



# Share of Nations in 37 International Public Health Journals: An Equity and Diversity Perspective towards Health Research Capacity Building

*\*N Keshavarz Mohammadi<sup>1</sup>, F Zaree<sup>2</sup>, E de Leeuw<sup>3</sup>, MM Emamjomeh<sup>4</sup>*

<sup>1</sup>*Dept. of Public Health, School of Public Health, Shahid Beheshti University for Medical Sciences, Tehran, Iran*

<sup>2</sup>*Dept. of Family Health, Qazvin University of Medical Sciences, Iran*

<sup>3</sup>*Dept. of Community Health Systems & Policy, School of Public Health, Deakin University, Geelong, Australia*

<sup>4</sup>*Dept. of Environmental Health, Qazvin University of Medical Sciences, Iran*

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## **Abstract**

**Background:** This paper contributes to further exploration of inequity in access to health research capacity development by examining the representation of different nations in international public health journals. It also aims to examine the degree of diversity that exists in these journals.

**Methods:** This study is a descriptive survey. It was done with objective sampling on 37 ISI health journals on October of 2008. The number and nationality of people in different editorial positions of the journals was identified. The second analysis involved recalculating the numbers obtained for each nation to the population size of nations per million inhabitants. In order to better compare countries in terms of presence in editorial team of the journals, a 'public health editor equity gap ratio' (PHEEGR) was developed.

**Results:** Low income countries have occupied none of the leadership positions of chief editor or associate /assistant chief editors and middle income countries at maximum shared less than 5 percent. The PHEEGR gap in access to the different editorial positions between highest to the lowest representation of countries was 16/1 for chief editors, 12/1 for associate editors, 335/1 for editorial boards and 202/1 for associate editorial boards. However, after normalizing the data to the country's population, the gap increased significantly.

**Conclusion:** There is an imbalance and possibly even inequity in the composition of editorial boards and offices of international health journals that should be paid significant attention. This can contribute to fill the equity gap exists between health in developing and developed countries.

**Keywords:** Equity, Capacity building, Editorial board, Journal, Nations

## **Introduction**

Today, journals play an important role in accumulating and disseminating knowledge and evidence and influencing our practice worldwide. The ideas reflected or advocated in prestigious peer reviewed international journals are more likely to be adopted, implemented, duplicated or modified elsewhere. In contrast, even brilliant ideas that do not get the chance to reach these platforms are ignored, perhaps at even very high expense. International journals,

including international public health journals, provide valuable opportunities for capacity development, career building, and impact on health research and practice at international levels not only for authors but also for editors and members of editorial boards.

For those concerned with equity, it is important that these opportunities should be shared fairly between researchers from less developed and developed countries, and would have a just

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\*Corresponding Address: E-mail: n\_keshavars@yahoo.com

gender balance. In addition, wider inclusion strategies will produce more diverse perspectives within the editorial boards that can ensure a more holistic understanding of health challenges are at place. However, there is a consistent pattern observed that shows higher publication and citation rates and hence scientific impact are attributed to developed countries (1-7). More recently, determinants of inequity in health are examined more in depth; among them are inequity in health research and its required capacity and infrastructures (8, 9). Measuring the quantity of publications by different countries has been one of the popular ways to examine the equality between countries in terms of their share in health research (1-7). These observations have been first identified nearly two decades ago in the term “90/10 gap” (10). Since, capacity development for health research has been widely recognised as key strategy to fill this gap.

Health research capacity can be considered at several levels of individual, research groups, institutions and nations (11, 12). Research capacity is conceptualized as competencies and skills to identify problems, set objectives and priorities, identify solutions and also build sustainable organisations and institutions for research in a way that the research outcomes can improve policy and programs (9, 11). Other competencies have been identified as required capacity for health research including leadership skills, a high self-efficacy, a sense of ownership, and experience (8). The launch of the “Research for change” initiative by WHO reflects the global will for improving research capacities for developing countries (13). It is a significant move to see that chief editors of health journals are among key stakeholders and supporters of this initiative affirming their important role in the research arena (14). However, measuring equity in health research opportunities is a relatively ignored aspect of both equity and capacity building for research.

### ***Health research capacity development, equity and diversity***

Inequality and inequity in health research are complex issues. Many factors have been identified as causes or explanations for this inequity. These factors include inequality in distribution of power of identifying the problem, and solution generation (15), and more importantly economic development status, and limited health research capacity (1, 2, 3, 8). However, this important and legitimate view does not provide a sufficient explanation for real patterns observed as there are other factors such as political implications(8), ethnocentric biases (16) Intellectual isolation (8), language barriers for Non-English speaking researchers to be playing their roles. Hence, the low representation of developing countries is not explainable only by research budget and even research infrastructure. It is easy to observe that not only in international journals but also in many global conferences, guidelines and strategies for health suffer from inequitable global representation and diversity. Low representation of data and perspectives from less developed countries/communities reduces the comprehensiveness of our understanding of the complex health challenges we face in the 21st century. This misguided supposed homogeneity in our understanding of health problems and hence solutions also may lead to a widening gap between research and practice between and even within countries (14). Finally, inadequate research infrastructure, capacities and opportunities in developing countries have led to significant brain drain (8) just to widen the inequity in health research and finally in health.

International journals can provide valuable capacity development opportunities. Editorial teams of international journals have a unique power to shape the direction of health research and practice at global level. Utilizing their right and power in the evaluation and process of decision making about publishing a piece of research, or commissioning papers or to write editorials helps them to act as change agents and leading the research publication. Editors

and editorial boards have better opportunities to reflect their perspectives through writing editorials or inviting guest editors which support their perspectives. They may also have better 'insider knowledge' to increase their opportunities for publication in affiliated journals. Establishing and running national and international journals requires capacities such as research, leadership and management skills, experience, communication, visibility and organisational infrastructure. It appears that developing such capacities have received less attention in the dialogue on research capacity development. Hence they have been less examined from equity perspectives.

This paper contributes to further exploration of inequality in access to health research capacity development by examining the representation of different nations in international public health journals. It also aims to examine the degree of diversity that exists in these journals.

## **Materials and Methods**

This study is a descriptive survey. It was done with objective sampling on 37 ISI health journals on October of 2008. In seeking out international journals that focus on public health, two approaches were employed. First several websites providing an overview /list of international health journals were examined including ISI web of Science, the directory of open access journals and Google. In addition, several international experts were consulted to identify additional list of international public health journals. Searches were made into this website under the keywords "health", "hygiene", and "public health". The research was restricted to resources in English as the main language of international journals. Consultation with experts led to identifying journals such as the Milbank Quarterly that did not have the terms such as health or hygiene in their title and yet are health journals. A long list of hundreds of health journals emerged at this stage. The inclusion criteria at this study defined those health journals

that have an international scope clearly mentioned in the front matter of the journal, and also focus on public health from a general perspective rather than issue or age specific health journals. Hence, examining the title of the journal as well as the information available on the journal's website assisted in selecting the final list of journals, all available online. As a result 37 journals were included in the study.

An analysis of the scope of the journals, location of the office of the journals, publisher of the journals and the composition of editorial boards and their affiliation were based on information contained on the journals' websites. The first step in the analysis involved a detailed examination of the publisher and the host country of the journal and more importantly the positions defined in the journals. These positions included chief editor/s, associate/assistant editor/s, Editorial Board, associate Editorial Board. A table including these variables was developed to contain the data for each journal. The number and nationality of people in these positions according to their affiliation as on the website of journals were identified and recorded in the table. The second analysis involved recalculating the numbers obtained for each nation to the population size of nations per ten million inhabitants. The population of countries was obtained from World Population Data Sheet report published by the Population Reference Bureau (17). Finally, absolute and relative numbers of each position for each nation were recalculated for the three-tiered country income stratification based on the World Bank classification (18). Ultimately, the entire dataset was analyzed with SPSS software.

## **Results**

The 41 chief-editor positions available in 37 journals included in this study were shared only by 11 countries, of which nine were from high income and two from middle income countries. Generally, 95.12% of chief-editors were from high income countries and less than 5 percent from middle

income countries. USA occupies 39.1% of available positions of chief editor followed by the UK with 31.7%. Combined, 70% of chief-editor positions (31 positions) were occupied by these two English speaking nations. The nine remaining positions were taken up by nine other countries. All of the associate/assistant editor's positions were located in only 11 high income countries leading with USA (12 positions, 35.29%), followed by UK (9 positions, 26.47%) and Canada (5 positions, 14.7%). Two countries each with two and six countries each with only one position were further identified. In terms of editorial board membership [671], 52 countries contributed in forming editorial boards in 37 journals. Again, USA with about half the members of editorial boards [335] and UK with 16.54 percent [111] members had the largest representation on editorial boards. The share of the remaining 48 countries varied from 24 seats to only one position for 21 countries. Similar patterns were observed in examining the share of nations on associate editorial boards [317]; more than 64.74% of associate editorial boards [202] were from USA and 7.5% from UK (22). Only 25 countries could be identified for such roles, of which 19 countries were from high income countries. As Fig. 1 shows low income countries have occupied none of the leadership positions of chief editor or associate/assistant chief editors and middle income countries at maximum shared less than 5 percent.

In terms of hosting/publishing these journals, the location of the administration offices formed part of our judgment. Except Malaysia, all the other journals were published and hosted by 9 high income countries. USA was leading country, together with UK hosting more than 70 percent of these journals. Canada with two journals was third followed by seven other countries all hosting one journal.

Although in terms of absolute numbers the affluent and highly populous USA appeared to be the most privileged in gaining all type of positions in these journals, when data were normalized to population size of countries (thus calculating a position/population rate), a different

pattern emerged. Table 1 illustrates the rank of top five nations in access to the positions utilizing the absolute numbers and normalized numbers. Countries with small size of population such as Iceland ranked better when the numbers divided by population size. For example, Belgium ranked first with 3.77 representative per ten million inhabitants and the lowest represented countries were countries such as Brazil had 0.005 people per ten million inhabitants. The most populated countries such as China and India with populations exceeding one billion, or countries such as Brazil, Pakistan, Nigeria, and Mexico with more than 100 million populations did not have significant presence, while some countries with less than 40 million population such as Canada and Australia or even less populated ones such as Iceland were better off.

In order to better illustrate the gap, a 'public health editor equity gap ratio' (PHEEGR) is suggested. PHEEGR is calculated by dividing the number of positions occupied by the most represented countries journals to less represented country based on absolute numbers and also normalized data to population illustrated in table two. For example, the PHEEGR for occupying the position of chief editor was 16 to one (16/1), as USA had most contribution with 16 chief editors and 6 countries had less contribution with only one representative. When data were normalized for population to calculate the relative number of positions in the editorial team of the journals available for 10,000,000 inhabitants of each nation, the gaps proved to be much wider. As table two shows that regarding the positions of chief editors, Belgium had the most contribution as there were 3.7 chief editors per 10,000,000 inhabitants of Belgium while Brazil had the least contribution with 0.005 per 10,000,000 inhabitants and 108 countries some with hundreds of millions populations with no contribution as chief editors in these journals. Hence, the inequity gap rate was 754 that meaning Belgium is 754 times more privileged.

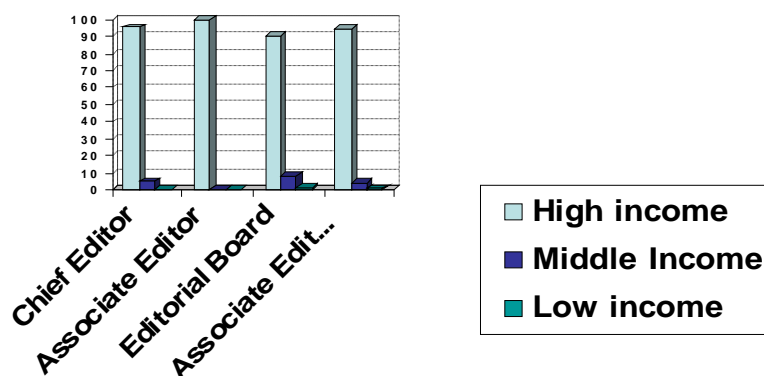


Fig. 1: The share of nations in editorial team of journals

Table 1: Rank order of the top 3 countries based on the share in editorial team of the 37 journals

Position	Countries	Absolute numbers	Countries	normalized numbers (per10,000,000 in habitants)
Chief Editor	U.S.A	16	Belgium	3.7
	U.K	15	U.K	2.1
Associate editors	Belgium	4	U.S.A	0.5
	U.S.A	12	Iceland	33
	U.K	9	U.K	1.4
Editorial board	Canada	5	Australia	0.9
	U.S.A	335	Iceland	33
	U.K	111	U.K	18
Associate editorial board	Canada	28	Australia	11.4
	U.S.A	202	Australia	5.7
	U.K	22	U.K	3.6
	Japan	17	U.S.A	0.66

Table 2: Equity conditions in access to the editorial positions in 37 international public Health journals (PHEEGR= Public health editor equity gap ratio: the ratio of highest representation to lowest representation of countries)

Positions	PHEEGR	PHEEGR normalized to population
Chief editor/s	16/1	754 / 1
Associate editors	12/1	1111/1
Editorial board	335/1	4761/1
Associate/ editorial board	202/1	2852/1

## Discussion

We realize this study has limitations. The pattern identified in examining only 37 English language journals with international scope would not necessarily reflect the pattern in any individual international journals and those not in English. Including more journals in the study might have led to some different pattern. In addition, this study only includes English language journals, so for international journals published in other languages, a different pattern might be observed. However, the material presented here demonstrates that there is a significant gap between countries of different income and hence development stages in terms of their share in international public health journals.

Developing countries account for more than 85% of global population (19) but their visibility and share in health research by no means reflect this proportion. Current global patterns, as our data supports, show that the developed world is a dominant player in leadership roles in the public health knowledge generation process. Other studies have examined the share of countries in different international journals based on their publication and the citation rate (1-7), this study has taken a novel approach to examine the share of countries in the process of evaluation and decision making regarding research publication and direction which are within power and responsibilities of chief editors and editorial boards.

The PHEEGR indicator alludes to a critical issue in global health research, namely, the 90/10 gap: 90% of health research expenditure is spent on 10% of the world population (notably in OECD countries); in pharmaceutical R&D the balance seems even more skewed. The population component is therefore a valid and even essential part of the equation.

Developing research capacity has been identified as a critical step towards equity between countries (16, 10). Developing leadership skills and promoting self confidence and self efficacy should

be considered as key capacities. It appears that any intervention should involve change in the current practice, communication and policies which have led to emergence of the existing inequity. Among them is facilitating more equitable distribution of power (10) However, it is interesting to note that reviewing literature on capacity development in developing countries indicates that often even these discussions are led by scholars from the developed world. In contrast there is little knowledge about perspectives of people from these countries towards the causes of, and potential solutions for major health issues. A more constructive engagement should possibly start from discussions around capacity development within low-income countries, rather than more 'charitative' benevolent discourses led by high-income countries. An example of the effectiveness of the challenge to the expert-driven, Western public health discourse can be found in the operations and agenda of the People's Health Movement. Its publication of the Global Health Watch (20, 21) and community response to important global issues such as the WHO Commission on Social Determinants of Health (22) shows that editorial engagement from low and middle income countries is possible, and is possibly significant.

Facilitating equal accessibility to international opportunities for capacity building for all countries is a key step. For example, there could be more policies in international organisations that ensure all experts regardless of their origin will have equal chance to benefit from these opportunities. Improving strategies to better reach out to experts and researchers in the less developed world would facilitate distribution of information at global level. At the same time, low and middle income countries, governments and researchers should more actively and effectively engage in international research communication and collaborations. Local action would provide a common ground for international collaboration. This would be

an important strategy focusing on the development of research capacity. Integration of researchers from low and middle income countries into international networks not only improves critical ability of researchers but also tends to correct ethnocentric biases and national focuses (16).

Filling the equity gap in health and health research not only is justified from an equity perspective, but we can also consider it from a diversity perspective. Considering the complexity of health challenges we face in the 21<sup>st</sup> century, the more diverse perspectives are exchanged, the more chances that we reach a comprehensive understanding of global and local health challenges. This diversity also offers more chances to generate effective and adoptable solutions for different contexts. Health research capacities are limited in lower income countries compared with the existing capacities in higher income countries. However, it appears that even limited existing capacities have not been effectively managed both within countries and at global levels. Widening inequity in health research has dramatically reduced the diversity in available information, knowledge and perspectives and hence solutions for health challenges. This inequity and low diversity calls for more urgent and effective research-capacity buildings and also to share benefits of international health research.

## **Conclusion and the way forward**

Research so far have identified a knowledge gap that may contribute to global health inequity; in addition to the well-known underrepresentation of scholarly work from low and middle income countries in journals with a global peer-reviewed remit. We have now identified that there is an imbalance and possibly even inequity in the composition of editorial boards and offices of such journals. Clearly, here is a need to examine capacity development for research in a more comprehensive manner in re-

gards to sustainability and renewability of existing capacities. Taking on board the 90/10 health research agenda there seems a challenging task ahead for the international public health research community.

International public health journals have the potential to provide valuable opportunities for health researchers from developing countries both to develop their research knowledge, skills and experiences as well as reflecting on their local experiences and different perspectives. This will also be beneficial for the developed world, and it helps to achieve a more comprehensive understanding of health challenges we face in the global village. A globally equitable scholarly community would, we propose, also contribute to the development of more effective and sustainable solutions around the world. There are also better opportunities for collaborative research between countries. This can contribute to fill the equity gap exists between health in developing and developed countries. A good starting point will be found in providing better opportunities for gaining experience in editorial processes for example by internships, mentorships as well as editorial apprenticeships (temporary seats, rotating existing opportunities). We suggest action on the following strategies:

1. Establishing policies in international knowledge generation organisations such as international journals that facilitate more contribution of researchers from LICs and MICs in leadership and policy making positions and also enhance the diversity in perspectives
2. Allocating more funding for research and leadership capacity developments for researchers from LICs and MICs. Internships, fellowships and mentorships are potential strategies in this regard.
3. Providing additional support and mentorship for researchers from LICs and MICs for publishing their research in international journals.
4. Reviewing the existing capacity development opportunities such as such as publica-

tion, memberships in international networks and associations, conferences, training opportunities as well as collaboration for publication of journals with an equity and diversity perspective.

5. Conducting research on effective ways to achieve equity in access to opportunity and resources for capacity development and career building for less presented health researchers from less developed communities and countries.

6. More contribution and leadership in debate and discussion on health research capacity development strategies by scholars from LICs and MICs

Development and setting into motion of these tasks involves continuous commitments, particularly among scholars. While the developed world should take significant actions towards connecting with researchers in the less developed world, health professionals and experts in less developed world have also a key part to act. They need more efforts to reach out to their colleagues to collaborate for developing capacity for health research within their countries and also ask for external support when and where needed. There is a need for raising awareness about and demand for the opportunities needed for capacity development and equally important for confidence building. Researchers and research institutes in less developed countries need to consider strategies for capacity development that enhance independency and strengthen leadership skills.

### Ethical Considerations

Ethical issue principles including plagiarism, informed consent, misconduct, data fabrication and/or falsification, double publication and/or submission, redundancy, etc. have been completely observed by the authors.

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