

Growing diversity in doctoral programs

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The challenges of increasing diversity in academia have been widely cited. Now a new Northwestern Medicine study is addressing challenges at the Ph.D. level to boost the persistence of underrepresented minority and female students toward academic careers.

The study is testing a new coaching program to provide in-depth guidance on succeeding in science careers and reduce the commonly reported feelings of pressure and isolation of Ph.D. students from underrepresented backgrounds. The program consists of individual and group-based professional development activities, and discussions with fellow students and highly skilled mentors serving as coaches, many of them minorities themselves, trained in diversity issues. The program is also includes equal numbers of students by race, ethnicity and gender. The results were positive.

The study is being published Dec. 16 in [*Academic Medicine*](#).

In the study's paper, one African-American female student from the new coaching group said, "I'm so happy to see other people of color in one place doing the same thing that I'm doing." Another African-American female said in a recording to her coach, "You ... are very inspiring because ... you're a wife, a mother, a woman of color, all these things ... that was also very reaffirming."

The study is ongoing and included 121 graduate students from 74 public and private institutions. For those who received coaching, confidence in achieving a career in academia increased from the start of the study, in

July 2012, through the follow-up in July 2013. The coaching was intended to be used as a supplement to schools' traditional one-to-one research mentoring. Confidence decreased for students in the control group, who did not receive coaching beyond what mentoring they were receiving at their home universities, the authors said.

"For women and students from racial and ethnic minority groups in particular, the program provided new role models and novel opportunities to have difficult conversations about diversity, difference and discrimination in science," said first author Simon Williams, research assistant professor in medical social sciences at Northwestern University Feinberg School of Medicine.

"The ultimate goal is for more of those in the coaching group—and hopefully more underrepresented racial and ethnic minority groups - to end up in faculty positions," said Williams. "In the field of science, a more diverse workforce allows more complex, varied and diverse questions to be asked and ultimately leads to breakthroughs in research."

Interest in biomedical [academic careers](#) declines during Ph.D. studies across all races, ethnicities and genders, but especially for underrepresented minorities, earlier research has shown. In addition to the limited number of academic positions and difficulty getting grants, confidence about achieving this career path can be hampered by perceptions of being stereotyped by race or gender, and being expected to represent everyone of their group.

One African-American male student in the study cited his experience giving a presentation in which he was the only minority in the room. "I kind of feel that pressure," he said. "It makes me nervous and less likely to carry on a conversation with anyone. I prefer to stay by myself."

"It's a combination of these students feeling like their peers are judging

them and somehow expecting them to be a representative of all minorities," said senior study author Richard McGee, a professor in medical education at Feinberg. "They become the person who either fits into the stereotype that people have, or they're trying to debunk the stereotype. By providing high quality professional development and the opportunity to talk about these feelings in a 'safe space' of peers and a skilled scientist coach, the goal is to mitigate these legitimate feelings and provide paths to academic careers."

Current mentoring of young life scientists is highly variable, which leads to risks that some may miss out on the informal guidance that makes or breaks academic success, McGee said. Some students who received the supplemental mentoring said they felt like they had better access to their coaches than they had with their university research mentors and other advisors. Others said working with someone who isn't affiliated with their institution provided unbiased support and advice.

Created by Dr. McGee in 2011, the program, called "The Academy for Future Science Faculty," is being tested in a longitudinal randomized control trial. The researchers will continue to follow the students, with the long-term aim being to see whether more students in the program, particularly those from underrepresented groups, end up in faculty positions. Many of the students continue to keep connected with their coaches and coaching group colleagues.

Although being currently tested with biomedical science students, the authors conclude that coaching could be useful for other [students](#) and in different settings.

Provided by Northwestern University

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