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## **Keeping Women in Science on a Tenure Track**

By **STEVEN GREENHOUSE**

More women are obtaining Ph.D.'s in science than ever before, but those women — largely because of pressures from having a family — are far more likely than their male counterparts to “leak” out of the research science pipeline before obtaining tenure at a college or university.

That's the conclusion of a study by researchers at the [University of California, Berkeley](#), who warned that the loss of these scientists — together with the increased research capabilities of Asian and European countries — may threaten America's pre-eminence in science.

The study, “[Keeping Women in the Science Pipeline](#),” found that women who are married with young children are 35 percent less likely to enter a tenure-track position after receiving a Ph.D. in science than are married men with young children and Ph.D.'s in science. Not only that, the married women with young children are 28 percent less likely than women without children to achieve tenure in the sciences.

Moreover, women Ph.D.'s with young children are 27 percent less likely than men with children to receive tenure after entering a tenure-track job in the sciences. The report notes that single women without young children are roughly as successful as married men with children in attaining tenure-track jobs.

According to the report, plans to have children affect women postdoctoral scholars more than their male counterparts. Women who had children after becoming postdoctoral scholars in the [University of California](#) system were twice as likely as their male counterparts to shift their career goals away from being professors with a research emphasis — a 41 percent shift for women versus 20 percent for men.

“Of course, not all women want children or marriage,” noted the report, written by three researchers at the University of California, Berkeley: Mary Ann Mason, Marc Goulden and Karie Frasch. “As one faculty colleague put it, ‘Motherhood would only keep me from my passion: science.’□”

Tenured male scientists are considerably more likely to be married with children than tenured female scientists — 73 percent for men versus 53 percent for women. The report noted that among tenured science professors, women are nearly three times more likely to be single without children than men — 25 percent to 9 percent.

The report said that one reason many women Ph.D.'s leave the research science pipeline is that

only a small fraction of research universities offer paid maternity leave to graduate students or postdoctoral scholars. According to the report, 13 percent of universities provide at least six weeks' paid maternity leave to graduate students, while 58 percent of universities provide it to faculty.

The report found huge time demands on faculty, especially women. "The time pressures of academia are unrelenting for most faculty in the sciences, who work on average about 50 hours a week up through age 62," the report states. "When combined with care-giving hours and house work, U.C. women faculty with children, ages 30 to 50, report a weekly average of over 100 hours of combined activities (compared to 86 hours for men with children). And women faculty with children provide an average of more than 30 hours a week of care giving up through age 50."

The report urges universities to adopt more family-friendly policies to help prevent women Ph.D.'s in the sciences from dropping out of research careers. It recommends giving paid maternity leave to graduate students and "stopping the clock" on tenure for women scientists who give birth, perhaps by giving an extra year before making tenure decisions, in effect giving them extra time to do research and publish. The report also criticized policies that require postdoctoral scholars to begin their work within a certain number of years after receiving their Ph.D. "The lock-step timing of academia needs to be more flexible," the report says.

"America's researchers do not receive enough family-responsive benefits, particularly the more junior researchers," the report concludes. "All major research universities should look to build a family-friendly package of policies and resources."

Ms. Mason, the report's principal author and a director of the Center for Economics and Family Security at the University of California, Berkeley, School of Law, noted that since 2003, the University of California system had adopted more family-friendly policies, like giving new mothers leave of two semesters without teaching in addition to their child-birth leave and giving six weeks' paid maternity leave to graduate students.

Thanks in large part to such policies, Professor Mason said, 64 percent of assistant professors in the University of California system have children, up from 27 percent in 2003.

"It shows that you can change the workplace culture," she said.