Gender Bias in the Sciences

In many disciplines, the representation of women as faculty lags behind degrees awarded. These resources explore the research on the reasons women are underrepresented across many fields. Committees are encouraged to consider, discuss and apply the implications from this research to address relevant barriers to equitable hiring, retention and advancement processes.

Overall research on gender
This annotated list of references collates diverse studies on gender bias in the academy:
https://www.hastac.org/blogs/superadmin/2015/01/26/gender-bias-academe-annotated-bibliography-important-recent-studies

It has 2 major sections:
- Part I: Studies that Find Gender Bias in Academe
- Part II: Studies That Find Lack of Bias or Bias in Favor of Women in STEM Fields


Research on specific topics

- Beneficial effects of women in leadership roles:

- Beneficial effects of diversity:

- Sexual harassment has negatively impacted women’s careers in sciences and engineering. There are approaches that institutions can take to reduce sexual harassment and address its impacts, including through addressing organizational climate—which links to willingness to use preferential and limited
Environments where men outnumber women, leadership is male dominated, and/or jobs or occupations are considered atypical for women have more frequent incidents of sexual harassment for women (USMSPB 1995; Fitzgerald et al. 1997; Berdahl 2007a; Willness, Steel, and Lee 2007; Schneider, Pryor, and Fitzgerald 2011). On many campuses, these programs and departments persist as male-dominated work settings. More often than not, men are in positions of authority—as deans, department chairs, principal investigators, and dissertation advisors—and women are in subordinate positions as early-career faculty, graduate students, and postdocs.

Women are underrepresented or have limited access to elite labs and programs while male students are given more opportunities


Women are underrepresented in academic positions


Women experience disadvantages in funding

Women experience disadvantages in peer review, publication access and authorship credit


Qualified female candidates and faculty are not always evaluated fairly: undervalued, underrated, evaluated with different standards


**Gender bias in letters of reference** disadvantage women


**Ways to apply these research findings**

Implications from this research may be applied in varying ways:

- Discuss gender and equity regularly as a department, bringing in relevant research articles for discussion
- Respond to any concerns that arise about hostile work environments or sexual harassment
- Address gender dynamics in the composition and discussion processes of committees
- Ask committee members to take an implicit bias test before they develop criteria and use this information to inform their discussions
- Establish strong criteria that create an inclusive definition of excellence and address gendered discrepancies in access to elite institutions, funding, publication, and more
- Discuss how to use consistent language across genders to discuss to applicants and colleagues
- Review data on gender representation in the department (ask EQHR for this data) and discipline
- Identify unintended barriers to full participation and advancement of women
- Integrate support for gender equity into the requirements for a position
- Acknowledge the potential impact of leaves and cumulative and systemic barriers on productivity and professional timelines
- Integrate gender considerations into reviewing materials, including letters of reference
- Use a gender lens to review the work of the department, including guest speakers, awards granted, workloads (formal and informal), and more