

Sex and gender equity in research and scientific publication

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In this edition, *Epidemiology and Health Services: journal of the Brazilian National Health System (RESS)* publishes the Portuguese version of the Sex and Gender Equity in Research (SAGER) guidelines,¹ in keeping with its policy of promoting integrity in research and scientific publication.^{2,3} The SAGER guidelines are intended above all to guide authors on the preparation of their manuscripts, and include guidance on reporting information on sex and gender in study design, data analysis, results and interpretation of findings. Although articles are generally submitted to journals after research and data analysis has been concluded, the review process undertaken by editors and *ad hoc* reviewers holds great potential for manuscript improvement.¹

Sex and gender equity is one of the fundamental aspects to be considered in epidemiological studies, given that sex and gender are important determinants of health. Sex is generally classified as female or male, whilst gender encompasses a spectrum of definitions regarding how individuals identify and express their gender. In other words, sex is a biological attribute, whilst gender refers to socially constructed identities. Gender influences the way individuals perceive themselves, how they behave and relate with each other, in addition to being related to the distribution of resources and power in society.¹

Inequities arising from the patriarchal order of gender manifest themselves in diverse ways, including different forms of violence,⁴ as well as unequal opportunities on the job market, generally to the detriment of women and individuals not identified with the male sex. This in turn implies disparities in research and scientific publication.^{5,6}

On International Women's Day this year (March 8th, 2017), the multinational publishing company Elsevier published a report on gender in the global research landscape, including results of bibliometric data analyses performed on the Scopus database.⁷ Brazil and Portugal stood out as countries where, between 2011 and 2015, women comprised the largest proportion of researchers (49%) among the 12 countries studied. Despite progress found with gender-related indicators in research and publication, taking all research areas as a whole, the volume of production by women was lower than that of men, although the impact measured in terms of article citations and access – an indicator that can be interpreted as a reflection of the quality of production – is similar. Moreover, women had less participation than men in articles involving international collaboration and less international mobility than men.

In Brazil women are the majority in postgraduate programmes. Data from the Coordination for the Development of Higher Education Personnel (*Capes*) show that in 2015, 55% of those enrolled and graduated on master's and doctor's degree courses were women.⁸ According to statistics produced by the National Council for Scientific and Technological Development – (*CNPq*),⁹ 2015 was also the year in which equality between the sexes was achieved with regard to research grant distribution in Brazil, with 50% of grants being awarded to women and the same amount to men. Notwithstanding, the distribution of research productivity grants continues to be considerably unequal. In the same year women received only 35.5% of total research productivity grants and 24.6% of level 1A grants. This phenomenon, which is found worldwide, is called the “glass ceiling” and refers both to the existence of a barrier to women's advancement in their academic careers and also to women's invisibility in this milieu.¹⁰

Women are the majority in health-related postgraduate programmes. In 2015 they received 68% of the postgraduate grants awarded by *CNPq* in the area of health.⁹ This proportion, whereby women account for approximately two thirds, is also found in the indicators relating to articles submitted to and published in *RESS*. In 2016, women accounted for 72% of total authors submitting articles (N=1,809), 66% of total authors of published articles (N=441) and 72% of *ad hoc* reviewers (N=209). Similar figures were found in previous years (2013-2015). Monitoring gender inequalities in research and publication is fundamental for informing policies aimed at overcoming them. Female participation in *RESS* has apparently reflected their participation in health-related postgraduate programmes.

Although gender inequalities have been receiving increasing attention and specifically in the area of health, as well as in epidemiology,¹¹ the number of women has overtaken that of men, there are still important barriers to female participation in research and publication, given that the progress needed has been excessively slow. Within this context, the role of scientific journals must be highlighted, as well as the role of all those involved in scientific publication – editors, reviewers, funders and authors –, in promoting the quality and transparency of sex and gender equity beyond research and scientific publication, so that all of society is benefitted.

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Referências

1. Heidari S, Babor TE, Castro P, Tort S, Curno M. Equidade de sexo e gênero na pesquisa: fundamentação das diretrizes SAGER e uso recomendado. *Epidemiol Serv Saude*. Aheadofprint 2017.
2. Galvão TE, Silva MT, Garcia LP. Ferramentas para melhorar a qualidade e a transparência dos relatos de pesquisa em saúde: guias de redação científica. *Epidemiol Serv Saude*. 2016 abr-jun;25(2):427-36.
3. Garcia LP. Revisão sistemática da literatura e integridade na pesquisa. *Epidemiol Serv Saude*. 2014 jan-mar;23(1):7-8.
4. Saffioti HIB. Contribuições feministas para o estudo da violência de gênero. *Cad Pagu*. 2001;(16):115-36.
5. Rodrigues JG, Guimarães MCS. A Fundação Oswaldo Cruz e a ciência no feminino: a participação feminina na prática e na gestão da pesquisa em uma instituição de ensino e pesquisa. *Cad Pagu*. 2016;(46):197-222.
6. Leta J, Carisey M, Sechet P, Ohayon P. As mulheres na pesquisa, no desenvolvimento tecnológico e na inovação: uma comparação Brasil/França. *Rev Serv Publico*. 2006;57(4):531-47.
7. Elsevier Research Intelligence. Gender in the global research landscape: analysis of research performance through a gender lens across 20 years, 12 geographies, and 27 subject areas. [placeunknown]: Elsevier; [date unknown] [Cited 2017 Apr 4]. Available from: https://www.elsevier.com/__data/assets/pdf_file/0008/265661/ElsevierGenderReport_final_for-web.pdf
8. Ministério da Educação (BR). Fundação Capes. Mulheres são a maioria na pós-graduação brasileira [Internet]. Brasília: Ministério da Educação; 2017 [citado 2017 abr 4]. Disponível em: <http://www.capes.gov.br/sala-de-imprensa/noticias/8315-mulheres-sao-maioria-na-pos-graduacao-brasileira>
9. Ministério da Ciência, Tecnologia, Inovações e Comunicações. Conselho Nacional de Desenvolvimento Científico e Tecnológico (CNPq). Estatísticas [Internet]. Brasília: Ministério da Ciência, Tecnologia, Inovações e Comunicações; 2017 [citado 2017 abr 4]. Disponível em: <http://cnpq.br/estatisticas1>
10. Vaz DV. O teto de vidro nas organizações públicas: evidências para o Brasil. *Econ Soc*. 2013 dez;22(3):765-90.
11. Reshma, J. Gender Equity in Epidemiology: Miles to Go. *Epidemiol*. 2017 Mar; 28(2):169-171.