

# Babies exposed to mothers' drug abuse may have positive attitudes toward violence as teens

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Credit: AI-generated image ([disclaimer](#))

The wave of mass shootings across the United States in the last two decades has reignited the discussion of gun violence and the role it plays on childhood development. New research has found that prenatal substance exposure may contribute to positive attitudes toward guns and

violence among adolescents.

This association may occur through an indirect pathway from substance exposure to higher child aggression in kindergarten to greater engagement with bullying perpetration and victimization in early adolescence, according to researchers from Penn State, the University at Buffalo (State University of New York), Buffalo State (State University of New York), and the Rochester Institute of Technology.

"We found that maternal substance abuse in pregnancy was associated with higher risk for children to behave aggressively in kindergarten," said Rina Eiden, professor of psychology at Penn State and Consortium to Combat Substance Abuse (CCSA) co-funded faculty member.

"Maternal substance use in this sample was associated with greater socioeconomic adversity and greater placement in non-biological parent care like foster or kinship care. These children were also living in neighborhoods with higher rates of crime and were exposed to more community [violence](#)."

Eiden, whose research focuses on risk and resilience processes among children of substance abusing parents and early childhood interventions for mitigating risks, said that over half of the families in the project were recruited because of maternal substance use in pregnancy, particularly cocaine, and many were in unstable home environments.

"These families also experienced significant exposure to community violence in addition to difficult home lives," Eiden said. "Our results indicate that a pattern of child aggression that was sustained over time and contexts was associated with aggressive attitudes supporting gun violence."

According to Eiden, the current project stemmed from a research program that began in 2000 on the effects of prenatal cocaine exposure

on children's development. As in other studies of prenatal cocaine and other substance exposure, researchers found that substance exposed children had lower birth weights and had more trouble regulating or modulating their arousal under stress in infancy.

It was not until the National Institute of Health called for studies on gun violence five years ago that Eiden and her team realize that the sample might be suitable for examining how parental substance abuse, socioeconomic adversity, and neighborhood contexts might be associated with greater risk for violence and victimization including risk for gun violence.

The researchers recruited 216 families from two urban hospitals that predominantly served a low-income population for the study. The mothers were screened after delivery to identify participants with high rates of prenatal substance use. The families consisted of 116 infants exposed to cocaine and other substances, and 100 not exposed to cocaine but possibly exposed to other [substances](#) like alcohol, cigarettes or marijuana. The infants were assessed beginning at one month with follow-up assessments every six months until and including kindergarten age, in second grade, and throughout [early adolescence](#).

The assessments included whether children were exposed to violence in the home (e.g., shootings, beatings); incidents of early childhood aggression noted by teacher ratings and classroom observations at the kindergarten age; incidents of bullying perpetration and victimization; and any positive attitudes towards guns and violence.

"My team was interested in looking at the pathways to violence, victimization and adolescent substance use," Eiden said. "The goal was to examine two pathways to violence/victimization: reactive and proactive. Reactive aggression happens in response to provocation while proactive aggression is planned to achieve a specific goal. Our findings

suggest that bullying perpetration or being victims of bullying was not associated with greater comfort with guns or power, but rather was associated with using violence as a retaliatory coping mechanism."

Eiden said one way to help prevent these outcomes may be early intervention to help reduce [aggressive behavior](#).

"We know from other research that children naturally decrease aggressive behaviors between three and four years of age," Eiden said. "If this decrease does not happen, there is greater continuity in aggressive behavior. Thus, helping parents with strategies to reduce child aggression by positive parenting and helping children cope with environmental stressors may be good prevention strategies."

Additionally, Eiden said that treating substance use as a public health issue and not a criminal one may help not only parents with substance use problems but also children and families. Providing parents with treatment for [substance abuse](#) and helping them with strategies that promote children's self-regulation and lower risk for aggressive behavior in the infant/toddler period may have long lasting effects on developmental outcomes into adolescence. Self-regulation is the ability to manage emotions and behavior in accordance with the demands of the situation like resisting highly emotionally reactions to upsetting stimuli and calming oneself down.

In the next few years, Eiden said she hopes to release more findings from this sample as the families complete the adolescent wave of data collection.

"I believe we will find that as these children enter late adolescence, there will be an even stronger connections among the parental substance use problems, socioeconomic adversity, exposure to community violence, continuity of aggression from childhood to late adolescence, and weapon

carrying including the potential for gun violence," Eiden said.

**More information:** Amanda B. Nickerson et al. A Longitudinal Study of Gun Violence Attitudes: Role of Childhood Aggression and Exposure to Violence, and Early Adolescent Bullying Perpetration and Victimization, *Journal of School Violence* (2019). [DOI: 10.1080/15388220.2019.1703716](https://doi.org/10.1080/15388220.2019.1703716)

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