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Threats within

With an APF innovation grant, Michael Inzlicht is investigating how negative stereotypes can hamper academic performance.

BY JAMIE CHAMBERLIN
Monitor staff

Despite advances in recent years, women continue to be underrepresented in math and science careers. According to the National Science Foundation, while women account for more than half of U.S. undergraduates and graduate students, they make up less than one-third of all bachelor's degree recipients in the physical and computer sciences, and less than a quarter of all graduate degree recipients in engineering and mathematics.

But research by psychologist Michael Inzlicht, PhD, holds the potential to help close this gender gap—as well as a similar racial gap between African Americans and whites in higher education. Inzlicht, whose research is funded by a \$10,000 grant from the Rosalee G. and Raymond A. Weiss Research and Program Innovation Fund of the American Psychological Foundation, posits that these gaps are caused in part by “stereotype threat,” or worrying about one's risk of confirming a negative stereotype about one's group. More specifically, he's found that stereotype threat drains the self-control needed for optimal academic performance.

Inzlicht, who finished a postdoc at New York University (NYU) this fall and began a tenure-track position at Wilfrid Laurier University in Ontario, is using the grant to conduct studies on the link between self-control, stereotypes and performance. His ultimate goal? Identifying ways students can build their reserves of self-control to overcome stereotype threat.

Building on a theory

Inzlicht began this line of research as a graduate student at Brown University when he studied whether being outnumbered in a group could be a cause of stereotype threat. To test this, he asked women to complete a math test in one of two situations—in a room with two men or with two other women. Strikingly, he found that the situation could undermine test performance: Women participants performed worse when they were in the minority.

During his postdoc at NYU, Inzlicht linked his findings to cutting-edge research on self-control—or the ability to regulate one's own behavior and actions—by Florida State University social psychologist Roy Baumeister, PhD, who showed that people have a limited supply of self-control available and that using up available amounts can put them at a disadvantage.

Indeed, Inzlicht uncovered a strong link—evidence that activating stereotypes in the lab drained people's reserves of self-

control. He assigned women to one of two groups: In the first, he “activated”—or informed participants about the existence of—the negative stereotype that women aren't as strong in math and science, then gave them a hand grip and asked them to hold on to it as long as they could; in the second, he simply asked women to do the hand-grip test.

Women who were thinking about stereotype were able to hold the hand grip for significantly less time, he noted. “The hand-grip test is a measure of self-control,” explains Inzlicht. “A large determinant is hand strength, but it also matters how committed you are to holding on to it.”

He set up a similar study in which he activated the negative stereotype that African Americans aren't as strong academically as white Americans, this time measuring attentional self-control through a Stroop color-word task. Inzlicht found a similar effect among the experiment's African-American participants: Those activated took longer to complete the task, indicating that being the target of negative stereotypes depletes self-control, notes Inzlicht.

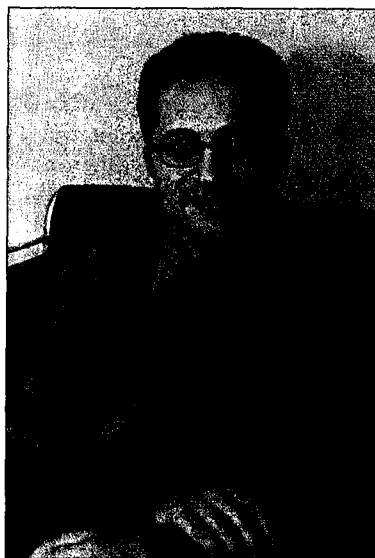
In the classroom

With the Weiss grant, Inzlicht will build on these laboratory studies by looking more closely at stereotype, self-control and performance in the classroom. By September 2005 he'll be working in classrooms in and around Waterloo, Ontario, looking specifically at gender composition.

If his theory that minority environments consume self-control holds true, “We predict that there will be a linear relationship for women students between proportion of women in the class, their self-control strength and ultimately, their grades.”

The grant will enable him to hire a graduate research assistant, purchase a computer to use on-site in the schools and present his findings at research conferences. He hopes to eventually develop an intervention that builds self-control and to continue to examine the connection between minority environments and self-control.

“Self-control may underlie not only school performance but many of the problems in our society such as drug abuse, sexual abuse and obesity,” says Inzlicht. Ψ



Research by Dr. Michael Inzlicht explores the gender gap in math and science.