Women are listed as authors in scientific and medical journal publications less often than men. This includes peer-reviewed publications across both specialty and general medical journals,1 case reports,2 and commentaries,3,4 and articles written by women are cited less often after publication.5 A recent series of papers shows this also is true in the family medicine literature including publications from the Robert Graham Center,6 the Annals of Family Medicine, the Journal of the American Board of Family Medicine, and Family Medicine.7,8

In this issue of Family Medicine, Mieses Malchuk and colleagues demonstrate two important findings in their review of the gender (by name) of authors in Family Medicine, the Annals of Family Medicine and the Journal of the American Board of Family Medicine between 2008 and 2017. First, over the study period, there were fewer female than male first and last authors. Second, there was a higher share of female first authors with female last authors.9 While the last author position may not necessarily indicate a senior author role and a senior author may or may not be a mentor to the first author, they propose that women may be disproportionately mentored by other women. This is a potentially important and interesting observation, but mentorship means much more than just support for publication.10

Mentorship, often defined as a sharing of knowledge and expertise in a given area, may also include psychosocial support and guidance as mentees work toward career goals. Some mentors may also act as coaches or sponsors. A coach focuses on assisting faculty in skill development while a sponsor seeks to increase the visibility of faculty members and assists with identifying specific opportunities for career advancement. Mentees are often best served by multiple mentors, offering expertise in different areas, rather than a single mentor.10 Mentorship has been proposed as a strategy to address gender disparities and bias in academic medicine by assisting women faculty in navigating the promotion process. Yet in a 2016 report, 34% of female faculty at 13 medical schools did not currently have a mentor and 13% had never had a mentor.11 A recent systematic review analyzed mentorship programs for women in academic medicine at 19 US institutions. While the programs were diverse in their approaches, common components included paired or group mentoring, workshops, skills development, networking events, and journal or book discussion. These programs were generally highly rated by participants. Eight of the 19 programs reported improvements in objective outcomes including recruitment, retention, promotion and/or scholarly publications.12

In spite of programs to support women’s retention and promotion, recent studies and reviews find that women persistently lag behind their male colleagues in promotions and appointment to leadership positions. One might assume this would improve over time, but several studies suggest otherwise. A study following a cohort of faculty from the 1995 National Faculty Survey through 17 years showed persistent gender disparities in rank, retention, and leadership positions.13 In addition, an examination of US allopathic medical school
graduates from 1979-2013, and faculty data through 2018, found women were less likely to be promoted to associate or full professor or appointed to department chair. These gaps did not narrow over the 35 years of the study and are more pronounced for women of underrepresented minority groups in medicine (URiM), an example of the combined burden of race and gender.\textsuperscript{13-15} The 2019 American Association of Medical Colleges report, \textit{The State of Women in Academic Medicine 2018-2019}, found that women make up a minority of full professors (25%), department chairs (18% overall, 30.4% in departments of family medicine) and deans (18%). This is notwithstanding the fact that the since 2003 women have made up about 50% of allopathic medical school matriculants.\textsuperscript{16}

Why might this be? Women report not pursuing leadership positions in medicine because “leadership costs outweigh the benefits.”\textsuperscript{17} Women experience gender-based discrimination,\textsuperscript{18} sexual harassment,\textsuperscript{19,20} and maternal discrimination.\textsuperscript{21} Gender stereotypes influence peer review of grants.\textsuperscript{22} Microaggressions and role challenges with lack of work-life balance contaminate many working environments.\textsuperscript{23,24} Women carry more responsibility than their male counterparts for personal and family life.\textsuperscript{25} Controlling for specialty, women physicians continue to be underpaid compared to men\textsuperscript{26,27} and burnout for women continues to be more prevalent.\textsuperscript{28,29} The Association of American Medical Colleges reports that a staggering 41% of full-time women faculty left their position in academic medicine in 2018.\textsuperscript{16} Systemic implicit bias pervades medicine as it does our entire society.\textsuperscript{30-32}

What are some solutions for women to be able to pursue any career path in academic medicine? We can start with collecting and assessing data on gender (and race and ethnicity) as it relates to authorship, salaries, promotion, and harassment, paying close attention to intersectionality, defined as “interconnected nature of social categorizations such as race, class, and gender creating overlapping and interdependent systems of discrimination or disadvantage.”\textsuperscript{33} For women, and those who are members of URiM groups, to be “seen, heard, and valued” requires us to eliminate the “culture of exclusion.”\textsuperscript{34} Carnes recommends treating unintentional or implicit bias as a “remediable habit” that may first be changed by becoming more aware of individual and collective biases, understanding their consequences, and learning skills to address them such as stereotype replacement, counter-stereotypic imaging, individuation, perspective taking, and increasing contact.\textsuperscript{35,36} Interventions are most effective when not limited to one focus but rather coordinated across the individual, interpersonal, institutional, professional, and policy levels.\textsuperscript{31,37} Examples of these might include policies to deal with discriminatory patient behavior\textsuperscript{38,39} and the normalization of parenting within career expectations.\textsuperscript{40,41} Challenging accepted assumptions and norms by making part-time training during residency more accessible and loosening strict promotion clocks\textsuperscript{42} is difficult yet necessary.

Mieses Malchuk and colleagues have added new insights to those of other authors in exposing bias in medicine, this time in family medicine. Family medicine is well positioned to respond because family physicians understand systems, social determinants of health, and advocacy. With women in nearly one-third of family medicine department chair roles, we have more role models than many specialties. To achieve greater equity and inclusion in family medicine, we must intentionally create and support diverse and welcoming pathways to professional achievement. The entrenched issues of systemic and structural patriarchy and racism within medicine require our attention. As novelist and thinker Chimamanda Ngozi Adichie states, “Culture does not make people. People make culture. If it is true that the full humanity of women is not our culture, then we can and must make it our culture.”\textsuperscript{43}

\section*{References}


35. Haggins AN. To be seen, heard, and valued: strategies to promote a sense of belonging for women and underrepresented in medicine physicians. Acad Med. 2020;95(10):1507-1510. doi:10.1097/ACM.0000000000001053


