

Analysis shows women who publish physics papers are cited less often than men

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A team of researchers affiliated with multiple institutions in the U.S. has

found that women who publish physics papers are cited less often than are men. In their paper published in the journal *Nature Physics*, the group describes their analysis of more than 1 million published papers in multiple journals.

Prior research and anecdotal evidence have suggested that [women](#) are greatly underrepresented in the sciences, particularly chemistry, physics and math. Prior research has also shown that there are a number of reasons for the differences, among them, simple discrimination. In this new effort, the researchers looked at one type of discrimination—underciting papers based on [gender](#)—that could play a role in the underrepresentation of women in physics.

One of the ways that scientists measure prestige in their field is by the number of times their publications are cited. A high number of citations for a given paper also suggests that the work was both insightful and impactful on the field in which a paper has been published. Thus, a dearth of citations by a given scientist or paper could suggest that the work did little to advance the science involved. But it could also suggest that a bias exists in the science community that makes it more difficult for some members to collect citations.

In this new effort, the researchers sought to find out whether such a bias exists in the physics community. To that end, they studied approximately 1.07 million physics papers published over the years 1995 to 2020 in 35 well-established journals. Their effort involved counting the number of citations made for all of the papers and noting whether the authors of the paper were male or female (as determined by their forename).

The researchers found that papers published by men (where the first and last authors listed were male) were on average 4.23% more likely to be cited. This, they contend, shows that there is a [gender bias](#) that favors citing male colleagues over those who are female. They conclude by

suggesting ways to reduce this [bias](#), such as having researchers sign diversity statements or holding publishers more accountable.

More information: Erin G. Teich et al, Citation inequity and gendered citation practices in contemporary physics, *Nature Physics* (2022). [DOI: 10.1038/s41567-022-01770-1](https://doi.org/10.1038/s41567-022-01770-1)

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