



## **Women abused as children are more likely to have children with autism...**

### **The effects of trauma on health across generations**

Boston, MA — Women who experienced physical, emotional, or sexual abuse as children are more likely to have a child with autism than women who were not abused, according to a new study from Harvard School of Public Health (HSPH). Those who experienced the most serious abuse had the highest likelihood of having a child with autism — three-and-a-half times more than women who were not abused.

“Our study identifies a completely new risk factor for autism,” said lead author Andrea Roberts, research associate in the HSPH Department of Social and Behavioral Sciences. “Further research to understand how a woman’s experience of abuse is associated with autism in her children may help us better understand the causes of autism and identify preventable risk factors.”

The study appears online March 20, 2013 and in the May 2013 print issue of *JAMA Psychiatry*. It is the first to explore the relationship between a mother’s exposure to childhood abuse and risk of autism in her children.



Research Associate Andrea Roberts

The authors examined data from more than 50,000 women enrolled in the Nurses’ Health Study II. They found that it was not just women exposed to the most serious levels of abuse who had higher risk of having a child with autism, but also a large number of women who experienced moderate abuse. While about 2% of women reported the most serious abuse, even women in the top 25% of abuse severity—which included mostly women who experienced more moderate levels of abuse —were 60% more likely to have a child with autism compared with women who did not experience abuse. These results suggest that childhood abuse is not only very harmful for the person who directly experiences it, but may also increase risk for serious disabilities in the next generation, the authors said.

Delving further, the researchers looked at nine pregnancy-related risk factors to see if they were linked to higher risk of having a child with autism in women who were abused as children. These nine risk factors—including gestational diabetes, preeclampsia, and smoking—have been previously associated with an increased likelihood of having a child with autism.

The researchers did find that women who had experienced abuse as children had a higher risk for each of the pregnancy-related risk factors that were examined. Surprisingly, though, those risk factors accounted for only 7% of the increased likelihood of having a child with autism among women who were abused.

Given that these factors accounted for so little of the association between mother's experience of abuse and risk of autism in her children, the authors speculated that other factors may be playing a role. One possibility, they said, is that long-lasting effects of abuse on women's biological systems, such as the immune system and stress-response system, are responsible for increasing their likelihood of having a child with autism. More research is needed to tease out the mechanisms involved in the maternal childhood abuse-autism link, the authors said.



Professor Marc Weisskopf

"Childhood abuse is associated with a wide array of health problems in the person who experiences it, including both mental health outcomes like depression and anxiety, and physical health outcomes like obesity and lung disease. Our research suggests that the effects of childhood abuse may also reach across generations," said senior author Marc Weisskopf, associate professor of environmental and occupational epidemiology at HSPH.

Given the findings in this study, the authors suggest increasing efforts to prevent childhood abuse, and suggest that clinicians focus more strongly on limiting pregnancy-related autism risk factors, particularly among women who experienced abuse in childhood.

Other HSPH authors included Alberto Ascherio, professor of epidemiology and nutrition; and Kristen Lyall, visiting scientist in the HSPH Department of Nutrition.

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