

Summer camp conversations lead boys to have more positive views of girls' STEM ability

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Negative stereotypes of girls and women in science, technology, engineering, mathematics (STEM) persist, but York University

researchers have designed a brief intervention that makes a big difference toward improving boys' gendered beliefs.

The researchers recruited 667 boys, aged nine to 15, who were attending STEM summer camps and randomly assigned them to either an [intervention](#) or control conversation with a staff member—all undergraduate or graduate students in STEM.

The paper, "[Girls are good at STEM: Opening minds and providing evidence reduce boys' stereotyping of girls' STEM ability](#)," was published in the journal *Child Development*.

The intervention conversation involved a multi-stage persuasive appeal. Trained staff affirmed the boys' most important values, gave an illustration of why girls' STEM ability is commonly underestimated (with a genuine personal anecdote), and asked boys to reflect on their own similar experiences. The [control group](#) discussed general camp experiences.

"We were happy to see that a brief intervention could have such a positive effect on how boys view girls in STEM," says York University Professor Jennifer Steele of the Faculty of Health and a co-author of the study. "Providing strong evidence of girls' potential in STEM went a long way toward encouraging boys to form more positive perceptions of their female peers."

The research, led by Emily Cyr, a York University SSHRC Postdoctoral Fellow, also found that the boys with more positive perceptions of girls' STEM ability ended up having more female friends. The findings highlight the importance of engaging elementary-school-aged boys to make STEM climates more inclusive.

"This kind of intervention could go a long way in tackling the persistent

barriers women face when trying to feel a sense of belonging and flourish in STEM higher education and careers," says Cyr. "The difference with this study is that we addressed these gender gaps in childhood before girls are pushed out of STEM."

The researchers say being able to change [boys'](#) perception early on could make a big difference to girls when it comes time to choose which courses to take at the high school level. These early decisions to take prerequisite courses, such as Grade 11 physics, would better position girls for STEM [higher education](#) and beyond.

More information: Emily N. Cyr et al, Girls are good at STEM: Opening minds and providing evidence reduces boys' stereotyping of girls' STEM ability, *Child Development* (2023). [DOI: 10.1111/cdev.14007](#)

Provided by York University

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