

Opinion
Medicine General & Policy



Gender Equity in Academic Medicine

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Received: Jan 17, 2023

Accepted: Feb 21, 2023

Published online: Apr 21, 2023

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Disclosure

The authors have no potential conflicts of interest to disclose.

Author Contributions

Conceptualization: Sandhu NK, Gupta L.
Data curation: Sandhu NK, Gupta L. Formal analysis: Gupta L. Investigation: Gupta L. Methodology: Gupta L. Project administration:

Modern society is witnessing widening support for gender equity. There has been a rapid increase in the attendance rates of women in universities leading to a rise in workplace participation.^{1,2} However, despite these advances, significant disparities remain. According to the International Labor Organization (ILO), in 2021, globally, among women over 15 years of age, the labor force participation rate was 46% compared to 72% among men in the same age group, with figures varying from approximately 11% in Iraq to 79% in Burundi.^{3,4} According to the “Progress on the Sustainable Development Goals: The Gender Snapshot 2022” report by the United Nations Department of Economic and Social Affairs, women held less than 20% of jobs in information and technology, fewer than one-third of managerial positions, and accounted for less than 17% of patents issued worldwide.⁵

This paper aims to facilitate a discussion on the role of the gender moderator in academic medicine. While the terms *equity* and *equality* are often used interchangeably, the United Nations Sustainable Development Goals (SDG) include gender equality (goal 5) which is defined as ensuring equal opportunities for both men and women to participate in decision-making at all levels of public life effectively.⁶ It focuses on ensuring equal treatment for both genders, which requires cross-sectoral collaboration and gender-inclusive partnerships across the implementation of all SDG-related projects.^{7,8} Gender equity, on the other hand, focuses on the fair (equal or different) treatment of both sexes according to their individual needs to create equivalent outcomes and opportunities.^{9,10} It promotes the creation of reasonable accommodations for members of each sex to foster an equitable work environment that provides every worker with an equal opportunity for career advancement.¹¹

The gender moderator is a crucial factor influencing organizational work and outcomes through management style and work-life balance policies.^{12,13} While men score better on mathematical and spatial ability, women score better on memory tests, verbal fluency, and fine motor skills. Women tend to discuss issues and offer constructivist advice.¹⁴ Likewise, female leaders favor a transformational style emphasizing motivation and individualized consideration. Male leaders favor a transactional form of leadership based on rewards and punishments.¹⁵ Female leaders have a holistic and inclusive approach to management and favor sustainable choices that promote the organization's long-term goals.¹⁶ Even though both sexes may have different overall contributions in the work environment, these differences should be viewed as strengths that will allow women to reduce the inequity between the genders.

Gupta L. Resources: Gupta L. Software: Gupta L. Supervision: Peixoto Souza M, Gupta L. Validation: Gupta L. Visualization: Gupta L. Writing - original draft: Sandhu NK. Writing - review & editing: Sandhu NK, Peixoto Souza M, Figliuolo M, Gupta L.

The participation of women in academia has lagged behind men. The United Nations Educational, Scientific and Cultural Organization (UNESCO) 2020 estimates suggest that globally women held approximately 43% of jobs in academia, ranging between 50% in North America to 24% in Sub-Saharan Africa.¹⁷ A study on post-secondary education in the United States found that, although women occupied 47.5% of full-time faculty positions, they held 32.5% of tenure track positions and were paid 81.5% of the salary of their male peers.¹⁸ This gap tends to widen in the Science, Technology Engineering, and Management (STEM) fields, potentially arising from the absence of supportive policies and networks.¹⁹ The World Health Organization Gender Equity in Health Workforce Report suggests that women account for 70% of the global health workforce. However, they are mostly confined to lower-level jobs. The percentage of female physicians varies from 28% in the African region to 53% in the European Union (EU), with female nurses ranging from 65% in Africa to 84% in the EU with an average gender-based pay gap of 28% (13%: physicians, 12%: nurses and midwives).²⁰ Although most Rheumatology fellows in the U.S. and practicing physicians in the EU are women, they are underrepresented in leadership positions.²¹ Female physicians had lower publication-related productivity as per their H indices (individual level metric to measure the impact of publications) compared to their male peers.²² Another study showed a lack of equitable female representation on the editorial boards of 34 prominent Rheumatology journals.^{23,24}

Men and women differ in their susceptibility to disease. Women are more likely to present with autoimmune diseases compared to men.^{25,26} The disease manifestations, care-seeking behavior, provider preference, and treatment response differs between the sexes.²⁷ However, very little research has been conducted to examine gender-based differences as confounders in clinical trials. This topic was the central point of discussion at the recent *Lancet* sex and gender summit in rheumatology. It provided eye-opening insights into the underrepresentation of either sex in clinical trials, leading to gender-skewed data and the amplification of disease prototypes.²⁸ An emerging movement in medicine to ensure fair and equitable treatment of diverse populations led to the development of Sex and Gender Equity in Research (SAGER) guidelines to improve the reporting of gender and sex-based differences in the design, implementation, and reporting of scientific studies.²⁹

The Asia-Pacific region has demonstrated significant gender-based disparities, with the World Economic Forum Global Gender Gap Index in 2021 placing South Korea in 102nd place and India in 140th place, indicating substantial gender disparities in the region.³⁰ These disparities are also observed in the field of medicine. A survey of female physicians in South Korea in 2020 revealed significant gender-based discrimination in the workplace, particularly in the context of pregnancy and childcare.³¹ A qualitative study documenting the experiences of female academic physicians in South Korea revealed feelings of being othered and experiencing unhealthy work-life balances.³² Similar disparities are notable in Rheumatology conference participation, with female participants accounting for fewer than 20% of the speaker and chairperson roles over a span of 10 years at the Indian Rheumatology Association.³³

Several hypotheses have been presented to explain the hampered professional advancement of women in academia, including gender stereotyping, adverse gender climate, and biological differences leading to different needs for work-life balance and crucial psychological differences such as negotiation skills compared to men.^{34,35} A cohort study that followed 16,418 medical students across 32 medical centers in the U.S. found that males were more likely to be enrolled in MD/PhD programs compared to females.³⁶ Unfortunately, there have been reports of

substantial hardships due to workplace harassment, disrespectful attitudes from patients and colleagues, lack of equal opportunities, and poor work-life balance for women.^{37,38}

These observations create a case for an unmet need to substantiate the gender gap in recent times and identify organizational approaches to mitigate these concerns. Such efforts must be guided by consensus-building discussions involving all relevant stakeholders.³⁹ Recent efforts have led to the creation of analytic tools to assess gender disparities in academic conferences.⁴⁰ Greater participation of underrepresented communities is needed in academia, editorial boards, and leadership positions to promote a culture of equity and create a more just society.

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