Papers

Representation of authors and editors from countries with different human development indexes in the leading literature on tropical medicine: survey of current evidence

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Abstract

Objective To assess the current international representation of members of editorial and advisory boards and authors in the leading peer reviewed literature on tropical medicine.

Design Systematic review.

Main outcome measures Country affiliations, as classified by the human development index, of editorial and advisory board members of all tropical medicine journals referenced by the Institute of Scientific Information (ISI) as of late 2003 and of all contributing authors of full articles published in the six leading journals on tropical medicine in 2000-2.

Results Sixteen (5.1%) of the 315 editorial and advisory board members from the 12 ISI referenced journals on tropical medicine are affiliated to countries with a low human development index and 223 (70.8%) to countries with a high index. Examination of the 2384 full articles published in 2000-2 in the six highest ranking tropical medicine journals showed that 48.1% of contributing authors are affiliated to countries with a high human development index, whereas the percentage of authors from countries with a low index was 13.7%. Articles written exclusively by authors from low ranked countries accounted for 5.0%. Our data indicate that research collaborations between a country with a high human development index with one that has either a medium or a low index are common and account for 26.5% and 16.1% of all full articles, respectively.

Conclusion Current collaborations should be transformed into research partnerships, with the goals of mutual learning and institutional capacity strengthening in the developing world.

Introduction

Serious under-representation of editorial and advisory board members from countries with a low human development index in general medical and psychiatry journals has been documented recently. In addition, very low proportions of published articles from authors from low income countries have been found in many research fields, including psychiatry, cardiovascular disease, and epidemiology and HIV/AIDS.

The current global burden of infectious and parasitic diseases is heavily concentrated in the developing world. Major national and international initiatives have been launched to improve research capacities in developing countries. It is therefore interesting to investigate whether scientists affiliated to countries with low or medium human development indexes have more dominant roles in the research and control of tropical diseases than in other fields and hence share their experiences and disseminate their findings in the peer reviewed international literature. We systematically review and discuss the current geographical composition of editorial and advisory boards and of contributing authors in the literature on tropical medicine as classified by the human development index.

Material and methods

In July 2003 we systematically analysed the geographical composition of the editorial and advisory boards of all 12 journals indexed under the category “tropical medicine” in the journal citation reports of the Institute of Scientific Information (ISI), by visiting the journals’ electronic homepages and studying the latest print issues. We noted board members’ country affiliations as classified by the human development index 2002. This is a cumulative measure of the achievements of an individual country in terms of their residents’ life expectancy, educational attainment, and adjusted real income. Countries have been classified by high, medium, and low human development (http://hdr.undp.org/). We also recorded the geographical location of the editorial office (town and country) of the same 12 journals.

We then selected the six leading journals on the basis of their impact factors for 2002, namely the American Journal of Tropical Medicine and Hygiene (impact factor 2.063), Tropical Medicine and International Health (1.796), Transactions of the Royal Society of Tropical Medicine and Hygiene (1.742), Acta Tropica (1.332), Leprosy Review (1.017), and Annals of Tropical Medicine and Parasitology (0.978). We carried out a retrospective analysis for 2000-2 with particular consideration of the country affiliation of all contributing authors (hereafter “author countries”). We included all full articles but excluded editorials, letters to the editor, conference proceedings or reports, special reports, teaching materials, reviews of books and CDs, and news announcements. We noted author countries of all, first, and last contributors according to low, medium, and high human development index. We omitted articles that lacked authors' address details for unambiguous linkage (< 0.5%, n = 11). Authors with double or triple addresses that resulted in different rankings were accounted for as half or one third under the index category.

Results

Editorial boards

Table 1 summarises the current geographical affiliations, ranked by human development index, of all 315 members of editorial and advisory boards from the 12 tropical medicine journals cur-
rently referenced by the ISI. Overall, 223 (70.8%) of all board members are from countries with a high human development index. Only 16 (5.1%) board members are affiliated with countries with a low index; nine of them are on the boards of only two journals (Annals of Tropical Medicine and Parasitology, n = 5; Annals of Tropical Paediatrics, n = 4). Five of the journals do not have any representatives from a country with a low human development index on their boards, and three have only one single representative. With the exception of the Brazil based Memorias do Instituto Oswaldo Cruz (n = 35), only 41 members of the remaining journals have affiliations to countries with a medium index, most notably on International Journal of Leprosy and Other Mycobacterial Diseases (n = 9), Tropical Doctor (n = 7), and Annals of Tropical Paediatrics (n = 7). For journals that not only have an editorial but also an advisory board (such as Annals of Tropical Paediatrics), except for the editorial office of the Memorias do Instituto Oswaldo Cruz, all other ISI referenced tropical medicine journals are based in the United States (n = 2) or in Europe (n = 9), particularly in the United Kingdom (n = 7).

### Author representation according to human development index

We examined 2384 articles published in the six highest ranking journals on tropical medicine in 2000-2. Single authored publications were rare (6.8%, n = 162). The median number of authors per article is five, and the maximum number of coauthors on a single paper was 35.

Table 2 presents the geographical affiliations of authors according to the human development index. Overall the proportion of authors affiliated with countries with a high human development index is 48.1% (range 38.6% (Leprosy Review) to 55.9% (American Journal of Tropical Medicine and Hygiene)). The proportions of first and last authors from countries with a high index are even higher, namely 50.6% (range 40.2-59.8%) and 58.8% (range 46.9-68.5%), respectively. Annals of Tropical Medicine and Parasitology had the lowest percentages of first and last authors from countries with a high index, and the American Journal of Tropical Medicine and Hygiene had the highest percentages. We observed a positive trend between the percentages of first, last, and all authors from countries with a high human development index with the impact factor of a journal.

The percentages of authors from countries with a low human development index range from as low as 6.1% (American Journal of Tropical Medicine and Hygiene) to a maximum of 26.0% (Tropical Medicine and International Health). They decrease to 4.5% and 22.0% for these two journals respectively if only the first authors, and to 4.1% (American Journal of Tropical Medicine and Hygiene) and 15.2% (Leprosy Review) if only the last authors are considered.

Table 3 shows the current extent of research collaborations between countries with different rankings on the human development index and the number and percentage of articles from countries with the same rankings. The percentage of articles published exclusively by authors from countries with a low index ranges from 1.7% (American Journal of Tropical Medicine and Hygiene) to 7.7% (Leprosy Review). In contrast, far higher proportions of authors from countries with a high index have published their work exclusively in leading tropical medicine journals, from 20.9% (Annals of Tropical Medicine and Parasitology) at the low end of the scale to 35.9% (American Journal of Tropical Medicine and Hygiene) at the high end. Over the investigated period of three years we found a high percentage of articles originating exclusively from countries with a medium index (33.3% for Annals of Tropical Medicine and Parasitology and 33.5% for Leprosy Review).

The total proportion of research collaborations between countries with different human development indexes ranges from 25.2% (Leprosy Review) to 60.3% (Tropical Medicine and International Health) of all full articles. Research collaborations between authors from countries with a high and medium index were more common (26.5%) than between authors from countries with high and low indexes (16.1%). Research
collaborations between authors either from countries with all three rankings or from countries with medium and low indexes were uncommon, at 1.9% and 0.4%, respectively.

The way forward

Our analyses extend recent findings of imbalanced editorial and advisory boards of general medical and psychiatry journals to the literature on tropical medicine. As potential remedies the establishment of regional offices, the inclusion of internationally representative members in advisory boards, or the creation of virtual platforms of exchange—for example, facilitated through representative members in advisory boards, or the creation of advisory boards of general medical and psychiatry journals—might be helpful in analysing, presenting, and discussing the data. In addition to the promotion of partnerships between developed and developing countries, the results of a poll on the BMJ website found the allocation of 2-5% of the health budget to research, the cutting of links between donor aid and decisions about research priorities, and the improvement of telecommunications to be the important mechanism for creating a conducive and stimulating environment for sound research in developing countries. Sustainable research partnerships that are built on mutual trust, shared information, and joint responsibilities enable exchange and transfer of technology and capacity building of local scientists. Such partnerships may also make it possible for researchers in countries with a low human development index to be helped in analysing, presenting, and discussing the data. In addition to the promotion of partnerships between developed and developing countries, the results of a poll on the BMJ website found the allocation of 2-5% of the health budget to research, the cutting of links between donor aid and decisions about research priorities, and the improvement of telecommunications to be the

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Total 2384 12737 48.1 38.2 13.7 50.6 36.9 12.5 58.8 31.8 9.4

*Source ISI Web of Science.
†For inclusion criteria see materials and methods section.
‡Based on the number of all authors in each journal.
§Based on the number of all articles in each journal.
four most important strategies to improve research in poor
countries. With adequate support—including sufficient funding—and
sustained commitment the structure and emphasis of tropical
medicine research can be transformed so that researchers from
developing countries are leading the programmes in response to
their local needs. This in turn might be a key factor in reducing the
intolerable burden of infectious and parasitic diseases that
continue to affect poor people worldwide disproportionately
and might consequently be an important strategy towards allevi-
ating poverty.

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What is already known on this topic

Strengthening of research capacity from developing
countries is essential to reduce inequities in health

Few scientists from countries with a low human
development index serve on editorial and advisory boards of
leading international journals

Authors from countries with a low development index are
under-represented in numerous research fields (for
example, general medicine)

What this study adds

An imbalance of international representation exists among editorial and advisory boards of the ISI referenced journals on tropical medicine

Only 1.7-7.7% of the articles published in the six leading
tropical medicine journals in 2000-2 were generated
exclusively by scientists from countries with a low human
development index

International research collaborations (mainly between a
country with a low or medium human development index
and Europe or the United States) are common in tropical
medicine

Collaborations should be transformed into research
partnerships to enhance mutual learning and institutional
capacity building