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Study: Women and minorities less interested in academic research careers

By Beryl Lieff Benderly December 16, 2014

Recently, we reported on research showing that gender discrimination does not explain the low percentage of women in math-based fields. The data show that women applicants are at least as likely as men to be hired for those jobs, but women are less likely to apply. Why?

"Differences are not explained by research productivity, self-confidence, or how the scientists describe their relationship with their adviser." -Kenneth Gibbs

A study published in PLOS One on 10 December

adds a revealing dimension to the discussion. During graduate studies in biomedical science, the study indicates, all groups lost interest in faculty careers at research universities during graduate training—but men from underrepresented minority (URM) groups (defined as "American Indian/Alaska Native," "Black/African-American," "Hispanic/Latino," or "Native Hawaiian/Pacific Islander") and women of all ethnic and racial backgrounds lost interest in those careers more than men of well-represented (WR) groups (defined as "White" or "Asian/Asian American") did. There was no significant change in interest in teaching-focused faculty positions or nonacademic research careers; "the pattern of lower interest ... was unique to interest in faculty careers at research universities," write Kenneth D. Gibbs Jr., a postdoctoral fellow at the National Cancer Institute in Bethesda, Maryland, et al, in "Biomedical Science Ph.D. Career Interest Patterns by Race/Ethnicity and Gender."

"(I)nterventions to broaden participation in the workforce are often based on the assumption that if women and URMs progress through the system, demonstrate research productivity, and are well mentored, they will naturally choose faculty careers," the authors write. Previous research has demonstrated the influence of personal preferences and values on individuals' decisions about whether to pursue research careers.

"We were interested in surveying a large and diverse enough group of scientists to see if the trends seen in other studies of scientists showing less interest in academic careers—most notably by [Cynthia] Fuhrmann and [Henry] Sauermann and [Michael] Roach—were the same or different across race, ethnicity, gender, and their intersection," Gibbs told Science Careers in an e-mail. To find out, the authors quizzed 1500 American biomedical scientists who got their doctorates between 2007 and 2012, asking them about their career interests at "the beginning of their Ph.D. training, ... the completion of their Ph.D. training, and ... currently." Most of their results focus on the first two







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time points, at the beginning and end of Ph.D. training.

Initially, men were more interested in research-focused academic careers than women were, and WR men and WR women were more interested in research-focused academic careers than URM women. Interest in becoming a research-oriented faculty member waned among all groups over the course of graduate study, as previous researchers have found. After Ph.D. training, women remained less interested than men in research-focused academic careers, with URM women continuing to be the least interested in seeking research-focused academic careers. For nonresearch careers, there were no significant group differences at the beginning of training, but by the end of graduate school, URM women were more interested in them than any other group.

"Differences are not explained by research productivity, self-confidence, or how the scientists describe their relationship with their adviser," Gibbs emphasized in a phone interview. The study, he says, "raises a lot more questions about what is influencing career decision-making, and it points to the need to go beyond just increasing numbers to increase representation." Finding out why research-focused faculty careers have less appeal to members of underrepresented groups, then—and why all groups lose interest in such careers over the course of their graduate training—would appear to be an important step toward diversifying academic science.

Beryl Lieff Benderly writes from Washington, D.C.

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