

Establishing a Framework to Address Gender in Scientific Publishing



Mexico City ♦ April 29, 2016



Presentation Roadmap

**Elsevier Gender
Working Group**

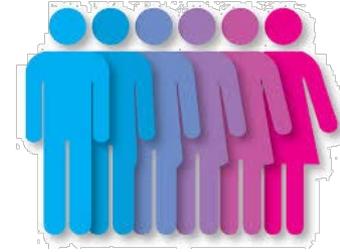
**Reporting on
Sex & Gender in
Research**

**Global Gender &
Research
Analytics Report**

EDGE Initiative



Gender Working Group



- As a leading scientific information solutions provider, Elsevier has a **responsibility** to apply a gender lens to its own core business
- **External influencers** to this effort incld: UN sustainable development goals; Global Research Council; NIH call to action on the science of diversity; and the Dutch National Agenda for Gender & Health
- Effort flows from success of the **Elsevier Foundation's** substantial contributions to support the advancement of women in science (50 grants, \$2.5 million)
- Through our longstanding partnerships with the **Gender Summits** the last 5yrs, we have learned that scientific publishers have a key role to play in leading advances in gender research

- The goal of the **STMJ Gender Working Group** working group is to examine key processes and principles and provide targeted interventions to ensure that Elsevier produces the most robust research possible in the most equitable and inclusive way
- Ultimately we hope to serve as an industry leader by helping to establish best gender practices



Key Issues on Gender in Publishing at Elsevier

- 1. Editorial policies and guidance to authors on reporting sex and gender in research**
2. Gender diversity for reviewers, editors, and editorial board staff in journals
3. Gender diversity for speakers/panelists at Elsevier conferences
4. Adapt internal data systems to capture gender metrics
5. Address unconscious bias during peer review
6. Promote research and publishing studies on i) sex & gender in research and ii) diversity in STEM
7. Seek gender balance in internal/external communications & outreach
8. Enhance gender diversity within Elsevier management ranks and gender parity across the organization
- 9. Apply analytics to gender in research and publishing**

Editorial Policies on Sex and Gender in Research



Illustration by Katie Scott, NIH to balance sex in cell and animal studies *Nature* 14 May 2014

Influence Through Partnerships

- Partnering with Stanford University's Gendered Innovations to develop a policy brief on empirically-derived recommendations for the industry editorial bodies International Committee of Medical Journal Editors (ICMJE) and Council of Science Editors (CSE) to consider adopting
- European Association of Science Editors (EASE) is also engaged in a recommendation exercise

Internal Coordination

- We have created an internal inventory of information from Health & Medical Sciences (HMS) publishers re: journals that have already adopted sex/gender reporting in their editorial policies.
- Based on ICMJE/CSE recommendations, Elsevier will enhance our own editorial guidance.



Recommendations

1. **Require correct usage of the terms “sex” and “gender.”** Using these terms precisely increases clarity, enables critical review, and facilitates meta-analysis.
2. **Require the reporting of the sex and/or gender of the study group/participants, and the sex of animals or cells.** If males and females were not studied in appropriate proportions (e.g. because the condition is sex-specific or because a convenience sample was used), these elements of study design should be justified in the Methods section, and considered in the Discussion section.
3. **Consider analyzing data by sex and/or gender, where appropriate, or providing the raw data** in the main manuscript, supplemental material, or in an accessible data repository. Report on the approach chosen for sex and gender analysis and comment on it in the Discussion section. In studies that are underpowered to detect sex (or gender) differences, access to data allows for use of those data in meta-analyses and systematic reviews.
4. **Analyze the influence (or association) of sex and/or gender on the results of the study where appropriate, or indicate in the methods section why such analyses were not performed.** Where those analyses were not performed, consider covering this topic in the Discussion section. Readers need to know whether the results generalize to both sexes. Include "no difference" results as well as results that demonstrate differences.
5. **If sex or gender analyses were performed post-hoc, indicate that these analyses should be interpreted cautiously.** No-difference post-hoc analyses may be underpowered, leading to a false conclusion of no difference. By contrast, if many such analyses were performed, the additional comparisons may lead to spurious significance suggesting an erroneous conclusion of a sex- or gender-related difference where no such difference was in fact present. To minimize this likelihood, authors might consider making a statistical adjustment (such as a Bonferroni correction).



A Gender Lens for Research Analytics

Investigate the relationship between the gender of researchers/authors and the various indicators on research performance by combining Scopus data with that from a large online social networking service

Are Women behind in Research?

Chapter 1: Gender Gaps in Research Performance in Germany

1.1 Distribution of Female Researchers

1.2 Research Productivity

1.3 Citation Impact

Chapter 2: The Impact of the Gender Composition of Research Teams on Performance

2.1 Citation Impact

2.2 International Collaboration

2.3 Interdisciplinary Research

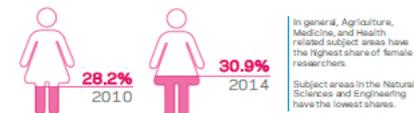
Chapter 3: The Impact of the Gender Composition of Research Teams on Research Topics

MAPPING GENDER

A case study of the German research arena

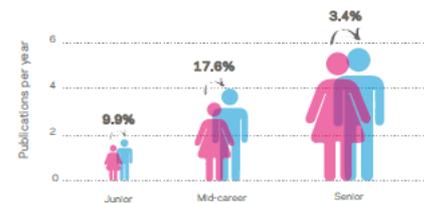
Distribution of female researchers

The number and proportion of female researchers in Germany is increasing.



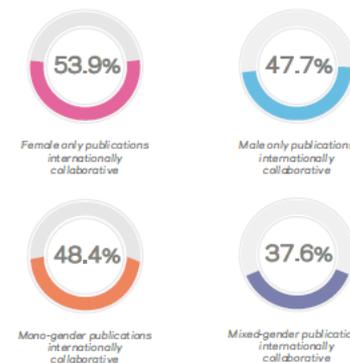
Research productivity

The differences between publication productivity and citation impact between female and male researchers in Germany are smaller for more senior researchers.



International collaboration

For Germany, female-only publications are the most internationally collaborative. Mixed-gender publications are more interdisciplinary but less internationally collaborative than mono-gender publications.





Global Gender & Research Analytics Report 2016

In support of the UN SDG 5, Achieve Gender Equality and Empower All Women and Girls, Elsevier is committed to establishing a research framework for addressing gender to advance policy.

Critical issues related to gender disparity and bias need to be examined by sound studies. Bibliometric and social network analysis + gender disambiguation methodology will provide an **evidence-based examination** of the outputs, quality and impact of research through a gender lens, as well as an understanding of where women and men reside within the structure of research.

Global Gender & Research Analytics Report 2016

1. Include numerous comparator countries/regions worldwide

- US, Canada, Mexico, Brazil, EU28 (there may be too many countries with low ratios in EU41), Australia/New Zealand, South Africa, Japan, Korea, China

2. Compare across disciplines as well as regions

- ASJC27 categories (ASJC334 may yield too little data for smaller comparators);
- Will be interesting to examine differences between disciplines with underrepresentation of women (e.g., high-energy physics) and men (e.g. nursing);

3. Include additional analyses

- Productivity across a researcher's career (20 yr, vs 10 yr cohort)
- Mobility by gender
- Network reach by gender
- Impact of author position by gender
- Others TBD with input from partners;

4. Interviews

- Contextualizing the report's finding;

5. Report release & outreach activities

- Begin developing a global stakeholder list now;
- Suggest outreach events (e.g. for last year's Brain Research Report, we held a global expert panel at the annual Neuroscience meeting);
- Assist with distribution of the report and dissemination of its findings broadly;



Report Partners & Advisors

Expert stakeholders around the world are advising on the report's development, including the research questions, methodologies and analytics and offering policy context for the report findings

1. North America

- **Stanford University**, Gendered Innovations - [Londa Schiebinger](#) (full leadership team, LS as point person)
- **Reed College** - [Kjersten Bunker-Whittington](#) (NIH consultant)
- **Harvard University** - [Richard Freeman](#), [Sifan Zhou](#) and [Griffin Weber](#)

2. Asia

- **Japan Science & Technology Agency (JST)**

3. Australia

- **Australia National University Gender Institute**

4. Europe

- **European Commission Joint Research Centre (JRC)**



EDGE Initiative at Elsevier

EDGE Global Action Plan for Gender Diversity		
Focus Area	Action	Why?
Recruitment & Promotion 	<p>Aim for gender diverse candidate pools for all senior management positions</p> <p>Aim to ensure all candidates for senior management positions are interviewed by both male and female managers</p>	<p>Some policies and practices are in place, but need to be implemented on a regular and structured basis.</p> <p>Arranging for a more balanced male: female ratio of interviewers in the hiring process would help make hiring managers more conscious and more engaged in the gender diversity issues and ensure a more balanced approach to candidate assessment.</p>
Leadership Development 	<p>Ensure equal access to leadership development training for men and women</p>	<p>Some practices are in place but not implemented consistently</p> <p>This will help provide equal opportunities to development for everyone</p>
Equal Pay 	<p>Review, communicate and manage a global policy on equal pay for equal work</p>	<p>Need to standardise application of policy globally with regards to pay equity</p> <p>Need to better communicate the policy more clearly to managers and employees</p>
Flexible Working 	<p>Review and communicate our approach to flexible working to ensure optimal environment for business success and employee engagement</p>	<p>Form a company point of view about flexible working and provide guidance to managers and employees</p> <p>A global alignment with regards to approach and application would help create a more inclusive and supportive environment for everyone</p>
Company Culture 	<p>Explore viability of awareness training on potential gender (other) biases for senior leaders and employees</p> <p>Include diversity as a strategic goal</p>	<p>Adding diversity as part of the company's strategic goal would be important to create accountability for results and thereby accelerate progress</p>
<p>Other actions</p> <p>We will continue the 3 year commitment to the EDGE action and certification process.</p> <p>We will engage with employees through Employee Resource Groups, because we would like to partner with the groups for cross sharing and better engagement with employees globally around diversity.</p> <p>We will create a company Diversity and Inclusion Statement, because we would like to make diversity more prominent in internal and external communications.</p>		

3 year commitment to gender benchmark Elsevier and make data driven interventions for a more gender balanced and inclusive organization.

- Measure
- Benchmark
- Certify
- Communicate



Gender & Work

Transparency | Accountability | Certification



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