



When Fair Is Not Foul: Promoting Female Authorship in Gastroenterology Journals

Patrick A. Twohig¹

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Historically, gastroenterology (GI) has been underrepresented by women, with only 30% of trainees and 15% of practicing gastroenterologists being female [1–5]. Reasons for this gender gap have historically been attributed to factors such as time spent child rearing and the lack of role models, among others, all of which may contribute to decreased job satisfaction and reduced interest in pursuing GI as a career [2, 6].

Due to the low prevalence of females in GI, there has been a sparsity of female authors, speakers, panelists, and mentors for trainees. Although it may be concluded that there is a direct correlation between the overall low prevalence of females in GI and participation in scholarly activity, Bhatia et al. [7] describe in this issue of *Digestive Diseases and Sciences* that this alone does not explain the difference. One study showed that the proportion of female speakers at US and Canadian conferences increased from 24.6% in 2007 to 34.1% in 2017, although women are still underrepresented overall [8]. Improving female participation in conferences can be accomplished by promoting women to key organizational positions. One study found that including women in the membership of conference organizational committees increased female panelist involvement by up to 43% [9].

Bhatia et al. [7] provide the first study to assess gender disparities among authors of publications in three GI journals over a 20-year period—*Gastroenterology*, *Gut*, and the *American Journal of Gastroenterology*. Though other studies addressing this topic have been published in other specialties, this article focuses specifically on the field of gastroenterology. The authors found a significant increase in female first authors from 18.1% in 1997 to 42.7% in 2017, and a significant, albeit smaller increase in last (senior)

authorship, 8.3% in 1997 to 24.7% in 2017. As highlighted by the authors, primary and last authorship is a marker of academic opportunity and advancement, since being a first or senior author of a publication is an important component of career growth. Moreover, since women may have fewer opportunities to contribute to and influence their field, under-recognition of achievements and expertise along with decreased visibility in academic communities may result [10].

Bhatia et al. [7] highlight the gender disparity in editorial review boards, ranging from 12.5 to 15.6% in the three journals studied. Prior studies investigating trends in gender diversity among journal editorial boards and last authorship in GI journals have found a similar disparity [11–13]. Assessing the selection and promotion process for journal editorial board members and reviewers is essential for ensuring equal opportunity. The authors also discuss the influence that female last authorship can have on the probability of female first authorship. This finding has been shown in other medical fields, including surgery and radiology [14, 15]. This highlights the importance of mentorship in promoting involvement in scholarly activity and subsequent career development.

Multiple GI societies have created committees and interest groups that provide a platform for mentorship, networking, and career advancement. Encouraging women to get involved in professional communities can lead to subsequent professional growth and diversity. These advances have spawned a culture that promotes the identification of areas of interest and expanding mentorship to include individuals outside of one's home institution. A study assessing the results of the British Society of Gastroenterology's 'Supporting Women in Gastroenterology' initiative demonstrates the positive impact of a forum for mentorship and discussing personal challenges with others can have on female trainees in GI [16].

✉ Patrick A. Twohig
patwohig@gmail.com

¹ Department of Gastroenterology and Hepatology, University of Nebraska Medical Center, 982000 Nebraska Medical Center, Omaha, NE 68198, USA

The Future Is Now

Creating a culture of inclusion and promotion within our institutions and organizations is essential to continue to attract the best and brightest to this immensely rewarding and evolving medical sub-specialty. Additional areas for consideration aimed at boosting continued progress of women in GI are outlined below:

Academic Institutions

Training aimed at raising awareness of unconscious biases significantly reduces gender disparities and promotes equal promotion and compensation practices, even with just a single 20-min session [17]. This may allow for greater equity in research funding and be a starting point for greater female representation in publications, as well as at academic conferences. GI departments should be evaluated regarding hiring and promotion practices in order to maintain equitable diversity, inclusion, and gender balance [18].

Organizations

Though the American College of Gastroenterology has seen an increase in women membership on committees from 19 to 26% from 2010 to 2016 [19], areas of leadership remain underrepresented with 24% of ACG committee chairs and 16% of board of trustees being women [19]. Continued growth, expansion, and promotion of special interest groups that provide a platform for networking, mentorship, and career advancement will be essential to increasing the percentage of leadership positions occupied by women in GI. The National Institute of Health provides grant funding for the advancement of women in biomedical careers. Similar methods can be employed by other organizations to promote scholarly activity and publication opportunities for women in GI [20].

Future Directions

Future studies could build from this article by assessing gender publication trends in other general GI journals of all impacts and also in subspecialty areas including advanced endoscopy, hepatology, colon cancer screening, and IBD, among others. Looking at the impact female mentors in scholarly activity outside of journal articles (e.g., abstracts, conference presentations, lectures) may also provide a different perspective on this issue. Assessing the percentage of first/last authorship by women in

journals based on academic position may also add insight to improving areas of under-representation in the future.

Conclusion

Recognizing obstacles faced by women in GI, breaking them down and helping overcome them is the next step. Though encouraging leadership positions, journal authorship, and speaker invitations is merely scratching the surface, it is an auspicious start to a constantly evolving process. As institutions, journals, organizations, and other groups strive to grow and innovate while providing the best care and outcomes for their communities, successfully implementing systems aimed at reducing gender disparities and promoting inclusion across all levels of leadership is essential. Finally, implementation is only the first step, as monitoring the impact of changes that promote equity and adapting systems to continue inspiring future generations of gastroenterologists is key.

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Declarations

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