

EDITORIAL

Women's leadership in scientific publishing

Liderazgo femenino en la publicación científica

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Gender equity in leadership positions remains a challenge across various sectors, including science and healthcare. While progress has been made in women's access to higher education, their representation in Science, Technology, Engineering, and Mathematics (STEM) fields remains limited. Globally, less than 30% of graduates in these disciplines are women; in countries such as Peru, the proportion is similar, according to data from the World Bank (1). The low levels of participation observed suggest not only disparities in access but also significant inequalities in opportunities for professional development within academic and scientific domains.

Multiple studies indicate that women face barriers throughout their careers, including biases in hiring and promotion processes, limited access to mentorship networks and institutional support, and a disproportionate burden of administrative and teaching duties. These factors, compounded by persistent gaps in participation, access to resources, compensation, and benefits, contribute to higher attrition rates and a reduced presence of women in academic leadership roles and as primary authors in prestigious scientific journals (2,3). This scenario perpetuates gender inequality over time and undermines the quality, diversity, and legitimacy of scientific knowledge on a global scale (4–6).

In middle-income countries like Peru, these issues may have more significant consequences for the healthcare sector, where the complexity of health challenges demands diverse perspectives in leadership roles, as well as multidimensional and creative thinking to address organizational and managerial issues. These competencies, often undervalued, are frequently associated with women's leadership and contribute meaningfully to strategic decision-making, particularly in resource-constrained settings.

Although female participation in healthcare has increased, it is not reflected in leadership roles. Women remain underrepresented in executive positions in public health, academia, and on the editorial boards of scientific journals. Despite comprising approximately 70% of the global health workforce, they hold only 25% of senior management roles in public administration (7).

These disparities persist despite growing evidence linking gender diversity to improvements in organizational performance. Several studies have shown that gender-balanced teams tend to make more adaptive and context-sensitive decisions, especially in complex environments, such as healthcare systems in middle-income countries (8,9). In the research domain, diverse teams have been found to solve problems more effectively and foster greater innovation (10).

A similar pattern exists in the editorial field: only 24% of editorial board members in high-impact medical journals are women, and merely 20% of editor-in-chief roles are held by women (11,12). Scientific editing plays a crucial role in the production and dissemination of biomedical knowledge. Editorial boards determine which research is prioritized and what methodological standards are upheld. Therefore, their composition directly influences the lines of inquiry that gain visibility in the scientific literature.

Despite a rise in women's participation in research activities over the past decade, their representation in senior editorial roles remains limited, particularly in low- and middle-income countries, where institutional barriers are more pronounced. According to an analysis by Liu *et al.* (13) of the editorial boards of 1,000 international scientific journals, only 14%

of editors and 8% of editors-in-chief were women. In Latin America, a 2020 study analyzing the editorial boards of 113 journals indexed in the SCImago Journal and Country Rank (SJR) platform found that women made up 12.9% of editors-in-chief and 28.9% of editorial board members (14). In Peru, a similar analysis using data from 11 journals indexed in SciELO Perú in 2019 revealed that only one journal had a woman as editor-in-chief. It also documented that the proportion of women on editorial boards of 4 to 18 members ranged between 25% and 30% (15).

Lower scientific productivity and the resulting reduced bibliometric impact of female authors may be linked to their underrepresentation on academic journal editorial boards (13). A study by Huang *et al.* (16) published in 2020 found that male scientists publish an average of 13.2 articles, while women publish an average of 9.6, representing a 27% productivity gap. The same authors also found that male scientists receive 30% more citations than their female counterparts. Similarly, Sebo *et al.* (17) reported that the median number of citations for articles with a male first author was 8 points higher than those with a female first author (31 vs. 23 citations). Specifically in Peru, it has been observed that only 37.7% and 26.6% of publications have a woman as first and last author, respectively (18).

Another factor that may contribute to the underrepresentation of women on editorial boards is unequal access to research funding. Although the proportion of women receiving funding from the National Institutes of Health (NIH) increased by 11% between 1998 and 2019, a gender gap persists. On average, only 27% of total grants awarded during that period went to women researchers (19). This disparity is also evident in fields such as surgery, where recent studies show that women account for only about 20% of surgeon-scientists receiving research funding in the United States (20,21). This finding reflects an inequitable distribution of available resources and hampers women's professional advancement in science.

Increasing the representation of women in editorial roles not only helps reduce gender disparities in science but also enhances the quality and scope of the scientific knowledge being produced and disseminated. Studies have shown that editorial diversity is correlated with journal quality indicators. Martins *et al.* (22) found a strong positive correlation between the proportion of women on editorial boards and the journal's impact factor ($r = 0.70$), as well as between the presence of women or gender-diverse editors-in-chief and the broader participation of these groups within editorial teams ($r = 0.42$). These findings were confirmed by Dada *et al.* (23) and Guetter *et al.* (24). However, it has also been observed that higher-impact journals tend to show less geographic diversity, suggesting that the relationship between academic prestige and editorial diversity is complex and may vary across disciplines.

Addressing this issue requires a comprehensive strategy that fosters inclusive academic environments and supports women researchers from early career stages. This strategy may include facilitating access to internships, graduate scholarships, formative editorial experiences, and establishing mentoring networks that enable long-term professional trajectories.

Journals, in turn, must commit to equity by monitoring gender indicators and incorporating diversity criteria into editorial leadership.

Gender equity in scientific publishing is crucial for enhancing the quality and legitimacy of biomedical knowledge. In contexts characterized by significant inequalities, particularly in low- and middle-income countries, fostering women's participation in editorial positions strengthens the scientific ecosystem, making it more diverse and better equipped to address contemporary global challenges. The journal *Investigación e Innovación Clínica y Quirúrgica Pediátrica* serves as a notable example, featuring an editorial team composed entirely of women. This model illustrates the potential for advancing a more equitable and inclusive scientific community, even in environments where structural barriers remain, such as in Peru.

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