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CORRESPONDENCE

Gender distribution of anaesthesiology journal editorial boards and authorship by women: a bibliometric analysis

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Editor—Despite growing awareness of gender disparities in academic medicine, women remain underrepresented on editorial boards and among authors in anaesthesiology journals.[1–3] Some studies have suggested that greater representation of women in journal leadership roles may be associated with increased women's authorship, indicating that editorial board composition could play a role in promoting gender equity in academic publishing.[4,5] Prior analyses from 1980 to 2020 revealed growth in women's authorship in anaesthesiology.[3] However, disparities continue to persist, particularly in senior roles.[6–8] So far, whether the gender composition of editorial boards is associated with women's authorship in anaesthesiology journals has not been assessed. Therefore, we conducted a bibliometric analysis to examine gender representation among authors and editorial board members of English-language anaesthesiology journals. We also examined whether editorial leadership by women and authorship by women were associated.

Only publicly available data were used, and no ethical approval was required. Eligible journals were identified under the 'Anaesthesiology' category of the Web of Science, limited to those published in English. Data were collected during the first 2 weeks of June 2025. For journals, we collected the binary gender of the editor-in-chief and deputy editor-in-chief; total number of executive editors and the proportion of women; and total number of editorial board members and the proportion of women. For articles, we collected the binary gender of the first and last authors, total number of authors per article, and percentage of women authors.

Editorial board data were manually extracted and standardised. 'Executive Editor' and 'Associate Editor' were classified as senior editors, whereas others were classified as board members. We took a pragmatic standardised approach to assess authorship, selecting the most recent issue or, for open-access online-only journals, the 10 most recent online articles. For each article, the publication type, number of authors, and gender of the first and last authors were recorded. The dependent variable was defined as ≥50% women authors. Independent variables were defined as gender of first author, gender of last author, total number of men, percentage of women on the editorial board, and presence of ≥50% women on the editorial board.

Editorial and author genders were assigned using public profiles, which used the Genderize.io application programming interface (API) with a certainty threshold of ≥90%, consistent with the methodologies used in previous studies.[9,10] Uncertain cases were manually verified by two independent reviewers (AGC and TD). When authors' full first names were not available, gender was determined manually by consulting the author's date of issue (DOI)-linked information, associated e-mail addresses, or publicly accessible professional profiles. A random sample of 20% was cross-checked: no discrepancies were found between Genderize.io

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and manual verification. Articles lacking first-author gender certainty were excluded. Statistical analysis was performed in SPSS v26 (IBM Corp., Armonk, NY, USA), using descriptive statistics, χ^2-square tests, and stepwise logistic regression. The Hosmer–Lemeshow test assessed model fit, and odds ratios (ORs) with 95% confidence intervals (CIs) were reported.

Of the 70 identified journals, 56 met the inclusion criteria (see Supplementary Table 1). Interrater reliability between human reviewers was assessed using Cohen's kappa statistic, revealing a kappa coefficient of 0.98 and 0.91, respectively, for the first author and the gender of all of the authors in a given article. Analysis of editorial leadership showed a strong predominance of men. Men served as editors-in-chief in 46 of 56 journals (82.1%). Of 11 journals listing deputy editors-in-chief, one listed a woman only, seven listed a man only, and four listed both men and women, with women making up 36.4% (4/11) of the total. Among 465 senior editorial roles, women held 145 positions (31.2%). For 1978 editorial board roles, women held 509 positions (25.7%). Even in journals with over 100 board members, representation of women remained below one-third.

A total of 919 articles were reviewed: 30 (3.3%) were excluded because of indeterminate first-author gender, leaving 889 for analysis. Across all articles, representation of women was 39.2% of first authors and 30.2% of last authors. In total, 24.3% of articles had no women as authors, whereas only 6.0% had no men as authors.

Logistic regression identified several independent variables with higher women's authorship (≥50%) (Table 1; Supplementary Table 2). Articles in which both the first and last authors were men had the lowest odds of ≥50% women authorship. Each additional man as an author decreased the odds of women's authorship (≥50%) (β= −0.11, $P<0.001$). The proportion of women editorial board members was independently associated with increased odds of authorship of women: each 1% increase in editorial representation of women was associated with 2.7% higher odds of ≥50% women's authorship (OR 1.03, 95% CI 1.01–1.04, $P=0.001$), whereas journals with ≥50% women editors were more than three times more likely to reach that threshold (OR 3.23, 95% CI 1.06–9.83, $P=0.04$).

Table 1 Associations of women's authorship. CI, confidence interval; OR, odds ratio; SE, standard error. *Statistical significance was set at $P<0.05$.

Association	β	SE	OR (95% CI)	P value
First and last author gender				<0.001*
Man–man	−4.49	0.31	0.01 (0.01–0.02)	
Man–woman	−1.94	0.31	0.14 (0.08–0.26)	
Woman–man	−1.92	0.28	0.15 (0.08–0.25)	
Woman–woman	N/A	N/A	N/A	N/A
Woman editorial board members (%)	0.03	0.01	1.03 (1.01–1.04)	0.003*
Women editorial board members (≥50%)	1.17	0.57	3.23 (1.06–9.83)	0.04*
Constant	−0.01	0.75	0.99	

This study highlights persistent gender imbalances in anaesthesiology publishing, especially in senior authorship and editorial roles. A strong and statistically significant association was found between representation of women on editorial boards and higher rates of women's authorship. These findings support the hypothesis that inclusive editorial leadership is associated with increased gender equity in publishing in peer-reviewed anaesthesiology journals.[11]

Although the proportion of women on senior editorial boards and among editorial board members in our analysis (~30%) may reflect the approximate proportion of women academic anaesthesiologists in some Western regions, proportional representation at the workforce level does not necessarily translate into equity in leadership positions and editorial boards.[3] Future studies should validate and investigate whether these findings are the result of editorial policies, mentorship dynamics favouring gender diversity, or broader institutional values that promote inclusion at multiple levels of academic production.[12,13]

Several limitations warrant consideration. Firstly, the standardised methodology to assess authorship included selecting the most recent issue or, for online-only journals, the 10 most recent online articles, a limitation in terms of overall representation for the full year of 2025. Secondly, binary gender assignment relied on the Genderize.io API and publicly available information, which may have led to misclassification and excluded non-binary identities. Discrepancies between the Genderize.io API and manual verification were not found in 20% of cases, though this does not exclude inaccuracies. Thirdly, articles with indeterminate author gender, most often from Asia, were excluded, which may have introduced geographic bias. Fourthly, the analysis was limited to English-language journals indexed in Web of Science, thereby omitting non-indexed but potentially influential journals. In addition, data on submission rates, acceptance rates, and reviewer gender were not available, which prevented deeper insight into the peer review process and potential structural biases. Fifthly, regarding our statistical model, candidate variables were selected *a priori* based on conceptual relevance and prior literature, which reduced the risk of overfitting but inevitably excluded other factors that may influence women's authorship, such as the geographic distribution of authors and institutional or editorial practices. As a result, residual confounding cannot be excluded. Finally, the cross-sectional design prevents causal inferences, and observed associations should therefore be interpreted as hypothesis-generating rather than definitive.

In conclusion, women remain underrepresented as both authors and editors in anaesthesiology journals. Our study found a significant association between women's representation on editorial boards and women's authorship, indicating that inclusive editorial leadership may be crucial to promoting gender equity in academic publishing. This aligns with recent calls for greater diversity and inclusion in anaesthesiology, which urge concrete steps to ensure gender equity in academic leadership.[14] Future research should explore causal pathways and extend this analysis to other disciplines and global regions.

Authors' contributions

Conception and design, acquisition of data, or analysis and interpretation of data: AGK, SE, TD, MG, SS, JBE
Drafting and revising of the manuscript: AGK, SS, MG, JBE
Read and approved the final manuscript; and agree to be accountable for all aspects of the work: all authors

Declarations of interest

JBE is a member of the Board of Directors of the European Society of Anaesthesiology and Intensive Care (ESAIC) and a member of the editorial board of *BJA Open*, and has received speaker's fees from Medtronic. SS is the lead of ESAIC's subcommittee for the Geriatric Patient and has received speaker's fees from Medtronic/Merck. The other authors declare that they have no conflicts of interest.

Declaration of generative AI and AI-assisted technologies in the writing process

During the preparation of this work, the authors used ChatGPT 5.0 to improve readability. After using this tool/service, the authors reviewed and edited the content as needed and take full responsibility for the content of the publication.

Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.bja.2025.09.020.

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