

Why is medicine better than science at retaining women?

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A female doctor examines a patient. About 99% of female med school graduates are still practicing 7 years after graduation, far more than female scientists. (Image: CDC)

Over the last ten years, women earned roughly half the doctorates awarded in biological sciences, yet they make up only 35% of assistant professors in both Canada and the United States. About half of medical students are also female, but similar numbers of men and women are still in medicine seven years after training. In a recent [article](#) published in *BioScience*, Professor Shelley Adamo examines the reasons why medicine—as a field—is more successful at retaining women than are the academic life sciences.

It's not the long hours, children, or money

It's often suggested that women leave academic science because they find it difficult (or fear they will find it difficult) to balance the long hours of a science career with raising a family. But as Adamo points out, female physicians work longer hours than female professors and retention of female medical students is about 99% seven years after training.

Additionally, studies show that female physicians are often pressured to work long hours after becoming mothers, and many aren't happy about that. They also have fewer children than male physicians (but more than female scientists). On the surface, the flexibility of academic science makes it more family-friendly than medicine.

Maybe physicians are better able to pay for childcare and housekeeping help? Not so says Adamo: in Canada, many physicians and biology professors make similar salaries.

So what is the difference? Competition for jobs

As Adamo points out, the biggest difference between the training of physicians and the training of scientists is competition for jobs. For physicians, the most competitive period is getting into medical school, which is very selective. However, medical schools purposefully train fewer medical students than the available number of residencies—ensuring that medical students will have a secure career path upon graduation. In science, it is easier to be admitted to graduate school but the competition for jobs later on is fierce—fewer than 15% of biology PhDs find academic science positions in Canada. Also, pre-medical school competition has vastly different effects on women than does post-graduate school competition. Most medical students will be admitted into medical school before having their first child, whereas the competition for faculty positions in the sciences occurs later—in the late 20s and 30s—when women are more likely to have a family and thus have less time, less mobility, and more stress. Male scientists are also more likely to have children at this point, but studies show that having a family does not impact their career prospects [although my hypothesis is that [dads](#) with working spouses do have a tougher time].

There is a country-specific difference in the rate of tenure of women who do land those coveted faculty positions: in Canada the rate is the same between men and women, but in the U.S. female scientists are less likely to earn tenure than their male colleagues—actually 27% less likely when they have young children. Adamo suggests that this might be due to a difference in the maternity leave policies—usually 6 weeks paid in the U.S. compared to 17 weeks paid in Canada (and up to a year with partial pay). [Although Adamo mentions earlier in the piece that this is not the case for physicians: “In Canada, there are no legally mandated policies on maternity leave for female physicians after residency”]

So how can we retain more women in science? The key may be to train fewer scientists and, in the US, to improve parental leave policies.