

# Vaccinations of U.S. children declined after publication of a now-refuted autism risk: study

June 4 2012, By Judy Ashton

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UC researcher Lenisa Chang

(Medical Xpress) -- New University of Cincinnati research has found that fewer parents in the United States vaccinated their children in the wake of concerns about a purported link (now widely discredited) between the MMR (measles, mumps, rubella) vaccine and autism.

Lenisa Chang, assistant professor of economics in UC's Carl H. Lindner College of Business, found that the MMR-autism controversy, which played out prominently in the popular media following publication in a

1998 medical journal, led to a decline of about two percentage points in terms of parents obtaining the MMR vaccine for their children in 1999 and 2000. And even after later studies thoroughly refuted the alleged MMR-autism link, the drop off in vaccination rates persisted.

For her study, “The MMR-Autism Controversy: Did [Autism](#) Concerns Affect Vaccine Take Up?” to be presented during the 4th Biennial Conference of the American Society of Health Economics June 10-13 in Minnesota, Chang examined data from the National Immunization Survey from 1995 through 2006 to gauge [parents](#)’ response toward the vaccine-autism controversy.

Interestingly, in the aftermath of the controversy, Chang found that the higher a mother’s education level, the less likely a child was to receive an MMR vaccination. In other words, college-educated mothers were less likely to have their children vaccinated than were non-college education mothers. This may be due to the fact that more educated mothers have better access and/or more quickly absorb medical information available in the media.

After epidemiological studies refuted the MMR-autism link, the difference in MMR usage by mother’s education level persisted and became more pronounced in 2003, 2004 and 2006, possibly as previous negative information received more weight than positive information in the parental decision-making process on whether or not to vaccinate.

She also found that the controversy, begun with the publication of research (later discredited) linking the MMR vaccine to risks for autism in “The Lancet” medical journal, seemingly had a spillover effect to other vaccines—such as polio or other measles-containing vaccines—likely as a result of concern for safety over the MMR controversy.

Chang says the decline is a significant decrease and attributes the spillover effect to parental concerns.

“The [spillover effect](#) I find on other vaccines such as polio and, to a lesser degree DTP (diphtheria, tetanus and pertussis), could be partially ascribed to general safety concerns toward all vaccines that stemmed from the MMR controversy, but other factors might be at play as well,” Chang says.

In other related work, Chang is researching the effect on immunization rates of state mandates that require insurance companies to cover childhood vaccines.

Provided by University of Cincinnati

Citation: Vaccinations of U.S. children declined after publication of a now-refuted autism risk: study (2012, June 4) retrieved 25 April 2024 from <https://medicalxpress.com/news/2012-06-vaccinations-children-declined-now-refuted-autism.html>

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