When women are more like men, they still face STEM bias

November 2 2016, by Susan Kelley

Whenever Cornell demographer Sharon Sassler talks about her latest research, she has to restrain herself from singing the lyric, "Why can't a woman be more like a man?" from the musical "My Fair Lady."

Even when women were more like men 20 to 40 years ago, it didn't help them get a job in science, technology, engineering and mathematics (STEM) fields, says Sassler, professor of policy analysis and management.

That's according to Sassler's new study on women who completed college STEM degrees in the 1970s through the early 1990s. "We don't know if these findings still hold in the current marketplace," Sassler cautioned, "although some research suggests that women still face challenges entering into STEM fields."

The study found that when women planned to delay marriage and limit the number of children they wanted – which would let them focus exclusively on work – they didn't get the same employment opportunities in STEM as men. Of those graduating with a STEM degree, 41 percent of women and 53 percent of men were employed in a STEM job within two years of completing college – a statistically significant difference, the study said.

"These women have the characteristics of the ideal worker. They expect to have few family distractions and work in STEM both within five years and at midlife. They really have strong aspirations," Sassler said. "But

they were no more likely to enter STEM jobs than women who anticipated marrying young and having two or more children."

The study, "The missing women in STEM?" was published Sept. 28 in *Social Science Research*. Sassler's co-authors include Yael Levitte, associate vice provost for faculty development and diversity.

The study fills a void in research on the "pipeline" for women's employment in STEM fields. The transition from college to the workforce is a crucial – and poorly understood – section of the pipeline, Sassler said.

"If women aren't getting into these STEM jobs, then they're not there to mentor other women. They're not there to climb the ladder and help with hiring," she said.

The researchers analyzed data from the 1979 National Longitudinal Surveys of Youth. This sample of young people ages 14-22 were interviewed in 1979, again as young adults and periodically through the present about their teenage career aspirations, fields of study during college and occupations over time. The researchers focused on 163 women and 353 men who completed STEM bachelor degrees.

Employer bias was one potential reason for the STEM employment gap, the researchers concluded.

"You would think that a woman who intended to limit her fertility would be more hirable in demanding jobs," Sassler said. "Men with similar family preferences, however, were more likely than women to transition into the STEM workforce. The women were not seen as desirable as men who said the same thing."

"If a woman with a STEM degree said she didn't want children, her peers

and employers didn't seem to believe her," added Levitte.

Another major reason for the employment gap was women's underrepresentation in STEM majors, the study said.

While only 15 percent of women earned a STEM degree, nearly 33 percent of men did. Moreover, men were significantly more likely than women to get degrees in computer science and engineering, majors that translate most frequently into a STEM job. In contrast, more women majored in life sciences, but often found non-STEM work.

Ideas about the roles men and women should play may also have kept women out of STEM jobs, the researchers said. Men in the study had more conservative views, saying that women should be responsible for domestic and childcare responsibilities. In contrast, women said couples should share housework and childcare.

"Women might have perceived potential colleagues or the broader STEM climate as too conservative to work in," Levitte said.

To counteract leakage of women from the STEM pipeline, colleges and universities should encourage women to major in STEM subjects. "Cornell's College of Engineering seems to be doing its part; 48 percent of incoming freshman for the Class of 2020 and 43 percent of all students enrolled in the College of Engineering are women," Levitte said.

More information: Sharon Sassler et al. The missing women in STEM? Assessing gender differentials in the factors associated with transition to first jobs, *Social Science Research* (2016). DOI: 10.1016/j.ssresearch.2016.09.014

Provided by Cornell University