

# New study finds bias against women and girls when intellectual ability is sought

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A new study finds bias against both women and girls for jobs or activities requiring intellectual ability. The research underscores the pervasiveness of gender bias, held even among females, in both adults and young children.

"Despite their achievements in the classroom and the workplace, our experiments suggest that [women](#) and girls may still encounter [bias](#) in circumstances where brilliance is viewed as the key to success," observes Andrei Cimpian, an associate professor in New York University's Department of Psychology and the senior author of the study, which appears in the journal *American Psychologist*.

"Although it is intuitive to think of [gender bias](#) as an adult phenomenon, the gender imbalances currently seen in many academic and professional fields may actually be due in part to processes that unfold early in development," adds Lin Bian, first author of the study, who was a visiting researcher at NYU and [doctoral student](#) at the University of Illinois at the time of the study and will become an assistant professor of Human Development at Cornell University in 2019.

The study, conducted at the Cognitive Development Lab at the University of Illinois at Urbana-Champaign and New York University, also included Sarah-Jane Leslie, a professor of philosophy at Princeton University.

National statistics show that the intellectual achievements of girls and

women in the U.S. have matched, if not surpassed, those of boys and men. Given these realities, one might expect women and men to be treated as intellectual equals and be given the same opportunities to pursue intellectually challenging work.

However, in a series of three experiments, the researchers found evidence of consistent bias against women and girls in contexts that emphasize [intellectual ability](#).

In two initial experiments, more than 1,150 participants (approximately 350 in one experiment and approximately 800 in another) were asked to refer individuals for a job. Half of the participants were led to believe that the job required high-level intellectual ability (e.g., "high IQ," "superior reasoning skills," "natural intelligence"); the other half were not. The results showed that participants were less likely to refer a woman when the job description mentioned brilliance (43.5 percent female referrals) than when it did not (50.8 percent). In other words, the odds of referring a woman (rather than a man) were 25.3 percent lower when the job description mentioned intellectual ability.

Notably, while women were more likely than men to refer females for jobs requiring intellectual ability, both women and men were less likely to refer females for these jobs than for the other [jobs](#). That is, men and women showed comparable levels of gender bias.

The hypotheses and analysis plan for the second experiment were specified [ahead of time](#); this process of "preregistration" increases confidence in the conclusions of a study.

In the third experiment, the researchers tested whether contexts that emphasize intellectual ability elicit gender bias among [young children](#). In it, the researchers taught 192 [children](#), aged 5 to 7, how to play two new team games. Half of the children were told that the games were for

"really, really smart" children; the other half were not. For each game, children then selected three teammates from among six children (three boys and three girls) they did not know.

Children initially selected teammates of their own gender (that is, girls chose girls and boys chose boys), but in the third selection round they showed bias against girls, choosing [girls](#) as teammates for the "smart" game only 37.6% of the time (vs. 53.4% for the other game).

"Our studies add to our current understanding of the processes that lead to women's underrepresentation in 'genius fields'—that is, fields such as physics and philosophy, in which success is generally seen as depending on high-level intellectual ability," observes Cimpian. "Moreover, while [gender](#) bias may be becoming less common in employers' and supervisors' 'public' behavior, such as hiring or promotion decisions, in part because the possibility of bias is often explicitly discussed in these contexts, young women's path to a successful career goes through many contexts in which people may be less guarded and—our evidence suggests—may still behave in biased ways."

Provided by New York University

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