies like it will raise greater awareness about the dangers of secondhand smoke during pregnancy. He'd like to see policymakers find new ways to reduce expectant mothers' exposure to secondhand smoke.

More information: NICHD Study of Early Child Care & Youth Development (SECCYD): www.nichd.nih.gov/research/sup...yd/Pages/seccyd.aspx

Provided by Florida International University

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