

# Challenges Facing Sub-Saharan African Health Science Journals and Benefits of International Collaborations and Partnerships

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## Abstract

In order for the findings of health-related research to be accessible to health professionals and to have a potential effect on the greater scientific community, they must be not only written but also published. Failure to publish or access important health-related research findings might significantly diminish the potential impact that those findings would have on health and, more precisely, on clinical practice. Journals form a core means of accrediting and disseminating these findings and are especially important in sub-Saharan Africa by virtue of its large share of the global population and disease burden. Unexpectedly, the health-related research output from the region is low, owing in part to unique challenges facing the health science journals in the region. In this essay, we discuss some of those challenges from our editorial point of view, as well as the benefits of international collaborations and partnerships.

## Introduction

The accessibility and potential for impact of health-related research work on the scientific community depends on such work being both written and published. Recently, sub-Saharan Africa (SSA) has greatly increased both the quantity and quality of its research output. Between 2003

and 2012, the region more than doubled its annual research output. Its share of global research increased from 0.44% to 0.72%, and citations to its publications increased from a range of 0.06–0.16% to 0.12–0.28%.<sup>1,2</sup> As promising as this trend is, however, SSA still accounts for less than 1% of the world's research output, which remains a far cry from its shares of 12% of the global population<sup>1</sup> and 31% of the global burden of disease.<sup>3,4</sup> At such a low percentage of research output, the region is denied local health data that can lead to customized local health solutions and improved overall population health.

Health science journals serve as vehicles for disseminating health-related research findings through publication.<sup>5</sup> These findings form the basis for health policy decisions. It follows, therefore, that any challenges facing health science journals can negatively affect their dissemination role and eventually the impacts of important health-related research findings on public health. Although various reasons contributing to limited research output from low-income settings have been reported previously,<sup>6</sup> there is a dearth of data on the challenges facing health science journals in these settings. Having been the editors of some of the health science journals in SSA, we aim to share, based on our experience and anecdotal observations, some unique challenges facing these journals. We also analyze the role of collaborations and partnerships as mitigation to these challenges.

## Challenges Facing Sub-Saharan African Health Science Journals

### External Challenges

To begin, SSA health science journals suffer from a slim authorship base. In particular, the art of writing for scientific publishing is yet to be taught in several tertiary institutions in the region. At best, students who are in training to become health professionals only embark on an exercise in scientific writing in a bid to meet the university requirement to publish their thesis as a prerequisite to graduation. Unfortunately, this requirement to publish is often not accompanied by a writing mentorship program to ensure good writing skills. As a result,

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manuscripts that are submitted by junior researchers to local journals for consideration for publication can get rejected owing to poor quality and occasional breaches of publication ethics through plagiarism and other forms of scientific malpractice.<sup>7</sup> Journal editors may attempt to help junior authors improve the quality of their papers through the normal peer-review process and, sometimes, mentoring<sup>8</sup> (for example, through manuscript writing workshops); however, where no formal and regular structures exist to teach junior researchers scientific writing skills, the quality of their manuscripts will remain greatly impaired. Kumwenda et al.<sup>9</sup> identified a lack of mentorship of junior researchers by senior researchers as one of the challenges facing young African scientists in their research careers. In that study, one junior researcher had this to say:

*“When I first wanted to publish, I needed someone to assist me in turning my dissertation report into a publication. I approached two professors, but they kept postponing the meeting dates until I gave up.”*

Second, SSA health science journals face poor journal patronage. This is reflected in the researchers’ poor response when they are invited by editors to review manuscripts—a situation that may result in a delayed peer-review process of the manuscript and in low-quality publications.

Third, there is the issue of “Impact Factor Fundamentalism,”<sup>10</sup> a situation whereby African researchers prefer to publish their research manuscripts in high Impact Factor journals overseas. Unfortunately, such manuscripts tend to face high rejection rates by those journals because of their lack of or little relevance to their audience. Indeed, research originating from Africa often addresses local problems and is meant for local (African) journals’ audiences.<sup>5,11</sup>

Fourth, there is a rise in the number of predatory journals, which continues to hamper the growth of genuine journals in SSA. Many a seasoned researcher would rather lean on the side of caution, and rightly so, when evaluating requests from SSA journals for editorial assignments, such as serving as a reviewer or associate editor or being nominated to editorial board membership. The strict guidelines that have been put forth as warning flags for researchers to identify predatory journals, although intended for good, do unfortunately place several SSA journals in the category of predatory journal-like category. For instance, many SSA journals are yet to be indexed, have a very low Impact Factor (or lack one entirely), and may comprise an editorial board membership from a single country. All these factors only inadvertently tick all the boxes with regards to being a predatory journal. It is therefore important that more partnerships and initiatives be developed between renowned journals in the global North and such SSA journals that are in their infancy in order to help distinguish them from predatory journals. Such relationships

would boost the confidence of researchers in SSA journals and open a whole array of resources and benefits.

### Internal Challenges

SSA health journals face poor sustainability. This is partly due to the low funding priority and support from local institutions to the journals.<sup>12</sup> This lack of a strong funding base hampers the development of the journals and their ability to offer ancillary services such as author outreach campaigns and workshops on manuscript writing in addition to auxiliary services that help improve the international visibility of the journals’ publications (e.g., Altmetric). Additionally, the journals have poor succession planning. This situation means that when an editorial staff member leaves the journal because of retirement, resignation, termination, transfer, promotion, or death, there is often no one readily available or prepared to continue the staff member’s duties.

The dedication of time and energy to editorial work is imperative to the practice of journal publishing. Although it is not uncommon for journal editors the world over to serve voluntarily in addition to their other personal or professional responsibilities, the general poverty situation in SSA leads its journal editors into dedicating much of their time and energy into taking care of their paying jobs at the expense of their voluntary editorial work. As a result, journal production and metrics such as Impact Factor can suffer, which encourages African academics and researchers to publish elsewhere.

Moreover, the focus on peer-reviewed publications sometimes makes journal editors forget the vital role of dissemination of published research into the media for wider effect. Good working relationships with the media is a missing link toward a wider reach of health science journals in SSA.

### Benefits of International Collaborations and Partnerships

Collaborations in research and publishing have been in existence for a while.<sup>13,14</sup> Although certain authors have decried parachute research—the case in which Southern researchers in North–South collaborations conspicuously get left out of the resulting publications—considerable measures seem to have been put in place to arrest this challenge through meaningful collaborative partnerships.<sup>13</sup> One such collaborative partnership is the African Journal Partnership Program (AJPP).

AJPP is a partnership between African health and biomedical journals and leading journals published in the United States and the UK, with journals from the United States and UK providing mentorship and training to African journals.<sup>14,15</sup> The program was born out of an idea conceived in 2003 by the Fogarty International Center and the National Library of Medicine to address the need for capacity building among Africa’s biomedical and health journals by partnering

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a select few with leading biomedical journals in the United States and the UK.<sup>16</sup> The AJPP has received support from the Council of Science Editors from the beginning.

The AJPP began in 2004 with four journal partnerships as follows: *African Health Sciences* partnered with *The BMJ*, *Ghana Medical Journal* with *The Lancet*, *Malawi Medical Journal* with *JAMA* and *Mali Medical* with *Environmental Health Perspectives* with the *American Journal of Public Health*. Over the years, the program has grown. When a second contract was awarded for a 5-year period in July 2008, the *Ethiopian Journal of Health Sciences*, *Annales Africaines de Médecine*, *Sierra Leone Journal of Biomedical Research*, *Annals of Internal Medicine*, and *The New England Journal of Medicine* joined the program. A third contract was awarded in 2013 and in 2016, and the partnership program was extended to the *Annals of African Surgery* and *Rwanda Journal of Health Sciences*. In 2018, *The Health Press Zambia* was welcomed as the newest member. Currently, there are 10 African journals paired with six mentor northern journals (Table).<sup>17</sup>

The premise behind the AJPP is that, despite the recognized benefits of medical journals to health practitioners, Africa's medical journal production and distribution are low and therefore do not make research from endemic areas available to colleagues on the continent or in the international scientific community.<sup>18</sup> This is due mainly to poor representation of African health and medical journals in international indexing services.<sup>18</sup> A central goal of the AJPP, therefore, was to strengthen the capacities of participating African journals to publish high-quality, relevant academic articles to a standard comparable to the West by emphasizing the need to establish guidelines and platforms for authors to submit manuscripts for publication and by implementing criteria for rigorous scientific peer-review processes for articles that conform to international academic publishing practices in health so that they could be accepted into MEDLINE and other scholarly indexes, thus resulting in wider availability of African health and medical research to the world.<sup>17</sup>

Starting with a basic needs assessment,<sup>19</sup> the AJPP looked at equipment, facility, and editorial needs and provided computer hardware, software, Internet connectivity, and training. Workshops on journal management and strategic business planning were offered. A tradition of internships was established with the African journals in order to train up the next generation of editors. In 2014, a qualitative and quantitative review of the AJPP by Sarah Schroter, Senior Researcher at *The BMJ*, identified several key success indicators of the program, including increased online visibility and accessibility owing to an increase in the number of journals indexed in international databases such as PubMed Central and MEDLINE, some journals being awarded Impact Factors, and all journals having websites. Annual evaluations have documented continued progress for the journals.

The AJPP is funded by the U.S. National Institutes of Health with support from the U.S. National Library of Medicine and the Fogarty International Center, and the program is administered by the Council of Science Editors.<sup>2</sup> In 2017, the Elsevier Foundation joined the partnership by providing a grant for a volunteer training complement.<sup>2</sup> In a program dubbed "Research without Borders," publishing volunteers from Elsevier spend up to a month working closely with the editorial teams of each African journal.<sup>2</sup> This has contributed much to recent progress for these SSA journals. The AJPP also receives valuable support from non-journal partners, including ScholarOne Manuscripts and Clarivate Analytics, SPi Global Services, KWF Consulting, Ovid (Wolters Kluwer), and Compuserp.

### Future Hopes for Sub-Saharan African Health Science Journals

It is now clear that a lot stands to be gained by all parties through partnerships. Whereas SSA journals benefit from capacity building and expertise development, the western journals continue to reach out to wider authorship base and get new perspectives.<sup>13,14</sup> What remains now is a scale-up of

**Table.** African and Mentor Northern Journals in the African Journal Partnership Program.

African Journals	Mentor/Northern Journal
<i>African Health Sciences</i> and <i>Rwanda Journal of Health Sciences</i>	<i>The BMJ</i>
<i>Ghana Medical Journal</i> and <i>Sierra Leone Journal of Biomedical Research</i>	<i>The Lancet</i>
<i>Malawi Medical Journal</i> and <i>The Health Press Zambia</i>	<i>JAMA</i>
<i>Mali Médical</i> and <i>Annales Africaines de Médecine</i>	<i>Environmental Health Perspectives</i> and <i>The New England Journal of Medicine</i>
<i>Ethiopian Journal of Health Sciences</i> and <i>Annals of African Surgery</i>	<i>Annals of Internal Medicine</i>

the proven working partnerships<sup>13,14</sup> to include the global South in its entirety, not just a few countries. Additionally, SSA health journals that have benefited from such partnerships should consider taking the mantle and extending this into South–South partnerships that strategically address the peculiar challenges discussed in this essay.

The biggest promise appears to lie in North–South research collaborations that should make efforts to publish segments of the research findings in local journals as long as they are within the partnership and meet agreed criteria regarding editorial policies and practices. This will increase the visibility and quality of manuscripts for the local journals, which will subsequently attract more established authors.

## Conclusion

Although improving, SSA health science journals suffer the challenge of infrastructure, finance, editorial expertise, author quality, and indexing. Partnerships such as the AJPP provide welcome injection into local journals' attempts to scale up their editorial and infrastructural capacity. To sustain and extend such gains, the partnerships need to be widened to include the entire SSA region and to co-opt research funding collaborators to publish donor-funded research with select local journals. African governments and development partners should accelerate support to research and research-based education in Africa to build the necessary human capital to further increase research on solving African problems by Africans for Africans.

## Conflict of Interest

The authors are editors of the sister journals in the African Journals Partnership Program (AJPP) network that is funded by the National Library of Medicine through the National Institute of Health. *Science Editor* is a publication of the Council of Science Editors, which is one of the collaborators within the AJPP network.

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## References and Links

- World Bank. A decade of development in sub-Saharan African science, technology, engineering and mathematics research (English). Washington, DC: World Bank Group; 2014 [accessed September 1, 2019]. <http://documents.worldbank.org/curated/en/2373714688204551128/A-decade-of-development-in-sub-Saharan-African-science-technology-engineering-and-mathematics-research>.
- Francescon D. Research without Borders: sharing expertise in Africa; January 13, 2017 [accessed September 1, 2019]. <https://www.elsevier.com/connect/research-without-borders-sharing-expertise-in-africa>.
- Saric J, Utzinger J, Bonfoh B. Research productivity and main publishing institutions in Cote d'Ivoire, 2000–2016. *Global Health*. 2018;14(1):88. <https://doi.org/10.1186/s12992-018-0406-1>.
- Kirigia JM, Ota MO, Motari M, Bataringaya JE, Mouhouelo P. National health research systems in the WHO Africa Region: current status and the way forward. *Health Res Policy Syst*. 2015;13:61. <https://doi.org/10.1186/s12961-015-0054-3>.
- Tarkang EE, Bain LE. The bane of publishing a research article in international journals by African researchers, the peer-review process and the contentious issue of predatory journals: a commentary. *The Pan African Medical Journal*. 2019;32:119. <https://doi.org/10.11604/pamj.2019.32.119.18351>.
- Muula AS. Medical journals and authorship in low-income countries. *Croat Med J*. 2008;49(5):681–683. <https://doi.org/10.3325/cmj.2008.5.681>.
- Rohwer A, Young T, Wager E, Garner P. Authorship, plagiarism and conflict of interest: views and practices from low/middle-income country health researchers. *BMJ Open*. 2017; 7:e018467. <https://doi.org/10.1136/bmjopen-2017-018467>.
- Bruijns SR, Banner M, Jacquet GA. Improving publication quality and quantity for acute care authors from low- and middle-income settings. *Ann Emerg Med*. 2017;69(4): 462–468. <https://doi.org/10.1016/j.annemergmed.2016.09.011>.
- Kumwenda S, Niang EHA, Orondo PW, William P, Oyinlola L, Bongo GN, Chiwona B. Challenges facing young African scientists in their research careers: a qualitative exploratory study. *Malawi Med J*. 2017;29(1):1–4. <http://dx.doi.org/10.4314/mmj.v29i1.1>.
- Murray S, Clobridge A. The current state of scholarly journal publishing in Africa: Findings & Analysis. September 2014 [accessed October 7, 2019]. <https://www.ajol.info/public/Scholarly-Journal-Publishing-in-Africa-Report-Final-vo4c.pdf>.
- Ajao OG, Ugwu BT. Some problems facing scientific medical publications in Nigeria. *J West Afr Coll Surg*. 2011;1(1):31–39.
- Uthman OA, Uthman MB. Geography of Africa biomedical publications: an analysis of 1996–2005 PubMed papers. *Int J Health Geogr*. 2007;6:46. <https://doi.org/10.1186/1476-072X-6-46>.
- Breugelmans JG, Makanga MM, Cardoso ALV, Mathewson SB, Sheridan-Jones BR, Gurney KA, Mgone CS. Bibliometric assessment of European and sub-Saharan African research output on poverty-related and neglected infectious diseases from 2003 to 2011. *PLoS Negl Trop Dis*. 2015;9(8):e0003997. <https://doi.org/10.1371/journal.pntd.0003997>.
- Royall J. Strengthening African medical journals. [accessed September 1, 2019]. <https://www.juliaroyall.com/african-journal-partnership-project-ajpp/>.
- Fogarty International Center. African Journal Partnership Program (AJPP): disseminating African science beyond the Journal. [accessed September 1, 2019]. <https://www.fic.nih.gov/About/center-global-health-studies/Pages/african-journal-partnership-project-ajpp.aspx>.
- Mataya AA. The 2015 African Journal Partnership Project meeting in Malawi: continental progress via continental breakfasts and intercontinental collaboration. *Malawi Med J*. 2015;27(2):40. <http://dx.doi.org/10.4314/mmj.v27i2.1>.
- African Journal Partnership Program. History. [accessed September 1, 2019]. <https://ajpp-online.org/about/history.php>.
- African Journal Partnership Program. [accessed September 1, 2019]. <https://ajpp-online.org/>.
- Schemm Y. African medical journals partner with leading journals to boost impact. September 26, 2014. [accessed September 1, 2019]. <https://www.elsevier.com/connect/african-medical-journals-partner-with-leading-journals-to-boost-impact>.