

A gender-biased metric guides funding decisions in psychology research

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How do psychologists gauge scientific impact? One way is the so-called “journal impact factor,” or JIF, a ranking of a journal derived from the number of citations by other authors to all of the articles it has published in a given year. But JIF isn’t just a statistical abstraction. “JIFs are increasingly used to assess and predict the merits of academic work,” which leads to decisions about hiring, promotion, and the allocation of scarce resources to researchers, says University of Surrey psychologist Peter Hegarty.

Needless to say, such a consequential measure must be as fair as possible. But JIF isn’t, say Hegarty and Surrey colleague Zoe Walton in a new article in *Perspectives on Psychological Science*, a journal published by the Association for Psychological Science. “Using JIF underestimates the impact of women researchers relative to men and the social science area relative to the natural science areas of psychology,” says Hegarty. For these reasons, the authors recommend administrators employ JIF “with caution.”

Hegarty and Walton performed a statistical analysis to assess whether JIF is the only, or even the best, way to predict which articles in leading psychology journals will garner the most citations—a number they got using the PsycINFO database. They sampled one issue published from 1996 through 2005 in each of nine high-impact psychology journals, which together represent nine sub-disciplines of psychology—1,133 articles in all. Their analysis included the sex of the first author; the number of pages, authors, and references, and the density of tables and

graphs in the articles. They asked which of these factors predicted citations in the five years following publication?

Along with JIF's underestimation of citations to articles published by women psychologists, Hegarty and Walton found that articles that are longer, have more authors, and cite more references are themselves more frequently cited in turn.

The authors think there's a link between the statistical slighting of papers authored by women in psychology and of those papers published in the social science areas of psychology: Women are better represented in those sub-disciplines and therefore published more often in such journals as the *Journal of Personality and Social Psychology* and *Developmental Psychology*. Men authors, meanwhile, currently predominate in experimental psychology and appear, for example, in the *Journal of Cognitive Neuroscience*.

It's one complexity of a discipline that "straddles the natural and social sciences and is also a field of practice and application," as well as theory and observation, says Hegarty, suggesting that measures of impact within psychology must be sensitive enough to account for the field's complexity.

"Especially when you are using citation counts as a proxy for merit," he says, "it is important to clarify the definition of academic merit. You want to make sure that the measure is not driving the definition of merit rather than the other way around."

Provided by American Psychiatric Association

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