Women scientists face problems

Surveys say that women collaborate less than men, find balancing work and family difficult

By Charles Q. Choi

SEATTLE—Women scientists experience less collaboration than their male colleagues, and roughly 63% find that balancing work and family is their biggest challenge, according to new surveys presented at the annual American Association for the Advancement of Science (AAAS) meeting here on Friday (February 13).

While the number of women majoring in science and technology has increased since the 1960s, according to a 2000 National Science Foundation (NSF) study, the percentage of those moving into the academic community remains low. Only 19.5% of science and engineering faculty at 4-year colleges and universities in the United States are women, and 10.4% of full professors. At large research institutions, the numbers are even smaller, that study noted.

In her studies of faculty recruitment, physicist Patricia Rankin of the University of Colorado in Boulder said her preliminary findings suggest academics have to follow "a perfect trajectory" to become faculty. "They need to have avoided anything that derailed them," she said. "Getting off track does not only happen to women, but it does seem to occur more frequently to women at crucial career points."

Rankin noted criticism could prove a stumbling block. "Like it or not, when a woman is criticized and told not to be in a field, more women take it to heart. We're not doing as good a job at building self-confidence as we'd want," Rankin said. "If we're stressing how difficult a field is, we should also stress how enjoyable it can be."

Improving ease of collaboration among faculty could also help women advance, Georgia Institute of Technology sociologist Mary Frank Fox told The Scientist. When it came to academics speaking with colleagues about their research on a regular basis, a survey of her school's faculty revealed men were more likely to do so than women (30% versus 13%). "When new faculty members are recruited, both men and women, it's important for department chairs to make apparent the contribution to a research area that's brought by the new faculty member, and the way it connects to other people," Fox said.

Rankin said that pregnancy is a potentially crucial career turning point unique to women. "The decision to have that child occupies a lot of time and may not come at an optimal point in a career. It's hard to take time off when in an active research group," Rankin said. There are even cases
in which potential supervisors are concerned about hiring women candidates because they could become pregnant, she said.

Women scientists and engineers often name balancing career and family as a key issue. Anthropologist Sue V. Rosser at the Georgia Institute of Technology looked at women scientists and engineers in tenure tracks awarded funding by the National Science Foundation (NSF) program Professional Opportunities for Women in Research and Education (POWRE). When Rosser asked what significant issues POWRE awardees from 1997 faced, she was surprised to find nearly 63% of respondents singled out balancing work with family as their biggest challenge. "This amazed me because the question was so open-ended," Rosser said. "They could have said anything, such as funding."

Rosser found even greater consensus when the survey was repeated with POWRE awardees from 1998, 1999, and 2000, with 73 to 78% of respondents citing balancing family and career as their major problem. Family issues loom large, Rosser said, because many women scientists and engineers postpone children. "By the time a woman completes her doctoral degree and postdoc work, she is typically in her early thirties—an age where there is competition between the tenure clock and the biological clock," Rosser said.

The NSF's ADVANCE program is developing policies that include "stopping the tenure clock," which means the time a woman is on maternity leave does not count toward the tenure track probationary period. "Such positive changes should have a ripple effect on women graduate and undergraduate students as they consider the wisdom of choosing a career in academia," Rosser said.

Sociologist Cheryl B. Leggon of the Georgia Institute of Technology also noted that her studies reveal the numbers of women of color on US academic faculties are very small and not increasing. "The United States is becoming more diverse, and that is somewhat reflected in the student population in colleges and universities, but nowhere in the faculty population," she said. "The absence of these groups does send a message."

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Mary Frank Fox http://www.prism.gatech.edu/~mf27/
Sue V. Rosser http://www.spp.gatech.edu/people/faculty/srosser.htm
Professional Opportunities for Women in Research and Education http://www.nsf.gov/home/crssprgm/powre/start.htm
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