

Study finds early career publications as likely source of NIH funding racial gap

November 14 2018

In seeking to pinpoint why black or African-American scientists are less likely than their white counterparts to receive National Institutes of Health research funding, a group of researchers has identified early career publications as a likely contributor to the gap.

"We found that because publications explain so much of the gap in funding, an intervention that focuses on how to convert research funding into publications seems to be warranted," said Donna Ginther, University of Kansas professor of economics and corresponding author of the forthcoming study published in the journal *PLOS ONE*.

The findings are the latest in a stream of research Ginther has led on the topic dating back to a 2011 Science study commissioned by the NIH that found a 10 percentage point gap in [research funding](#) between NIH grants funded to white applicants versus black or African-American scientists.

Co-authors on the most recent study are Jodi Basner, Unni Jensen and Joshua Schnell, of Discovery Logic and Clarivate Analytics in Rockville, Maryland; Raynard Kington, president of Grinnell College and former principal deputy director of NIH; and, Walter Schaffer, current NIH senior adviser.

The researchers collected data from nearly 2,400 NIH biographical sketches—known as a Biosketches—submitted between 2003-2006 as part of new applications for NIH Type 1, or R01, awards. They used the Biosketches to obtain detailed information on the applicants' training and

scholarly activities, including publications.

Then they examined the association between each applicant's race or ethnicity and the probability of receiving an R01 award. The researchers also performed a counterfactual analysis that found if the average black or African-American investigator had publications at the same rate at those receiving R01 awards, it would effectively close the gap as well.

The analysis revealed black or African American applicants reported fewer papers on the Biosketches, had fewer citations and papers reported appeared in journals with a lower influence in the field. The researchers concluded these predictors could influence the funding gap, but they cautioned the findings do not fully address race and ethnicity differences in receiving a priority score.

Ginther said the research team did identify the scientists' careers seem to diverge during their postdoctoral scholarship period—known as the postdoc when scientists after earning their doctorate professionally conduct research.

"That seems to be the obvious place to start intervening," Ginther said. "Right around the postdoc and early career period to try to make sure that black or African American investigators have the tacit knowledge needed to generate competitive publication records."

The researchers suggest that mentoring interventions that help scientists more effectively convert grant funding into publications would be beneficial.

"The NIH already has a national mentoring network," Ginther said. "Emphasizing that seems to be an appropriate next step."

Another key finding was the funding and publication gaps were larger

among experienced white and black or African-American investigators who had received at least one previous R01 grant.

"This suggests that once an investigator gets his or her first R01 award, they may be diverted from their science into fulfilling a role that the university might value, such as serving on committees or mentoring students of color," Ginther said. "While valuable, these could also take them away from their ability to publish their science."

As the NIH tries to address and eliminate bias in its grant review process, Ginther said that type of bias can also be difficult to tease out. Their recent findings do point to some alternative possibilities and potential fruitful strategies to help encourage minority scientists, she said. However, another word of caution is the NIH has since changed its review process when compared with the current dataset the researchers used.

"The gap between NIH [funding](#) for black or African American and white investigators is very complicated," Ginther said, "and so you need to take a multi-pronged approach. Our research has identified where the careers start to diverge, and that seems to be the obvious place to start intervening, right around the postdoc and in the early career period to try to make sure that black and African American investigators have competitive publication records."

Provided by University of Kansas

Citation: Study finds early career publications as likely source of NIH funding racial gap (2018, November 14) retrieved 9 April 2024 from <https://phys.org/news/2018-11-early-career-source-nih-funding.html>

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