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ORIGINAL ARTICLE

Gender Disparity in Editorial Leadership: A Cross-Sectional Analysis of Global Infectious Disease Journals

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ABSTRACT

Aim: The representation of women in major medical journals, particularly those publishing in the field of infectious diseases, is important for evaluating gender equity in academia. This study examined the gender distribution of editorial boards in international medical journals, with a specific focus on infectious disease journals. **Methods:** Medical journals were identified using the SCImago Journal & Country Rank database. A total of 262 journals and 12,142 editorial board members were analyzed. Gender data were collected through official journal websites and institutional profiles. **Results:** Among all editorial board members, 3,575 (29.4%) were identified as women. Only 45 (17.2%) women held editor-in-chief positions. In infectious disease journals, the proportion of female editors was 30.8% (n=1,525), which was similar to other specialties (p=0.230). Across all fields, male editors outnumbered female editors. **Conclusion:** This large-scale study demonstrates a clear male predominance in editorial leadership of high-impact medical journals, particularly in the field of infectious diseases. Although female representation was higher in certain specialties, women did not constitute the majority in any field. Efforts to promote gender equity in academic leadership remain essential.

Keywords: Editorial board, Gender representation, Infectious diseases

ÖZET

Amaç: Kadınların özellikle enfeksiyon hastalıkları alanında yayın yapan büyük ölçekli tıp dergilerindeki temsili, akademide cinsiyet eşitliğinin değerlendirilmesi açısından önemlidir. Bu çalışmada, uluslararası tıp dergilerinin editöryal kurullarındaki cinsiyet dağılımı, enfeksiyon hastalıkları dergilerine odaklanarak incelenmiştir. **Yöntem:** Tıp dergileri, SCImago Journal& Country Rank veritabanı kullanılarak belirlenmiştir. Toplamda 262 dergi ve 12.142 editör kurulu üyesi analiz edilmiştir. Cinsiyet verileri, dergilerin web siteleri ve kurumsal profilleri aracılığıyla toplanmıştır. **Bulgular:** Tüm editöryal kurul üyeleri arasında 3.575'inin (%29,4) kadın olduğu saptanmıştır. Editör-in-chief (baş editör) pozisyonunda sadece 45 (%17,2) kadının bulunduğu görülmüştür. Enfeksiyon hastalıkları dergilerinde görev yapan 1.525 editör arasında kadın oranı %30,8 olup, diğer uzmanlık alanlarıyla benzerdi (p=0.230). Tüm alanlarda erkek editör sayısı kadınlardan fazlaydı. **Sonuç:** Bu geniş ölçekli çalışma, yüksek etki faktörlü tıp dergilerinde, özellikle enfeksiyon hastalıkları dergilerinde, editöryal liderlikte belirgin bir erkek egemenliğini ortaya koymaktadır. Bazı uzmanlık alanlarında kadın temsili daha yüksek olsa da hiçbir alanda kadınlar çoğunlukta değildir. Akademik liderlikte cinsiyet eşitliğini teşvik etmeye yönelik çabalar önemini korumaktadır.

Anahtar Kelimeler: Editör kurulu, Cinsiyet temsili, Enfeksiyon hastalıkları

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INTRODUCTION

There has been a significant increase in the number of female academicians and specialist physicians in the field of medicine in recent decades. Academic medical journals play a pivotal role in the advancement of medical science, and holding editorial positions such as assistant editor, editor, or editor-in-chief is a prestigious achievement for academicians, including women. However, the extent to which women are represented on the editorial boards of major journals, and whether a gender imbalance persists, remains an important issue to investigate (1–3).

Female physicians and academicians have gained prominence in several specialties, including infectious diseases. Despite this progress, data regarding gender distribution in editorial leadership remains limited. Particularly in global-scale medical journals focusing on infectious diseases, little is known about women's academic representation (1–4).

Despite the substantial rise in the number of female medical professionals in recent decades, their progression into academic leadership positions remains disproportionately limited. This is especially evident in specialties such as infectious diseases, where women comprise a significant share of the clinical workforce but are markedly underrepresented in senior academic roles. Studies show that although the presence of women in academia is steadily increasing, this trend is not yet reflected in the leadership structures of academic journals (2–4). Such disparity underscores a persistent systemic issue and lends support to the notion that editorial leadership in medical publishing may mirror the broader gender-based inequities present within the medical field.

This study aims to evaluate the gender distribution of editorial board roles in leading international medical journals, with a specific emphasis on infectious disease journals.

MATERIAL AND METHODS

This cross-sectional study evaluated the gender distribution of editorial board members in medical journals. A total of 325 journals were initially screened using the SCImago Journal & Country Rank database. After excluding journals that had ceased publication (n=28), did not publish any issues in 2020 or 2021 (n=20), or lacked accessible editorial board data (n=15), 262 journals remained for the final analysis (Figure 1).

Infectious disease journals were categorized separately, while top-ranked journals from other specialties (e.g., neurology, orthopedics, microbiology, cardiovascular surgery, dermatology, gastroenterology, urology, hematology, obstetrics and gynecology, endocrinology, intensive care, anesthesia, internal medicine, emergency medicine, psychiatry, ophthalmology, family medicine, and pediatrics) were selected for comparison.

Data regarding editorial board members were obtained from official journal

websites. Positions evaluated included editors-in-chief, deputy editors, associate editors, assistant editors, senior editors, editors, and editorial board members. Non-active or honorary roles were excluded.

Gender identification was primarily based on first names; in ambiguous cases, institutional profiles or publicly available photographs were consulted. If gender could not be determined with confidence, the individual was excluded from analysis. Gender was assessed based on perceived identity using publicly available data, not self-reported sex.

A priori power analysis was performed with G*Power software (version 3.1.9.6). Assuming an effect size of 0.33, an alpha of 0.05, and a power of 0.99, the minimum required sample size was calculated as 246.

Statistical analyses were conducted using SPSS version 25.0 (IBM Corp., Chicago, IL, USA). Categorical variables were summarized as frequencies and percentages. Comparisons were performed using the Chi-square test with Bonferroni correction for multiple comparisons. A p-value <0.05 was considered statistically significant.

Ethical Considerations

This study did not involve human participants or animal subjects and used only publicly available data; therefore, ethical approval and informed consent were not required.

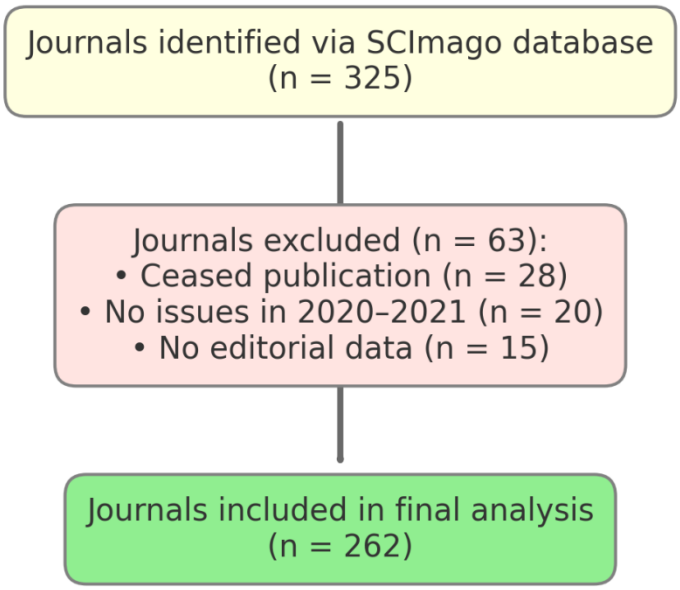

Figure 1. Flow diagram of journal selection process.

RESULTS

A total of 12,142 editorial board members from 262 journals were evaluated, including 262 editors-in-chief (2.15% of all members). Among all editorial board members, 3,575 (29.4%) were women.

Within the editors-in-chief group, 45 (17.2%) were women, representing a significantly lower proportion compared to other editorial positions (p<0.001). Among the 12,142 editorial members, 1,525 (12.6%) were affiliated with infectious disease journals. In these journals, 469 (30.8%) of the editors were women, a proportion similar to that of other specialties (p=0.230).

When comparing specialties, the proportion of female editorial board members was significantly higher in neurology, microbiology, dermatology, obstetrics and gynecology, ophthalmology, family medicine, and pediatrics (p<0.05 for each). In contrast, significantly lower female representation was observed in orthopedics, cardiovascular surgery, gastroenterology, urology, hematology, intensive care, and emergency medicine (p<0.05 for each) (Table 1).

Table 1. General comparisons between the groups in terms of gender distribution.

	Male		Female		Total		p
	n	%	n	%	n	%	
N	8567	70.6	3575	29.4	12142	100.0	
Duty							**<0.001**
Editor-in-chief	**217**	82.8	45	17.2	262	2.2	
Editorial board member	8350	70.3	3530	29.7	11880	97.8	
Duty							**<0.001**
Editor-in-chief	217	**82.8**	45	17.2	262	2.2	
Deputy editor	203	67.7	97	32.3	300	2.5	
Associate editor	1780	65.5	937	34.5	2717	22.4	
Assistant editor	11	61.1	7	38.9	**18**	0.1	
Senior editor	78	59.5	53	40.5	**131**	1.1	
Editor	52	48.6	55	51.4	**107**	0.9	
Editorial board member	6226	72.3	2381	27.7	8607	70.9	
Branch							**<0.001**
Infectious diseases	1056	69.2	469	30.8	1525	12.6	0.230
Neurology	842	63.3	488	**36.7**	1330	11.0	**<0.001**
Orthopedics	728	**83.3**	146	16.7	874	7.2	**<0.001**
Microbiology	548	64.2	305	**35.8**	853	7.0	**<0.001**
Cardiovascular surgery	538	**74.8**	181	25.2	719	5.9	**0.010**
Dermatology	442	62.3	268	**37.7**	710	5.8	**<0.001**
Gastroenterohepatology	544	**77.3**	160	22.7	704	5.8	**<0.001**
Urology	583	**85.2**	101	14.8	684	5.6	**<0.001**
Hematology	501	**77.3**	147	22.7	648	5.3	**<0.001**

Obstetrics and gynecology	282	56.5	217	**43.5**	499	4.1	**<0.001**
Endocrinology	350	70.6	146	29.4	496	4.1	0.997
Intensive care	362	**76.9**	109	23.1	471	3.9	**0.002**
Anesthesia	284	69.8	123	30.2	407	3.4	0.726
Internal medicine	277	69.1	124	30.9	401	3.3	0.509
Emergency	311	**78.1**	87	21.9	398	3.3	**0.001**
Psychiatry	261	70.2	111	29.8	372	3.1	0.865
Ophthalmology	239	64.9	129	**35.1**	368	3.0	**0.016**
Family medicine	228	65.7	119	**34.3**	347	2.9	**0.044**
Pediatrics	191	56.8	145	**43.2**	336	2.8	**<0.001**

*Comparisons were performed using the Chi-square test. Bold values indicate statistically significant differences ($p < 0.05$).

Regarding editors-in-chief specifically, neurology (p=0.001) and microbiology (p=0.027) journals had significantly higher proportions of women compared to other specialties. In infectious diseases and other specialties, male editors-in-chief continued to dominate, with no significant difference in gender distribution (p>0.05) (Table 2).

Table 2. Distribution of editors-in-chief in terms of gender.

	Male		Female		Total	p
	n	%	n	%	n	
N	217	82.8	45	17.2	262	
Branch						**0.046**
Infectious diseases	29	90.6	3	9.4	32	0.212
Cardiovascular surgery	18	75.0	6	25.0	24	0.286
Intensive care	14	87.5	2	12.5	16	0.609
Emergency	13	92.9	1	7.1	14	0.306
Obstetrics and gynecology	11	78.6	3	21.4	14	0.665
Neurology	16	59.3	11	**40.7**	27	**0.001**
Gastroenterohepatology	13	100.0	0	0.0	13	0.092
Hematology	11	84.6	2	15.4	13	0.861
Dermatology	9	75.0	3	25.0	12	0.462
Ophthalmology	10	90.9	1	9.1	11	0.468
Family medicine	8	72.7	3	27.3	11	0.364
Anesthesia	9	90.0	1	10.0	10	0.540
Urology	10	100.0	0	0.0	10	0.142
Psychiatry	9	90.0	1	10.0	10	0.540
Endocrinology	9	90.0	1	10.0	10	0.540
Orthopedics	9	100.0	0	0.0	9	0.164
Internal medicine	8	88.9	1	11.1	9	0.624
Microbiology	5	55.6	4	**44.4**	9	**0.027**
Pediatrics	6	75.0	2	25.0	8	0.551

* Statistical analysis: Chi-square test was used for gender comparisons between specialties. Bold values indicate statistical significance ($p < 0.05$).

Among editorial board members excluding editors-in-chief, the pattern remained consistent: higher proportions of female editors in neurology, microbiology, dermatology, obstetrics and gynecology, ophthalmology, and pediatrics, and lower proportions in orthopedics, cardiovascular surgery, gastroenterology, urology, hematology, intensive care, and emergency medicine ($p<0.05$ for each) (Table 3).

Although some specialties appeared to have a higher proportion of female editors at first glance, these figures should be interpreted in relation to the overall gender distribution across the editorial population. In no specialty did female editors outnumber their male counterparts. Rather, the findings indicate that in certain branches such as pediatrics, dermatology, and obstetrics and gynecology, the proportion of female editors was relatively higher compared to the overall average of 29.4%, suggesting a relative increase rather than absolute predominance.

Table 3. Distribution of editorial board members in terms of gender (excluding editors-in-chief)

	Male		Female		Total	p
	n	%	n	%	n	
N	8567	70.6	3575	29.4	12142	
Branch						**<0.001**
Infectious diseases	1027	68.8	466	31.2	1493	0.175
Neurology	826	63.4	477	**36.6**	1303	**<0.001**
Orthopedics	719	**83.1**	146	16.9	865	**<0.001**
Microbiology	543	64.3	301	**35.7**	844	**<0.001**
Dermatology	433	62.0	265	**38.0**	698	**<0.001**
Cardiovascular surgery	520	**74.8**	175	25.2	695	**0.007**
Gastroenterohepatology	531	**76.8**	160	23.2	691	**<0.001**
Urology	573	**85.0**	101	15.0	674	**<0.001**
Hematology	490	**77.2**	145	22.8	635	**<0.001**
Endocrinology	341	70.2	145	29.8	486	0.952
Obstetrics and gynecology	271	55.9	214	**44.1**	485	**<0.001**
Intensive care	348	**76.5**	107	23.5	455	**0.003**
Anesthesia	275	69.3	122	30.7	397	0.652
Internal medicine	269	68.6	123	31.4	392	0.464
Emergency	298	**77.6**	86	22.4	384	**0.001**
Psychiatry	252	69.6	110	30.4	362	0.776
Ophthalmology	229	64.1	128	**35.9**	357	**<0.001**
Family medicine	220	65.5	116	34.5	336	0.050
Pediatrics	185	56.4	143	**43.6**	328	**<0.001**

*Statistical analysis: Chi-square test was used for group comparisons. Statistically significant values are shown in bold ($p < 0.05$).

DISCUSSION

In recent decades, there has been a substantial increase in the number of female academicians and physicians in the field of medicine. Nevertheless, gender disparities persist in senior academic and leadership positions, including editorial board memberships. Editorial roles are critical indicators of academic influence and visibility, and their gender distribution reflects broader patterns of inclusion and representation. This large-scale study demonstrated that, despite overall progress, significant male dominance remains evident in editorial leadership within major international medical journals, including those focusing on infectious diseases.

Our findings revealed that 29.4% of all editorial board members were women, a proportion generally consistent with previous studies conducted across various medical fields. Marcelin et al. (5) reported female editor rates between 14–38% in infectious disease journals, while Ayada et al. (6) identified an overall female representation of 22% among editorial boards. In our study, the rate of female editors-in-chief was 17.2%, a figure that underscores the persistence of gender imbalance at the highest editorial levels. These results align with previous research indicating lower female representation in editor-in-chief positions compared to general editorial board memberships (5-7, 10-13).

Importantly, our study showed that the proportion of female editors in infectious disease journals was not significantly different from that in other medical specialties. However, notable variations across specialties were observed. Specialties such as neurology, microbiology, dermatology, obstetrics and gynecology, ophthalmology, family medicine, and pediatrics exhibited significantly higher female representation among editorial board members (8-11). In contrast, fields traditionally dominated by male practitioners, including orthopedics, cardiovascular surgery, gastroenterology, urology, hematology, intensive care, and emergency medicine, demonstrated markedly lower female representation (12-15). These findings support the notion that gender distribution among editorial boards is influenced, at least in part, by the overall gender distribution within each medical specialty.

The particularly low rate of female editors-in-chief highlights a structural challenge. Leadership positions within editorial boards not only confer prestige but also influence academic discourse and publication priorities. The underrepresentation of women in such roles may perpetuate systemic biases and limit diversity in scientific scholarship (16,17). Despite the growing number of female physicians and academicians, the translation of this demographic shift into leadership positions remains limited. Factors such as increased family responsibilities, lower institutional support, and potential biases in selection processes have been proposed as contributing to these disparities (6, 18, 19).

This study has several strengths. To our knowledge, it is one of the largest investigations into gender representation in editorial boards of infectious disease and other medical journals, with a comprehensive inclusion of 262 journals and 12,142 editorial board members. The systematic approach to gender determination, employing multiple verification methods for ambiguous cases, enhanced data reliability.

Nevertheless, certain limitations must be acknowledged. Gender assignment was based on publicly available information and was inferred rather than self-reported, introducing a potential for misclassification. Moreover, the study did not assess geographic, cultural, or institutional differences that may influence editorial board compositions. Future studies could explore regional variations and longitudinal changes to provide deeper insights into trends over time.

To address the observed disparities, academic societies, journal publishers, and editorial leadership committees should actively implement strategies aimed at promoting gender diversity. These could include transparent selection criteria for editorial appointments, targeted leadership development programs for women, mentorship initiatives, and fostering inclusive academic cultures. Increasing female representation in editorial roles would not only enhance equity but also enrich the diversity of perspectives guiding scientific publication.

In conclusion, despite meaningful progress, significant gender disparities persist in editorial leadership across major medical journals. Focused efforts to dismantle systemic barriers and promote gender equity are necessary to achieve a more inclusive and representative academic environment.

CONCLUSIONS

This study provides a comprehensive evaluation of gender representation among editorial board members in major international medical journals, with a focus on infectious disease journals. Despite notable increases in the number of female academicians in medicine, significant gender disparities persist, particularly at leadership levels such as editors-in-chief. Our findings emphasize the need for targeted initiatives to promote greater gender equity in editorial leadership. Enhancing the diversity of editorial boards will contribute to a more inclusive academic environment and foster broader scientific perspectives. Future efforts should focus on addressing structural barriers and developing transparent policies to support the advancement of women in academic publishing.

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Author Contributions: MU: Conceptualization, data analysis, statistical analysis, and manuscript drafting. BCD: Data collection, manuscript editing, and manuscript review.

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