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

Jennifer Keiser, Jürg Utzinger, Marcel Tanner, Burton H Singer

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 225 (70.8%) to countries with a high index. Examination of the 2584 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 15.7%.

Conclusion 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.1,2 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,3 and epidemiology and HIV/AIDS.4 The current global burden of infectious and parasitic diseases is heavily concentrated in the developing world.5 Major national and international initiatives have been launched to improve research capacities in developing countries.6 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 literature.

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reviewed international literature. We systematically reviewed and discussed 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 as classified by the human development index.

Table 1 summarises the current geographical affiliations of all 315 contributing authors (hereafter “author countries”) of all 12 tropical medicine journals currently 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; eight of them are on the boards of only two journals (Annals of Tropical Medicine and Parasitology, n = 4; 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 representative. With the exception of the Brazil based Memorias do Instituto Oswaldo Cruz (n = 35), only 41 author countries of all, first, and last contributors according to a 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 currently 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; eight of them are on the boards of only two journals (Annals of Tropical Medicine and Parasitology, n = 4; 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 representative. With the exception of the Brazil based Memorias do Instituto Oswaldo Cruz (n = 35), only 41 author countries of all, first, and last contributors according to a 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.
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 58.8% (American Journal of Tropical Medicine and Hygiene)) to 7.7% (Leprosy Review). In contrast, far higher proportions of authors from countries with a low human development 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 55.9% (American Journal of Tropical Medicine and Hygiene) at the high end.

Table 3 Extent of research collaborations between countries with different rankings on the human development index. Values are numbers (%) of articles

<table>
<thead>
<tr>
<th>Journal</th>
<th>Country’s human development index</th>
<th>Total no of articles from research collaborations*</th>
<th>Exclusively from authors in countries with human development index ranking</th>
</tr>
</thead>
<tbody>
<tr>
<td>American Journal of Tropical Medicine and Hygiene</td>
<td>High and low</td>
<td>High and low medium and low</td>
<td>High and low medium and low</td>
</tr>
<tr>
<td>54 (8.5)</td>
<td>205 (32.1)</td>
<td>12 (1.9)</td>
<td>271 (42.5)</td>
</tr>
<tr>
<td>229 (35.9)</td>
<td>127 (19.9)</td>
<td>11 (1.7)</td>
<td></td>
</tr>
<tr>
<td>Tropical Medicine and International Health</td>
<td>114 (28.6)</td>
<td>113 (28.4)</td>
<td>240 (60.3)</td>
</tr>
<tr>
<td>88 (22.1)</td>
<td>43 (10.8)</td>
<td>27 (6.8)</td>
<td></td>
</tr>
<tr>
<td>Transactions of the Royal Society of Tropical Medicine and Hygiene</td>
<td>116 (21.6)</td>
<td>155 (28.8)</td>
<td>281 (52.2)</td>
</tr>
<tr>
<td>121 (22.5)</td>
<td>110 (20.4)</td>
<td>26 (4.8)</td>
<td></td>
</tr>
<tr>
<td>Acta Tropica</td>
<td>30 (8.6)</td>
<td>86 (24.6)</td>
<td>121 (34.7)</td>
</tr>
<tr>
<td>105 (30.1)</td>
<td>102 (29.2)</td>
<td>21 (6.0)</td>
<td></td>
</tr>
<tr>
<td>Leprosy Review</td>
<td>24 (15.5)</td>
<td>13 (8.4)</td>
<td>39 (25.2)</td>
</tr>
<tr>
<td>52 (33.5)</td>
<td>53 (33.5)</td>
<td>12 (7.7)</td>
<td></td>
</tr>
<tr>
<td>Annals of Tropical Medicine and Parasitology</td>
<td>45 (14.7)</td>
<td>60 (19.6)</td>
<td>118 (38.6)</td>
</tr>
<tr>
<td>64 (20.9)</td>
<td>100 (33.3)</td>
<td>22 (7.2)</td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>383 (16.1)</td>
<td>632 (26.5)</td>
<td>1070 (44.9)</td>
</tr>
<tr>
<td>658 (27.6)</td>
<td>536 (22.5)</td>
<td>119 (5.0)</td>
<td></td>
</tr>
</tbody>
</table>

*Defined as including authors from countries with high and low human development index, high and medium index, medium and low index, or all three.
Collaborations should be transformed into research partnerships to
low or medium human development index and Europe or the United
International research collaborations (mainly between a country with a
from countries with a low human development index
medicine journals in 2000-2 were generated exclusively by scientists
medicine
and advisory boards of the ISI referenced journals on tropical
An imbalance of international representation exists among editorial
What this study adds
Authors from countries with a low development index are
serve on editorial and advisory boards of leading international journals
International research collaborations (mainly between a country with a
low medium human development index and Europe or the United
Collaborations should be transformed into research partnerships to
enhance mutual learning and institutional capacity building
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 arti-
cles. 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 collabora-
tions 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 journals1 to the literature on tropical medi-
cine. As potential remedies the establishment of
regional offices, the inclusion of internationally repre-
sentative members in advisory boards, or the creation
of virtual platforms of exchange—for example, facili-
tated through enhanced internet access or video
conferencing—should be considered. "Twinning" arrange-
ments, as recently established between editors of
five Western (including the BMJ) and four African
medical journals to establish mentoring relationships,
will help in the training of editors from countries with
a low human development index.

Our quantitative assessment of author representa-
tions on published full articles in 2000-2 in the six high-
est ranking tropical medicine journals shows that the
number of articles generated exclusively by scientists
from countries with a low human development index is
marginal (1.7-7.7%). We were surprised that authors
from these countries were so drastically under-
represented in tropical medicine. However, 16.1% of all
full articles originated from international research
collaborations between a country with a low human
development index and a country with a high index,
another 26.5% between a country with a medium index
and one with a high index, and 1.9% among countries
with all three rankings. Although the research agenda in
the developing world may be dictated to some extent by
the richer countries (also indicated by the high percent-
age of first and last authors as geographically ranked by
high human development index), genuine research
partnerships are an 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 infor-
mation, and joint responsibilities enable exchange and
transfer of technology and capacity building of local sci-
entists. Such partnerships may also make it possible for
researchers in countries with a low human development
index to be helped in analysing, presenting, and discuss-
ing the data. In addition to the promotion of
partnerships between developed and developing coun-
tries, the results of a poll on the BMJ website found the
allocation of 2-3% of the health budget to research, the
cutting of links between donor aid and decisions about
research priorities, and the improvement of telecommu-
nications to be the four most important strategies to
improve research in poor countries.10

With adequate support—including sufficient
funding—and sustained commitment the structure and
emphasis of tropical medicine research can be trans-
formed so that researchers from developing
countries are helping 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 alleviating poverty.

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and writing of the paper. MT and BHS participated in structur-
ating and revising the manuscript. JK is the guarantor.

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