

... close the gender gap in science

by Eva Gottwalles

At the beginning of your academic career, you may have already experienced it: in many disciplines, particularly in STEM fields, women are significantly underrepresented. The higher the status of a position, the lower the proportion of women. Despite numerous efforts to promote equal opportunities, the Gender Science Gap persists. Why is that? The causes of the Gender Science Gap are multifaceted and require both structural changes and the exploration and utilisation of individual agency.

What's Going On? Gender (Science) Gap

Gender gaps describe the unequal treatment of individuals based on gender identity. These disparities affect all aspects of life and have profound economic consequences, making gender inequality a key dimension of social inequality.

The Gender Science Gap specifically refers to gender disparities in academia. According to UNESCO, women account for less than 30% of researchers worldwide. The *Gender Gap in Science* project, a global initiative addressing these disparities, has demonstrated that "the gender gap in science exists across all regions, disciplines, and career stages" (gender-gap-in-science.org).

This means that women face a persistent Gender Pay Gap, slower career advancement, significant disparities due to parenthood, lower-quality PhD programmes, a lack of female role models, less familial support, and disproportionately higher exposure to sexual harassment.

Very Concrete: The Gender Publication Gap

Publication records play a crucial role in determining academic career success. Not only is the quantity of publications relevant, but also the prestige of the journals in which they appear. High-visibility and frequently cited publications increase opportunities for career advancement, collaboration, networking, and conference invitations. Publications serve as a key metric of scholarly merit—acting as a gateway or a barrier.

This is where the Gender Publication Gap comes into play, measuring publication frequency by gender. Data from 2022 revealed that only 34.6% of academic publications in Germany were authored by women (Elsevier, 2024). Why is this the case? One reason is the underrepresentation of women in certain disciplines and professorships. However, structural factors also play a role:

- Women bear a disproportionate burden of administrative tasks and institutional care work, reducing their research and publication time.
- Women are overrepresented in disciplines with lower publication rates.
- Women face stricter evaluations in the peer-review process and in research funding applications.

If you have topics for the „how to“ section we have not yet touched, please email us at jGfV@G-f-V.org.

- Women have less access to academic networks that facilitate publications and co-authorship opportunities.

The underrepresentation of women in academia results in fewer female mentors and role models who could provide strategic guidance and support for academic careers and publishing.

What to Do? Countermeasures

The causes of gender gaps are diverse, and so are the possible interventions. Below are some key measures that can contribute to greater gender equity in academia.

Cultural Change and Awareness-Raising

Achieving gender equity in academia requires a long-term transformation of academic culture. You can play an active role by fostering an open and diverse working environment.

- Support the publication of data and studies on various gender gaps in academia.
- Establish clear criteria in your own review and evaluation activities.
- Advocate for bias-awareness training to reduce unconscious biases.
- Demand a zero-tolerance policy against discrimination and sexism.
- Connect with like-minded colleagues and build supportive networks.
- Utilise existing support structures such as gender equality officers, diversity officers, and anti-discrimination offices.

Mentoring Programmes and Networks for Women in Academia

You can make a difference by actively supporting talented women in academia and sharing your experiences.

- Support or initiate academic networks to facilitate access to publishing opportunities and co-authorships.
- Advocate for women's first-authorships in publications.
- Prioritise non-male collaboration partners.
- Engage in mentoring programmes, offering professional, strategic, and emotional support to early-career women in academia.
- Offer yourself as a mentor and actively promote talented women in academia.
- Share your own experiences.



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Measures for Work-Family Balance

Advocate for better work-life balance policies. Academic careers often demand high mobility, long working hours, and precarious financial situations during the postdoctoral phase. Many women opt out of pursuing a professorship due to the lack of family-friendly policies. Bring the care perspective into your work environment—many hesitate to discuss their caregiving responsibilities.

Ask about:

- Flexible work models and part-time professorships.
- Targeted funding programmes and re-entry fellowships for scientists returning from parental leave.
- Reliable childcare support.

By doing so, you highlight the existing needs and contribute to structural improvements.

Transparent and Gender-Sensitive Recruitment Processes

Unconscious biases in hiring and appointment procedures often result in women being rated less favourably than equally qualified male candidates. Addressing this requires structural solutions such as:

- Implementing transparent, gender-fair selection processes, including structured interviews, standardised evaluation criteria, and gender-balanced selection committees.
- Utilising anonymised application procedures to minimise gender-based stereotypes.
- Ensuring gender parity in faculty appointments.

Last but Not Least

The Gender Science Gap presents a challenge that demands targeted interventions—both structurally and individually. Transparent recruitment procedures, targeted talent promotion, the dismantling of gender biases, a discrimination-sensitive mindset, and an inclusive research culture are key factors in fostering a gender-equitable academic environment where everyone's potential can flourish.