Performance, priorities, and future of biomedical research publications in Africa: Need for networks between scientists in developed and developing countries.

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Scientific publications play an important role in the scientific process providing a key linkage between knowledge production and use [1]. Africa’s health challenges and research needs have been well documented for many years now. Scientific publishing activity worldwide over the past decades shows that most countries in Africa have low levels of publication [1-10]. In the 1990s, the term “the 10/90” gap was coined to express the acute global imbalance whereby developing countries experienced 90 per cent of the world’s major health problems, but received only 10 per cent of its resources for health research [11-13].

The difficulties in research, publication, editorial bias, and information access facing Africa are profound and seem almost intractable [1, 14]. Richard Horton, editor-in-chief of The Lancet in his excellent discussion of this issue has highlighted some of the barriers to information exchange between North and South [14]. Lack of funding, poor laboratory, limited technical support, little available training, few tutors or mentors, no career structure, weak peer networks, diffuse relation between research and academic reward, and research biased to Northern interests are important factors affecting research production from Africa. The low proportions of published articles from authors from Africa have been reported in many research fields [1-10], and may be due to fear of rejection, uncertain about journal options, and no culture of publication to draw on. In addition, serious under-representation of editorial and advisory board members from countries with a low human development index in medical journals has been documented recently [15-17]. This editorial bias may be due to low interest in less-developed countries and reviews fail to take account of local research conditions. Another difficulty facing African researcher is dissemination of findings to other parts of the world. Most of the information published in African journals are largely not included in major databases. Access to technological tools, information access, and other equipment and supplies to ease the work is not always possible. Researchers in Africa are poorly paid [18, 19]. Many have to work in private practice to make ends meet. Many research units in Africa are struggling to cope with a “brain drain” of basic scientist and clinical researchers to developed countries which offer more opportunities and greater political and financial securities [20-23].

There is an urgent need to strengthen local research capacity in Africa, to tackle compelling questions about health and disease vital to enhancing people’s health, lives and livelihoods. More support should be provided by developed countries to Africa, for the advancement of local research efforts. This support should aim to improve the infrastructure of research in Africa. In addition, there is a need for Africa countries to develop and sustain research capacity by attracting, developing and retaining excellent scientists, providing and sustaining the infrastructure and equipment that high-quality research needs; developing strong research institutions with effective leadership, governance and management systems; sustaining a balanced research portfolio in the Africa and partner countries. Researchers from Africa should work effectively through partnerships internationally, nationally; regionally and locally to ensure that research agenda is relevant to Africa’s need and deliverable. There is a need for schemes to promote research as a viable career option and by giving more research awards and supplementing researchers’ salaries. This can be inform of non-bond research grants to PhD students studies in local universities that are have a good links to reputable institutions in the North. Researchers from Africa should join national, regional, and global networks. Developing computerized knowledge management systems to more accurately track research output including grey literature may help eliminate intellectual isolation.

Health research priorities in Africa have often been determined by funders, institutions or individuals, rather than by means of a truly participatory and rational process. There is a need to strengthen the “African Voice” in determining the priorities for future health research. On a final note, I believe like others, that adopting a philosophy of friends-helping-friends and intellectual solidarity will help promotes a commitment to research to equity in health development in Africa

**Competing interest**

UOA is a citizen of Nigeria.
1. Uthman OA, Uthman MB: Geography of Africa biomedical publications: an analysis of 1996-2005 PubMed papers. Int J Health Geogr 2007, 6:46.
2. Falagas ME, Karavasiou AI, Bliziotis IA: Estimates of global research productivity in virology. J Med Virol 2005, 76(2):229-223.
3. Falagas ME, Papastamatakis PA, Bliziotis IA: A bibliometric analysis of research productivity in Parasitology by different world regions during a 9-year period (1995-2003). BMC Infect Dis 2006, 6:56.
4. Keiser J, Utzinger J, Tanner M, Singer BH: Representation of authors and editors from countries with different human development indexes in the leading literature on tropical medicine: survey of current evidence. Bmj 2004, 328(7450):1229-1232.
5. Mahawar KK, Malviya A, Kumar G: Who publishes in leading general surgical journals? The divide between the developed and developing worlds. Asian J Surg 2006, 29(3):140-144.
6. Mandal K, Benson S, Fraser SG: The contribution to ophthamal literature from different regions of the world. Int Ophthalmol 2004, 25(3):181-184.
7. Patel V, Kim YR: Contribution of low- and middle-income countries to research published in leading general psychiatry journals, 2002-2004. Br J Psychiatry 2007, 190:77-78.
8. Rahman M, Haque TL, Fukui T: Research articles published in clinical radiology journals: trend of contribution from different countries. Acad Radiol 2005, 12(7):825-829.
9. Soteriades ES, Rosmarakis ES, Paraschakis K, Falagas ME: Research contribution of different world regions in the top 50 biomedical journals (1995-2002). Faseb J 2006, 20(1):29-34.
10. Yach D, Kenya P: Assessment of epidemiological and HIV/AIDS publications in Africa. Int J Epidemiol 1992, 21(3):557-560.
11. Davey S: The 10/90 Report on Health Research 2003-2004. Geneva, Switzerland: Global Forum for Health Research; 2004.
12. Volmink J, Dare L: Addressing inequalities in research capacity in Africa. Bmj 2005, 331(7519):705-706.
13. Volmink J, Dare L, Clark J: A theme issue "by, for, and about" Africa. Bmj 2005, 330(7493):684-685.
14. Horton R: North and South: bridging the information gap. Lancet 2000, 355(9222):2231-2236.
15. Patel V, Sumathipala A: International representation in psychiatric literature: survey of six leading journals. Br J Psychiatry 2001, 178:406-409.
16. Sumathipala A, Siribaddana S, Patel V: Under-representation of developing countries in the research literature: ethical issues arising from a survey of five leading medical journals. BMC Med Ethics 2004, 5:E5.
17. Tutarel O: Composition of the editorial boards of leading medical education journals. BMC Med Res Methodol 2004, 4:3.
18. McCoy D, Bennett S, Witter S, Pond B, Baker B, Gow J, Chand S, Ensor T, McPake B: Salaries and incomes of health workers in sub-Saharan Africa. Lancet 2008, 371(9613):675-681.
19. Pillay Y, Mahlati P: Health-worker salaries and incomes in sub-Saharan Africa. Lancet 2008, 371(9613):632-634.
20. Bundred P, Gibbs T: Medical migration and Africa: an unwanted legacy of educational change. Med Teach 2007, 29(9):893-896.
21. Clemens MA, Pettersson G: New data on African health professionals abroad. Hum Resour Health 2008, 6:1.
22. Connell J, Zurn P, Stilwell B, Awases M, Braichet JM: Sub-Saharan Africa: beyond the health worker migration crisis? Soc Sci Med 2007, 64(9):1876-1891.

23. Mills EJ, Schabas WA, Volmink J, Walker R, Ford N, Katabira E, Anema A, Joffres M, Cahn P, Montaner J: Should active recruitment of health workers from sub-Saharan Africa be viewed as a crime? Lancet 2008, 371(9613):685-688.