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Math is for Boys Stereotype Still Adds Up

By CWK Network Producer

For years, girls have been steadily catching up to boys in their scores on standardized math tests. And yet, some female students say the old belief that boys are better at math than girls still exists, even among parents.

"I think that my parents think that my brother, just because he's a boy, is smarter than me."

-Julie Kornder, 16 years old

WHO SAYS MATH IS FOR BOYS? A STUDY FROM RESEARCHERS AT THE UNIVERSITY OF WASHINGTON SUGGESTS THAT FOR GIRLS, THAT MESSAGE – EXPRESSED BY STUDENTS AS YOUNG AS SECOND GRADE – MAY COME FROM CULTURAL MESSAGES.

Thanh, 17 years old

"They automatically assume that since you're a girl, you can't handle the complications that you may run into with math or science."

IN THE NEW STUDY, CHILDREN SORTED FOUR KINDS OF WORDS ON THE COMPUTER SCREEN: BOYS NAMES, GIRLS NAMES, MATH WORDS AND READING WORDS. BOYS ASSOCIATED MATH WITH THEIR GENDER, WHILE GIRLS ASSOCIATE MATH WITH BOYS, AS WELL. EVEN SOME PARENTS BUY INTO THIS STEREOTYPE.

Julie, 16 years old

"Well like he'll use scientific terms and big words with my brother, but he'll talk to me like I don't know words that are bigger than 4 letters."

Jimisha, 17 years old

"It's hard because it's not just your parents, not just your brother and sisters, it's society, it's society's thinking."

EXPERTS AGREE, CHILDREN HAVE THEIR ANTENNAE TUNED TO EVEN SUBTLE MESSAGES FROM PARENTS, TEACHERS, PEERS AND GAMES. WE NEED TO DEPICT MATH AS BEING EQUALLY FOR BOYS AND GIRLS.

Diann Ash, Educator

"Please be careful what you say to the daughters, make sure you provide them with the same kinds of opportunities, even the toys that we buy them actually signal that I don't expect you'll do any erector set building or any of those things, those are for the guys."

WITH STRAIGHT A'S IN MATH AND SCIENCE, JIMISHA SAYS SHE'S EAGER TO PROVE PEOPLE WRONG.

Jimisha, 17 years old

"I think that's definitely a big part of it, to prove to people that I can be good at this, I can do this just as good as any male can."

Encourage Girls to Pursue Science, Math Interests

By CWK Network, Inc.

A study published in the journal *Developmental Psychology* shows that parents are more likely to believe that math and science are less interesting and more difficult for daughters than for sons. The Harvard University researchers based their findings on a survey of 52 boys and girls, aged 11 to 13, and their parents about science enjoyment and knowledge. They also found that parents use different language when discussing science with boys and girls. For example, fathers were more likely to use challenging or scientific language during science activities with their sons than with their daughters.

According to North Dakota State University's (NDSU) Department of Psychology, the academic gender gap usually surfaces during adolescence. It is at this time that girls become better at basic and computational skills while boys develop better mathematical reasoning and word problem solving skills. Although no differences in grades exist, girls' attitudes toward math and science become worse than boys. In addition, girls begin to feel less competent about their math and science skills, and then their grades decline.

But why do these differences occur? Experts at the NDSU offer the following reasons for the gender gap in science and math abilities:

- More value is placed on girls' compliance and boys' assertiveness.
- Teachers spend more time responding to boys' questions.
- Parents encourage boys to work independently and give more assistance to girls. They also allow girls to participate in more off-task behaviors than boys.
- Parents and their children believe that math and science are more important for the careers of boys than girls.
- Parents underestimate their girls' math abilities.
- Parents attribute girls' math achievements to effort and boys' math achievements to innate ability.
- Girls are taught that succeeding in math and science is not feminine.

What Parents Need to Know

Encouragement by parents is the first step in closing the gender gap in the areas of mathematics and science. The National Network for Child Care suggests the following strategies to help foster a scientific or mathematical interest in your child:

- Provide your son or daughter with early math and science experiences. Visit a local science museum.
- Think about the toys and activities you buy for your child. Don't forget that girls like chemistry sets, too.
- Find out what your child is doing in math and science at school. Does he or she come home excited about a neat experiment he or she performed that day?
- When your child enters high school, encourage both boys and girls to take math and science. It's never too early to learn about college entrance requirements.
- Remind your child that both boys and girls can become anything they want to be – even a mathematician or scientist.

More and more, technology in the form of computers is being used inside and outside the classroom, especially in the fields of science and mathematics. Therefore, it is important to ensure that your daughter receives the same exposure to computers as her male counterparts. Experts in the Mathematics Department at Rice University offer the following tips for getting girls on computers:

- Girls like to join clubs and take classes with their friends. A lone girl who likes computers is unlikely to join a computer club by herself. So encourage your daughter to join clubs or classes with a group of friends.
- Girls need role models; they need to see women using computers competently and confidently. Check out computing magazines – almost all of the photographs are of men. On high school campuses, being a computer geek raises a male student's coolness factor; it doesn't have the same effect for girls. To offset this, encourage your daughter's teachers to invite female speakers to classes or clubs. Also, ask them to share information about women who are leaders in the field.
- Make a conscious effort to encourage your daughter. Challenge her to take the highest level of science, math and computing courses offered.
- When she asks, don't tell. Girls tend to ask for assistance when something won't work. Boys tend to try to figure it out. Encourage your daughter to be daring with the computer. It's a real confidence booster when she succeeds. Only step in if you really need to, and then try just a hint or help her to read the manual.

- Girls like to see what computers can do for them. They see computers more as a tool and less as a toy. Let your daughter type her papers on the computer, show her how to create Web pages or teach her to make a graph using a spreadsheet.
- Find out what percentage of the students in the highest level of computer science taught at your child's school is girls. If it's not at least 50%, make the school aware of the problem. Talk to counselors, teachers and other parents to enlist their help in encouraging the girls in your child's school into the highest levels of computer science.

As a parent, your expectations can play a major role in your child's academic development. Math and science expectations for your child may be gender biased; the good news is that you can change this attitude over time.

Resources

- [University of Washington Study](#)
- [North Dakota State University Department of Psychology](#)
- [Developmental Psychology Journal](#)
- [Department of Mathematics at Rice University](#)

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