

## INVITED EDITORIAL

# Inequity in health research publication in Africa – and the potential of innovative publishing options

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There is considerable inequity in the publication of health research in the Global South, especially in Africa. There are many reasons for this including a lack of trained researchers and academic positions for them, the continued colonisation of research that sees the research agenda dominated by the Global North and research funding going mainly to the Global North (even for diseases that only occur in the South), as well as factors that inhibit publication of African research in the scientific literature. In this piece, I plan to briefly describe this inequity but focus on problems in the publication of research and how capacity building and innovative publication methods might lead to Southern ownership of scientific publication.

## Global inequity in research

The World Health Organisation reports a median of 203 health researchers per million inhabitants of high-income countries, compared with 5 in low-income countries (211 in Europe compared with 6 in Africa) [1]. Unsurprisingly there is a similar gradient in research publications according to the income level of global regions and countries, demonstrated pictorially here [2].

Research funding, and the research agenda that this funding meets, also favours the Global North [3], and where North-South research collaborations exist they are dominated by collaborators from the Global North [4]. A study of Neglected Tropical Diseases (NTDs), which by their nature are endemic in low-to-middle-income countries, found that between the years 2007 and 2022 organisations in non-endemic countries received 75% of direct research funding on NTDs and 70% of indirect research funding on NTDs [5]. An editorial in the Somali Health Action Journal (SHAJ) documents considerable dependence on external institutions and organisations, in particular North-American and European, on authorship, institutional affiliation and funding of published health research of relevance to Somalia [6]. Most of the research

of direct relevance to Somalia was authored by non-Somalis only, and did not address current and emerging health priorities for Somalia. The SHAJ was established to provide local publishing ownership and allow the voices of Somali health researchers to be heard.

Each of these factors paint a picture of neglect of health research in the Global South, but there are other factors to do with the publication of research.

## Inequity in availability of published research

One issue is lack of ready availability of published research due to restrictive practices of journal publishers. There are high fees either for institutions to subscribe to journals so that they are available through their libraries, or if authors wish to make their findings freely available through an open access option this requires them to pay high article processing charges (APCs). This is compounded by the low quality and failure of many local journals to be indexed – resulting in the published research being unavailable to those who would find the results useful. Bibliometric coloniality has also been coined [7] to describe the biases by bibliometric indexes towards academic publications arising in the Global North, hence “*academic research from the African continent and much of the Global South are largely invisible on the global stage*”.

Universities also may have institutional policies which require academics to publish in international rather than local journals. This is linked to reliance on so called impact factors with authors wanting to publish in journals with a high impact factor, and universities using this in academic staff recruitment and promotion policies. Despite the heavy criticism of impact factors and a debate about how to measure the true social impact of research [8], the problem persists, and universities should review their institutional policies relating to recognition of publication.

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Research funders have recently been demanding that the results of the work they fund should be published as open access to make the findings readily available [9], and there is a growing global movement to encourage and facilitate open publishing. Two recent studies explored African open access journals in the health field and barriers to open access publishing of research. In the first, 173 journals from 13 African countries were explored, with numbers of journals in each country varying from 1 to 85. Although two thirds of the journals were open to access and available for free download, only one in five were indexed on PubMed and fewer than one in ten on MEDLINE. One half charged APCs and only a third of these offered a full or partial waiver [10]. A second study surveyed 91 African public health practitioners about open access publishing. Fewer than half of the respondents had experience of open access publication, or appreciated the benefits of ready availability, added visibility, increased citations and transparency of the open publishing model. Around 70% would like access to mentoring or free online courses in relevant topics [11].

## Capacity building

Although the economic factors which inhibit research and its publication require major structural change [12], the results of these surveys do suggest that building capacity in both research and publication is required. Development of skills in peer review would be of value in building capacity in both research and in its publication, and informed by results of the surveys above, an open online course on peer review and open publishing was piloted. Following a pilot, an online course on peer review was offered to African health researchers, and a separate course on open reviewing and publishing offered to the course graduates.

The peer review course was offered freely online and included the fundamentals and challenges of peer review, AI and the review process, how to review a journal article and an assignment to post a review [13]. Among 1088 individuals expressing interest in the course, 651 actually accessed the course materials and 203 gained a certificate of completion. Online discussions were rich, and a number of themes emerged including the importance of motivation to perform reviews. Full analysis of the results of the survey is currently underway, as is a subsequent course on open publishing and peer review. A Community of Practice is being established for further discussions of open publishing and reviewing of public health in an African context [14].

## Innovative publishing models

A second course on open publishing and reviews will take advantage of two newly developed digital repositories – BAOBAB for posting journal articles and other materials [15], and PublishNow for posting articles and reviews [16]. [Note: the choice of BAOBAB for the repository title was stimulated by the West African proverb “Wisdom is like a baobab tree; no one individual can embrace it.”

– with similar examples across Africa meaning that true wisdom is vast and multifaceted, requiring the collective understanding and contributions of many people.] Both repositories are open access and will provide digital object identifiers to the articles and the reviews. They are also African developed and owned, through the West and Central African Research and Education Network (WACREN) [17],

BAOBAB and PublishNow are examples of an innovative publishing model – Publish/Review/Curate (PRC) [18]. Here research is published, then reviewed and curated into ‘overlay’ journals – all parts of this model are open for access and free. This replaces the more traditional Review/Publish model where publication only follows successful peer review. The PRC model is part of a global movement, with funding support in Africa as well [19].

The PRC model is an example of what has come to be called Diamond Open Access, *“a scholarly publication model in which journals and platforms do not charge fees to either authors or readers. Diamond Open Access journals are community-driven, academic-led, and academic-owned publishing initiatives. Serving a fine-grained variety of generally small-scale, multilingual, and multicultural scholarly communities, these journals and platforms embody the concept of bibliodiversity. For all these reasons, Diamond Open Access journals and platforms are equitable by nature and design”* [20]. This contrasts with other types of open access: ‘Green’ where the accepted version of the paper is published in a repository (usually institutional); ‘Gold’ where the journal publisher offers open publishing, usually following the payment of an APC and the article has an open licence which specifies how it may be used; and ‘Bronze’ where the journal offers access to the article, but without an open licence.

## Knowledge inequity

Inequities in research and its publication are part of a broader theme of knowledge inequity, where inequity in education is added to, and is partly a consequence of, inequity in research and its publication. The ability to distribute the creation of knowledge to include research among populations which are often missed, such as those in the Global South, is discussed in the paper ‘Distributing knowledge creation to include under-represented populations’ [21] and is the subject of an open online course on the same platform as the courses presented above [22].

## Conclusion

Global inequity in research and its publication will take a long time to reverse until research, its publication and subsequent appearance in educational programmes can be equitably distributed. However, I hope that a consideration of the potential of building capacity for and the adoption of new publication models might assist in the development of Southern owned publication options for the dissemination of research knowledge.

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