# **Policy Brief**

# Towards language-based equity in African health science research

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## **The Challenge**

Although there are over 2,000 living languages in Africa, there are mainly four languages of higher education and used by the World Health Organisation (WHO) on the continent. However, globally, English is the dominant language of science. Near fluency in reading and writing in English is required to engage in this broader scientific discourse. Failure to meet this standard limits the academic careers and influence of individual African researchers. This presents a challenge for the many African health science researchers who report English as a second, third or fourth language. What can individuals, institutions, governments and funders do to help address this challenge?

Language of Journal	Of the four working languages of WHO in Africa, the percentage of medical and health journals <u>published</u> <u>worldwide</u> in each language	Of the four working languages of WHO in Africa, the percentage of medical and health journals <u>published in Africa</u> in each language
English	94.22%	91.13%
French	3.58%	6.45%
Portuguese	1.99%	0.27%
Arabic	0.21%	2.15%
Total	100.00%	100.00%

Source: Ulrichsweb: Global Serials Directory - https://www.ulrichsweb.com/ (accessed: 2021-04-19).

### **Methods**

The findings and recommendations presented in this policy brief emerged from the analysis of data from: a) 95 peer-reviewed articles and other literature; b) interviews with and questionnaires completed by 48 African health researchers and stakeholders from 18 African countries; and, c) questionnaires completed by 16 representatives from organisations in 6 non-African countries supporting capacity strengthening of African researchers and research institutions.



Map of countries of African study participants

## **Key Findings**

English is the dominant language of African health science research, yet French and Portuguese are important academic languages and Arabic, Swahili and hundreds of indigenous languages are crucial for effective health service delivery and collecting research data on the continent

English presents a barrier to professional advancement for health science researchers who are not fluent in reading, writing and/or speaking in English.

Intersecting non-language barriers such as gender, financial, institutional and regulatory issues contribute to structural inequalities within health science research systems.

Embedding intensive writing and critical thinking approaches into existing health science courses at African universities is an approach for institutionalising change that shows promise and potential efficiency and scalability.

African and non-African leaders and mentors have a particularly important role to play in addressing language-barriers by designing research projects and teams they lead in ways that address language barriers faced.

Institutional policies and systems exacerbate existing language barriers faced by individuals and reinforce other structural inequities; for example, limited request for proposals in multiple languages, promotion processes being gender blind.



# Factors influencing language-based equity in African health science research

Global (e.g. journal policies)

Regional (e.g.commonality of language)

National (e.g. primary and secondary school curricula)

Institutional: (e.g. research culture and emphasis on research - "research intensive university")

Individual: (e.g. natural language ability; social and cultural norms; gender; sufficient confidence)

### Childhood

• (e.g. mother tongue)

#### Trainee

 (e.g. involvement in research: when introduced to research projects and involvemment in them)

#### Caree

 (e.g. colleagues: sufficiently large network of varied skills language, technical)

Steps can be taken and actions supported at each of the five levels (global, regional, national, institutional and individual) in the figure above. Two categories of individuals need to be considered. The first group includes individual trainees, young researchers and researchers faced with the personal challenge of overcoming a language-based barrier presented by the dominance of English in science. This group must take some personal responsibility to invest the time and resources to develop their language and research skills. The second group comprises research leaders (e.g., principal investigators) supporting or mentoring trainees and early-career researchers. Research leaders can include non-English speakers with adequate English language skills on their research teams and allocate project funds to language training for team members and language services that support the full participation of all members, such as translation.

While individuals can do much to assist themselves in becoming sufficiently fluent in English only through broader initiatives that strengthen the capacity of African research institutions and that address more systemic language-barriers, such as those that exist within funding mechanisms, are results likely to be achieved at scale. Below are five key recommendations for African organisations, funders and journals to support language-based equity in African health science research.

### **5 Key recommendations**

### #1 - Institutionalise intensive academic writing and communicating science courses and writing support services

Universities need to ensure that their graduates have sufficiently developed their academic language, critical thinking and writing skills. This includes strong scientific language skills in specific areas such as hypothesis formulation, research methods, discipline-specific vocabulary as well as reading, writing and verbal communication, whatever the language of instruction (Arabic, English, French or Portuguese). Embedding intensive writing courses into existing curricula is strongly recommended as a means to facilitate development of these skills. This can be further supported through regular extra-curricular workshops or short courses and by establishing writing centres where both one-on-one staff and peer support is provided together with other resources. Virtual solutions can complement on-campus activities, although universities should support less-economically privileged students with the means of accessing virtual services.

### #2 - Funders are advised to support virtual and in-person learning exchanges between writing support personnel

The types and methods of support services for academic writing varies greatly across the continent. Funders can support the sharing of best practices and challenges and skills-development among academic writing support personnel at universities and research institutions within and between countries in Africa and between African and non-African institutions in whatever language(s) each institution desires.

### #3 - Universities can increase research projects within the curricula

It is critical that students have sufficient opportunities to gain direct experience in developing and implementing research projects during their first degree. Undergraduate university students can be required to complete a research project as part of their coursework to get hands-on experience in research methods and use of academic language, regardless of the teaching language(s) of the institution.

## #4 - Funders are advised to support direct interactions between non-English-speaking early-career researchers and English-speaking researchers

Being immersed in another language is the fastest way to learn another language. Non-English-speaking early career researchers are recommended to conduct research at an English institution in an English-speaking community or on a mainly English-speaking research team. Multi-language research teams are also encouraged. It is suggested that funders support bilateral and multilateral reciprocal exchanges.

# #5 - Institutions and funders need to address their own policies and procedures that contribute to language and intersecting barriers

Institutions and funders need to provide conducive environments to enable individuals to overcome language-barriers faced and be committed to addressing inequities in their own processes; for example, using an equity lens to examine processes around request for proposals.