

## The Family Roots of Math Anxiety

By Sarah D. Sparks on August 10, 2015 11:23 AM



In general, parents' help with homework can be a major support for students. But if parents shudder at the thought of algebra or arithmetic, they can pass that math dread on to their children.

So finds the latest in a series of studies by University of Chicago psychologists including **Erin Maloney**, **Sian Beilock**, and **Susan Levine**, who study the causes and effects of performance anxiety. The new research, in the journal *Psychological Science*, finds that **parents with math anxiety can hinder their students' progress in math**.

The researchers tracked more than 400 1st and 2nd grade students whose parents provided different levels of help with their homework. They also assessed both parents' and kids' attitudes toward math at the beginning and end of the school year.

Students whose parents reported high math anxiety made significantly less progress in math over the course of a year, and they were more likely to become anxious themselves—but only if their anxious parents sweated through helping them with homework.

By contrast, students with math-anxious parents who helped with homework showed no similar problems when it came to reading. While there may also be some genetic influence on math anxiety, that did not seem to be a factor here. Students whose anxious parents did not help with math homework did not show similar difficulties or fear when it came to math.

### Parent Attitudes Shape Children

Even if a parent understands how to do a problem, his or her underlying dread of math could hinder students' enjoyment of solving problems, particularly if it plays into broader stereotypes about who should like or be good at math.

"Our work suggests that if a parent is walking around saying 'Oh, I don't like math,' or 'This stuff makes me nervous,' kids pick up on this messaging and it affects their success," Beilock said in a statement.

That's in line with prior research that found girls whose female elementary teachers were anxious about their own math competence showed **bigger gender gaps in math performance** by the end of the year, even if they had started on par with boys. Maloney told me that because nearly 9 out of 10 parents who responded in this study were women, they were unable to look at parent gender differences, but they found no differences in the effects of parent anxiety on boys versus girls.

### Overcoming Dread of Numbers

Even if parents try to control how they talk about math, fear may hinder how they help their children, the researchers found. Anxious parents may have trouble explaining math concepts, Levine noted in a statement. They may react badly when their children make mistakes while solving a problem.

"We can't just tell parents—especially those who are anxious about math—'Get involved,'" Maloney said in a statement on the study. "We need to develop better tools to teach parents how to most effectively help their children with math."

We already see this for teachers. One school in New York, for example, offers weekly **training to help math-anxious teachers brush up on skills** and gain confidence with numbers. Another works with teachers to understand the **theory of growth mindset**—that math performance is not a fixed innate skill, but one that can be improved through effort.

Photo Source: Getty Images

**Related:**

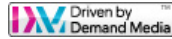
- **For Girls, Teachers' Gender Matters, Study Says**
- **Taking Anxiety Out of the Equation**
- **Researchers Probe Causes of Math Anxiety**
- **'Math Anxiety' Confuses the Equation for Students**

Want more research news? Get the latest studies and join the conversation.

[Follow @SarahDSparks](#)

**Categories:** [classroom management](#) [growth mindset](#) [math](#) [social and emotional learning](#)

**Tags:** [math anxiety](#) [parent involvement](#)



**Ground Rules for Posting**

We encourage lively debate, but please be respectful of others. Profanity and personal attacks are prohibited. By commenting, you are agreeing to abide by our [user agreement](#). All comments are public.