

Beliefs about Causes of Autism and Vaccines

Summary Reports describe results from newly published research using data from SPARK participants.

■ Study Titles

1. Beliefs about Causes of Autism and Vaccine Hesitancy among Parents of Children with Autism Spectrum Disorder
2. Vaccine Hesitancy and Attributions for Autism among Racially and Ethnically Diverse Groups of Parents of Children with Autism Spectrum Disorder: A Pilot Study

■ What were these studies about?

Researchers wanted to learn more about the beliefs that parents who are enrolled in SPARK hold about vaccines and autism.

■ How was the research done?

A total of 225 parents completed online questionnaires about their attitudes toward childhood vaccines, and their views of autism. Most of the participants were mothers. The average age of their children was 7. The results were published in two papers, one of which focused on race and ethnicity.

■ What did the researchers learn?

- Sixty-five parents, almost 29 percent, were “vaccine-hesitant.” That means that they had concerns that may lead them to delay or refuse one or more shots for their children.
- The children of vaccine-hesitant parents had some things in common. They were more likely to have more severe symptoms of autism and to have lost skills or stopped progressing at one point in their development.
- From a list of 21 items, parents rated their level of agreement on whether each item could cause autism. Vaccine-hesitant parents were more likely to believe that autism was caused by a decline in the child’s immune system, diet, environmental pollution, general life stress, a parent’s decisions or behavior, and vaccines, among other things.
- Vaccine-hesitant parents had more negative feelings, such as anxiety, about autism.
- Parents of color were more likely to be vaccine-hesitant. Parents who are non-white, Hispanic, and/or Latino/Latina were combined into one group because their total number (26) was too small to analyze by their individual races and ethnicities.
- A majority of parents, whether or not they were vaccine-hesitant, agreed that genetics is a cause of autism.

■ What was new and innovative about the studies?

A [previous study](#) involving data from more than 16,000 SPARK participants found that one in six believed vaccines could be a cause of their child's autism. These two smaller studies sought to measure vaccine hesitancy. This means that the researchers wanted to learn more about parents' beliefs and factors that might lead them to delay or refuse one or more shots for their children.

■ What do the findings mean?

Four factors were the strongest predictors of vaccine hesitancy: having negative feelings about autism, believing a decline in the immune system is a cause of autism, having a child who stopped making developmental progress, and having a child with limited language skills.

■ What are parents and scientists saying?

Parents:

"I think it is important to inform the population on the benefits of vaccines and the ease in which herd immunity can deteriorate if we believe this unfounded opinion that they cause autism."

"I do very much fear that [my child] did have some reaction to a vaccine. It may not have caused [their] autism, but the timing was so close it is hard to overlook."

"It is extremely important to my family that we understand the autism spectrum, and curb anything that is fear-based and not backed by science.

Researcher Robin P. Kochel, Ph.D. who worked on the studies: "It's so valuable for us to understand parents' perceptions about topics like this. If we can identify those factors that are associated with vaccine hesitancy, we can create more targeted vaccine educational strategies that might resonate more with particular groups."

■ What's next?

Kochel's research team is working on a larger study of vaccine hesitancy which has not yet been published. With larger numbers of participants, researchers could learn more about vaccine hesitancy in people of different races and ethnicities.

■ References

1. Goin-Kochel R.P. et al. Vaccine **38**, 6327-6333 (2020) [PubMed](#)
2. Chang J. and R. Kochel Autism Res. **13**, 1790-1796 (2020) [PubMed](#)

About SPARK Research Match

This SPARK program matches families with research studies they may want to join. These studies have been evaluated for scientific merit and approved by a scientific committee at SPARK. The program is free to researchers and families. SPARK does not endorse or conduct these studies. Families choose if they want to participate in a particular study.