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EDITORIAL COMMENT

Geographical and Gender Inequality on Pediatric Cardiology Editorial Boards

Time for Action Now!*

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THE CURRENT SITUATION

It is no secret that editorial board (EB) members have power. They decide what topics are emphasized in the professional discourse. In times of publication-based funding, they have an enormous influence on the visibility and future direction of research as well as on guidelines and our everyday practice. This is how they set the agenda for the whole specialty to move forward in a certain direction. Diversity on EBs would allow multiple perspectives on important topics. Therefore, it is important for any specialty to pay attention to whom journals recruit as their EB members.

This is also a matter of global health impact. If we want all children with heart diseases to be represented by their advocates, we need to make sure that the positions of power are filled in a way that reflects the global burden of pediatric heart diseases.

The lack of diversity is already evident at the author level. Women's participation as first authors in 6 important medical journals has only slightly increased from 27% in 1994 to 37% in 2014.[1] In 5 general medicine journals, authors from countries other than the United States, United Kingdom, or other "Euro-American countries" supplied only 2.4% to 21.8% of original research papers and 0% to 2.6% of editorials.[2]

Pediatric cardiology is not the first medical specialty to be examined for journals' EB composition. In general pediatric (including lactation) journals, only one-third of EB members are women,[3] and almost 96% of EB members are from high-income countries.[4]

Just as global supply chains for tangible goods are finally moving toward the focus of public attention in order to ensure fair chances for all, intangible goods like research output and the pathway to its appreciation need to be scrutinized.

THE PAPER

In their study in this issue of *JACC: Advances*, Dunne et al[5] analyze the EB composition of 5 journals in the field of pediatric cardiology focusing on gender on the one hand and geography or economic status of the EB member's country on the other hand. Journals were picked based on impact factors and specificity for pediatric cardiology or pediatric/congenital cardiac surgery. The authors used data mainly from the journal websites and found that there is striking underrepresentation of women (19%) and members from low-income (0%), lower-middle income (2%), and upper-middle income countries (6%). Most EB members were based in the United States, even though a large number of countries were represented by at least 1 person (n = 51). When breaking down the numbers by roles on an EB, there was always male predominance (from associate editors 69% to editors-in-chief 100%).

The authors discuss possible causes and remedies for this lack of diversity on EBs, and it seems that

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some of the mechanisms contributing to gender vs geographic/economic disparities are similar.

One issue is availability. EB members, especially in senior roles, are, in general, recruited from senior pediatric cardiologists or pediatric cardiac surgeons at dedicated centers. Women are not underrepresented at the pediatric cardiology trainee level (in the United States) but maybe in the higher tiers—be it because of the proverbial glass ceiling or because it will still take many years for the balanced, current generation of trainees to "grow up" to seniority.

With a low number of pediatric cardiac surgeons and cardiac centers, and probably also pediatric cardiologists, in low- and middle-income countries (LMICs), it seems obvious that their representation on international journal EBs would also be low (in absolute numbers). This is associated with less publications and, in turn, less funding opportunities, a vicious cycle.

Another issue, however, is that there are certain barriers to career advancement and/or appointment as an EB member. For women, it might be harder if all editors-in-chief are men. For our colleagues practicing in certain regions of the world, there may be "a lack of culture that values research" and little opportunity for research funding (some countries simply lack the resources to fund research projects and thereby create a basis for academic careers which enable EB memberships), insufficient proficiency in the English language, limited access to reading publications or publishing themselves (depending on the journal's business model), and a lack of material, software, and hardware, or maybe also time constraints due to an overwhelming workload of patient care.

A number of suggestions for improvement are made by Dunne et al,[5] partially based on a previous publication coauthored by 2 authors from this group.[6] Some of these actions will not provide results within the next few years, but some improvements can be achieved quite rapidly—especially on a journal (publishing house or editor-in-chief) level. For example, journals can start immediately to include a paper on a subject relevant to pediatric cardiology from low-resource settings in every issue. The authors and (guest) editors for this section should obviously be locals.

Journals are also called to increase transparency about their recruiting processes, terms of service, and composition of EBs and ideally limit the number of years or roles any individual can take on as an EB member. Both mentorship programs for manuscript writing or other prepublication support services and blinded peer review should be useful for increasing the diversity of authors publishing in a journal.

The study describes findings from 5 journals so far because a practical selection had to be made. And some of the relevant data are not publicly available, such as ethnicity or race of EB members, number of manuscripts received vs published by what kind of authors, and the composition of peer reviewers.

The authors conclude that participation of women and pediatric cardiologists from LMICs on EBs could be improved. If EBs were more diverse, there might be better representation of research based in LMICs where most of the world's children with heart diseases live.

OUTLOOK

Excessive homogeneity in EB composition is just one aspect of gender and geographical disparities in academic medicine. It is not only on EBs that we see inequalities, but the problem is also prevalent on the level of clinical trial funding and conduct as well as authorship.[7] Therefore, at a group, project, or collaboration level, researchers from LMICs should be encouraged to participate. At a funding body level, research support should be extended to disadvantaged professionals to support grant applications, international collaborations between institutions and personnel, and to encourage professional development of these researchers. On a national/international agency level, health or development ministries of LMICs should make sure that their country is well represented in the scientific literature and publication system of the fields in which they want to make improvements.

We are aware of current deficits in both gender and geographical equity on multiple levels of the clinical research and academic publishing system. There are several ideas how to improve the situation; one first step is to change the policy, and thus the culture. But this will only work if there is a will to create a more balanced landscape.

Who has to take on the responsibility to bring about this timely change? Medical schools, residency and fellowship programs, EBs, and overall, the leaders of this field including those of our professional associations have to act now. For the sake of quality, research must be based on projects contributed by anyone from anywhere and evaluated by fairly chosen, diverse EBs and society representatives serving in a time-limited commitment open to all qualified persons. Tim Berners-Lee, the inventor of the World Wide Web, said, "We need diversity of thought in the world to face the new challenges".

There will be many new challenges ahead of us in caring for our patients—we need everyone from everywhere.

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REFERENCES

1. Filardo G, da Graca B, Sass DM, Pollock BD, Smith EB, Martinez MA. Trends and comparison of female first authorship in high impact medical journals: observational study (1994-2014). *BMJ*. 2016;352:i847.

2. Sumathipala A, Siribaddana S, Patel V. Under-representation of developing countries in the research literature: ethical issues arising from a survey of five leading medical journals. *BMC Med Ethics*. 2004;5:E5.

3. Alonso-Arroyo A, Gonzalez de Dios J, Aleixandre-Agullo J, Aleixandre-Benavent R. Gender inequalities on editorial boards of indexed pediatrics journals. *Pediatr Res*. 2021;90(2):300–314.

4. Tutarel O. How international are leading general paediatric journals? *Arch Dis Child*. 2005;90(8):816–817.

5. Dunne E, Zuhlke L, Kumar RK, Casey FA, Penny DJ, McMahon CJ. Editorial board composition among pediatric cardiology journals: time to cast the net wider. *JACC Adv*. 2022;1:100137.

6. Hasan BS, Rasheed MA, Wahid A, Kumar RK, Zuhlke L. Generating evidence from contextual clinical research in low- to middle income countries: a roadmap based on theory of change. *Front Pediatr*. 2021;9:764239.

7. The Lancet Global Health. Closing the door on parachutes and parasites. *Lancet Glob Health*. 2018;6(6):e593.

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