

LETTER TO THE EDITOR



North African physicians' perspectives on the challenges facing medical research

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Dear editor,

The quality and quantity of medical research in developing countries, including in Africa, lags behind that in wealthier nations¹.

Kumwenda et al. are to be congratulated for reporting the results of a qualitative semi-structured questionnaire study, seemingly with open-ended questions, that allowed the responders to express their own thoughts and experiences². Responders were 15 young African scientists attending a workshop and representing 9 sub-Saharan African countries. The aim of the study was to identify challenges facing their research careers. The reported challenges included (a) limited senior support, (b) unsatisfactory technical and funding resources, (c) lack of financial rewards, (d) inadequate writing skills, (e) unclear governmental position on the value of research and (f) busy work schedules not allowing time for research.

The questionnaire invited opinions on how to improve the research environment. Responders suggested that attention should be paid to the above challenges in a direct manner, such as by improving senior support and research funding, for example.

Some countries in North Africa (NA) enjoy relatively plentiful resources in comparison with sub-Saharan countries. However, medical research output from NA remains well below expectations. We conducted a questionnaire-based study to investigate the perspectives of healthcare professionals (HCPs) from the Middle East and NA and the challenges they face with conducting medical research. Six closed-ended questions and 1 open-ended question were presented to the delegates of 5 educational medical meetings. The questions reflected the investigators' experiences and challenges related to conducting research. Responses to the 6 closed-ended questions could be either "yes", "no", or "do not know". In contrast to qualitative research, quantitative closed-ended questions provide numerical frequencies that can be accurately reported. Two-hundred six HCPs completed the questionnaire. Fifteen participants were physicians from NA countries (8 Egypt, 5 Algeria, 1 Morocco, and 1 Tunisia) and are the subject of this brief discussion. (Table 1)

Subjects of our study were HCPs providing clinical services (not scientists) and thus were asked if they had research interests. All responders expressed interest in conducting research. In contrast, subjects in the study reported by Kumwenda et al. were scientists already engaged in a research career and thus were asked on how they developed their interest in research².

In our study, the most frequently reported challenges after exclusion of "do not know" responses were (a) time limitation (42.8%) and (b) obtaining funding (53.8%).

The open-ended question provided an opportunity for participants to express experiences and perspectives beyond what was listed in the closed questions. The open question was "What is the top barrier to conducting research?" Responses were as follows: (a) obtaining funding (4/15); (b) not have enough time (4/15); (c) complex approval process (3/15); and (d) do not know (4/14).

Table 1: Response to the questionnaire by 15 physicians from North African countries

Question	Yes (%)	No (%)	Don't Know (%)
Closed-ended questions			
Do you have personal interest in conducting research?	15 (100)	0 (0)	0 (0)
Does your service commitment allow you enough time to conduct research?	8 (53.3)	6 (40)	1 (6.7)
Do you find the process of approving a research project within your department is feasible and reasonable?	13 (86.7)	1 (6.7)	1 (6.7)
Do you find the process of submission to and review by the institutional review board is feasible and reasonable?	11 (73.3)	2 (13.3)	2 (13.3)
Is the process of obtaining financial funding for research feasible and reasonable?	6 (40)	7 (46.7)	2 (13.3)
Should staff active in research and academia be rewarded accordingly?	12 (80)	2 (13.3)	1 (6.7)
Open-ended question			
What is the top barrier to conducting research?			
Obtaining financial funding	4		
I do not have enough time	4		
Complex approval process	3		
No response	4		

As explained above, there were some differences in the design, subjects, and settings of our study and that of Kumwenda et al. However, concerns about obtaining funding and time limitations were similarly reported in both studies. These 2 small studies can be perceived as complementary to each other and both have highlighted the challenges facing

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researchers and potential researchers in the larger African continent.

The African Union Scientific Technical Research Commission was founded in 1965 to promote research activities and to popularise scientific and technological research culture in Africa³.

The African Union (AU) was established in 2001, replacing the Organisation of African Unity (OAU). One of the 14 objectives of the AU is to advance the development of the continent by promoting research in all fields, in particular in science and technology⁴. Despite the presence of these (and other) organisations, the above studies indicate that major challenges still exist and hinder research in Africa.

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Author's reply

Save Kumwenda

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I concur with Zekri and Rehman that our 2 small studies^{1,2} complement each other. The North African physicians' perspectives on challenges facing medical research were not much different from those of the sub-Saharan African researchers included in our study. Zekri and Rehman's work revealed difficulties in obtaining research funds, lack of time for research, and complex approval processes as major barriers to conducting medical research in North Africa. The findings from these 2 studies build upon previous research done in Africa that have highlighted similar limitations to the advancement of health research and research in general. Using the success story of a research development programme implemented in West Africa as an example, Aidam and Sombié demonstrated that these challenges can be overcome through programmatic stewardship, collaboration, and funding³. The West African experience also revealed that new challenges (for example, language barriers between countries, staff turnover, weak institutional capacity, and ineffective collaborations) emerge despite improvements and successes, showing that research capacity building is a continuous and stepwise process that requires continuous support in order to effect meaningful and sustainable change. In South Africa, for example, incentives have been provided to researchers who publish their work, and this has shown to increase research output despite these new challenges⁴.

In most developing countries, including Malawi, the difficulties that hinder research capacity often start with mentorship of young researchers. Mentors often obtain the required qualifications late in life and end up chasing management positions and high salaries rather than concentrating on research and capacity building. Following that, the lack of funding available for research can make research an unattractive primary career focus, or it can influence researchers to shift away from their main areas of interest towards areas that have more reliable sources of financial support. Another challenge relates to the dissemination of results through high-impact journals. High-impact journals often publish reports of cutting-edge research that uses state-of-the-art equipment and methods

capacity and working together to make trials less complicated. *PLoS Negl Trop Dis*. 2010 Jun 29;4(6):e619. doi: 10.1371/journal.pntd.0000619.

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not affordable by African researchers. As a result of the lack of resources available locally, southern African countries produce much of their research through international collaborations instead of solely through government-funded means. Externally funded research may not directly solve the research and public health needs of Africa. Much of the health research in Africa is concentrated in a few countries (South Africa and, to a lesser extent, Uganda, Kenya, and Malawi, for example); most of this research is donor driven⁵. In their letter, Zekri and Rehman highlight the lagging behind of research quantity and quality in Africa²; it is clear that without donor support, southern and eastern Africa would be lagging even further behind.

The United Nations emphasise universality, integration, and transformation as means of achieving the Sustainable Development Goals (SDGs). SDG 3 ("ensure healthy lives and promote well-being for all at all ages") can only be achieved if interventions are well informed by research. This calls for more research on the best ways of integrating health interventions and for more research on new technologies that can achieve greater results. This places more demands on the scientific community to tackle systemic challenges and integration problems that affect health, including social, economic, and environmental factors. There is also need for information sharing to make sure solutions that work in one context are shared with neighbouring countries and regions, as well as globally⁶. Research on appropriate policies is also important for countries to achieve the SDGs by 2030⁶. There is need for countries to allow the health sector to revise policies and incorporate aspects that promote growth and universal access while maintaining quality. G8 countries are committed to assisting African countries through the New Partnership for Africa's Development (NEPAD) in several areas, including health research⁷. This is a great opportunity for Africa to develop and conduct research on the right technologies for health that will help achieve the SDGs. Unless Africa improves its health research environment, it will be difficult to achieve the SDG on universal health access by 2030.

Competing interests

The author declares that he has no conflicts of interest related to this work.

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