

Why women (still) don't get hired for jobs involving math

By Anne Fisher, contributor March 19, 2014: 1:55 PM ET



A new study pinpoints an unconscious bias against female applicants to STEM jobs -- even among other women.



FORTUNE -- There's no question that tech employers have been trying harder to recruit female talent, and progress has been steady, albeit slow. Tech companies **hired more women than men last year**, the Bureau of Labor Statistics reported, although it wasn't clear that all or even most of those hires were for scientific or engineering roles. For now, women still make up only about one-third of the IT workforce.

A new **study**, published in the current issue of the *Proceedings from the National Academy of Sciences*, suggests one reason for this. Three professors from the business schools at Columbia, Northwestern, and Chicago set up an experiment that had some volunteers acting as hiring managers, while others posed as job applicants. The "candidates," both male and female, were assigned a math test. On average, the men and women scored equally well.

The result: With no information about each job candidate, other than his or her appearance (including gender), the "managers" -- of both genders -- were twice as likely to choose a male candidate over a woman. Just as striking were the managers' reactions when they were shown the scores on the math tests and the fact that the women's scores were equal to, or higher than, the men's: They simply didn't believe it.

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"The information was just so counter to their 'gut feeling' about the candidates," says Ernesto Reuben, the Columbia Business School professor who worked on the study. "And the female 'employers' were just as likely as their male counterparts to give male candidates the benefit of the doubt." He adds that, even after viewing the test scores, the women had to score about 15% higher on the math test to be perceived as equal to the men by the "hiring managers."

There's more. In a second part of the experiment, the applicants were asked to predict their own future performance on mathematical tasks. Almost without exception, the men in the group exaggerated their abilities, while the women understated theirs. But the hiring managers didn't compensate for that difference -- even when they recognized it -- and were, again, twice as likely to choose a male candidate after seeing all the applicants' actual test scores. Some managers even deliberately chose a lower-performing male candidate over a higher-scoring female one.

"We were surprised, because we thought showing people the hard data on performance would reduce gender bias much more than it actually did," says Reuben. Another surprise: All of the study participants were B-school students, most of them in the 20-something-to-early-30s age range, which marks them as millennials -- a group that is often thought to have fewer, or at least different, biases than their elders. Yet the generations-old belief that "girls aren't good at math" seems to persist.

Reuben says the main point, for real-life hiring managers, is that "we all have biases based on beliefs that are largely unconscious. I had a slight bias [against women in math] myself. But people making hiring decisions can correct for that bias, if they are aware that they have it."

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To detect its degree, the researchers asked "managers" in the study to take a test called the Implicit Association Test (IAT), developed at Harvard, that was a slightly modified version of **the Gender-Science IAT available online**.

Hiring managers in STEM might want to try it, too, if only out of curiosity. According to the tally on the test's final page, 78% of the people who have taken this IAT harbor some degree of unconscious belief that women and science don't mix. The test-takers so far whose responses have shown a "strong association" between women and STEM (science, technology, engineering, math) disciplines: A tiny 1%.

