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RECENT STUDY HIGHLIGHTS AFRICA'S LIMITED RESEARCH CONTRIBUTION TO THE SCIENCE OF THE COVID-19/SARS-COV-2 PANDEMIC

An article by [Kana, LaPorte and Jaye](#) published in the March 2021 issue of BMJ Global Health discusses the possible different trajectory of the COVID-19 pandemic in Africa, the lack of regional research on the African COVID-19 variant and the need for African scientists to fill this gap.

The article describes the background to the epidemic: the [SARS-CoV-2](#) outbreak first appeared without much warning in November 2019 and by March 2020 the World Health Organization (WHO) had declared it to be a pandemic. The first confirmed case in Africa was reported in February 2020. By June, projections suggested that Africa could be the next epicenter because of countries' weak health systems' inability and slow response in handling the pandemic; and the limited success of the measures imposed to halt its progress, such as lockdown and social distancing interventions in many countries.

Nonetheless, fears of Africa being a new center for the pandemic have remain unfounded. The virus has killed a fraction of as many people on this continent — despite its relative lack of resources — as it has in Europe or the US. Siddhartha Mukherjee, writing in the New Yorker on 8 March 2021, points out that the usual trend of death from infectious diseases—diphtheria, HIV, malaria, tuberculosis, typhoid—follows a depressing pattern. Lower-income countries are hardest hit, with high-income countries the least affected. But if one looks at the pattern of COVID-19 deaths reported per capita—deaths, not infections—Belgium, Italy, Spain, the United Kingdom and the United States are among the worst off. He states: 'The reported death rate in India, which has 1.3 billion people and a rickety, ad-hoc public-health infrastructure, is roughly a tenth of what it is in the United States. In Nigeria, with a population of some two hundred million, the reported death rate is less than a hundredth of the US rate. Rich countries, with sophisticated health-

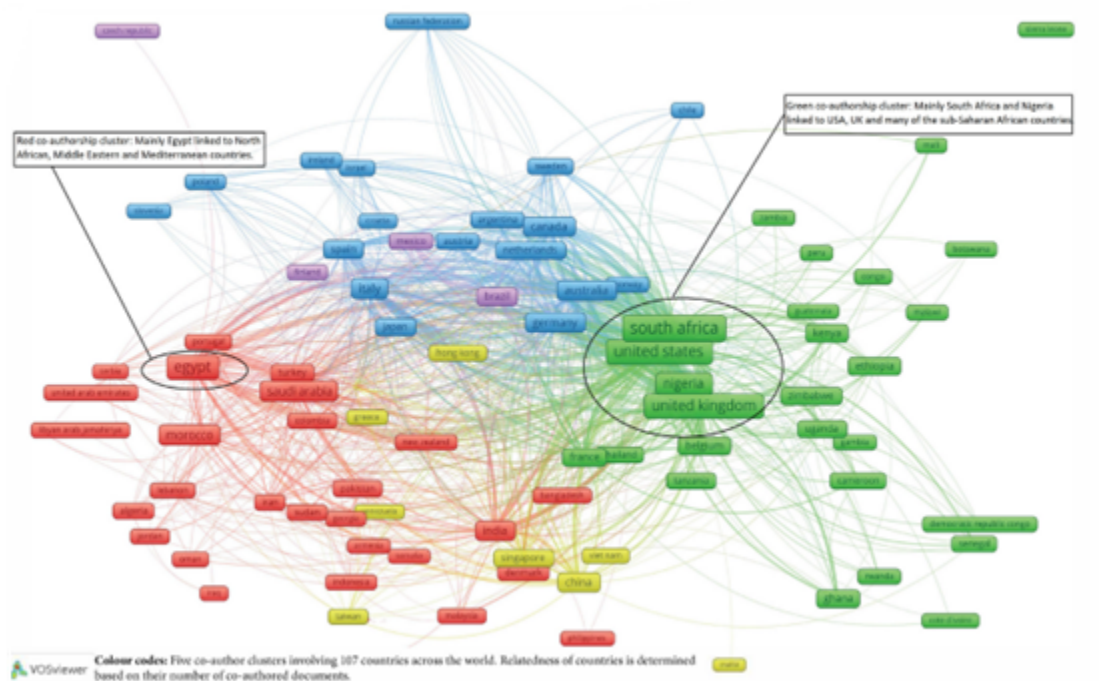
care systems, seem to have suffered the worst ravages of the infection. Death rates in poorer countries—particularly in South Asia and large swathes of Sub-Saharan Africa—appear curiously low. (South Africa, which accounts for most of Sub-Saharan Africa’s reported COVID-19 deaths, is an important exception.) [David Leonhardt of the New York Times](#) quotes Mukherjee as calling it ‘an [epidemiological whodunnit](#)’, noting that ‘while the virus has ravaged rich nations, reported death rates in poorer ones remain relatively low....probing this epidemiological mystery can tell us about global health’.

Kana and his colleagues state that opinions do vary about the different patterns of SARS-CoV-2 spread in Africa compared with that in the global north. Nonetheless, at the current rate and compared with other parts of the world, it appears that the virus is spreading more slowly and, hypothetically, with a less severe outcome in Africa despite the limitations of research data. Thus, African scientists need to generate more epidemiologic evidence on SARS-CoV-2 and related areas of science to provide more data on the pandemic in Africa. This would contribute towards a better understanding of the African situation and inform the development of targeted interventions ? considering that a uniform ‘one size fits all response’ is unlikely to work for different settings.

African scientists looking into COVID-19 in Africa and generating articles and research results is important for creating locally relevant knowledge to address the pandemic. Yet, Kana and his colleagues point out, Africans contributed just 3% of the global share of 36 326 indexed publications on SARS-CoV-2/COVID-19 at ten months into the pandemic.

The article describes the research methodology its autors used, that illustrated that there are clusters of related countries that represent different collaboration networks and co-authorship clusters of COVID-19 publications involving Africans and non-Africans (see Figure 1 below). Five clusters were derived from their analysis. Two of the clusters (red, centered around Egypt and green, centered around South Africa and Nigeria) were dominant because of the number of publications through these intersections (Egypt, Nigeria and South Africa) with the cluster of other (100+) African and non-African countries. The other three clusters (blue, purple and yellow) are dispersed and not centered around any particular African country.

Figure 1: Bubble map of COVID-19 publications by Africans and their co-author network and clusters



Kana et al call on African researchers and research groups to strengthen and maintain intracontinental collaboration to generate a more accurate picture of what is going on in Africa as the pandemic evolves. As they say: 'Active research in Africa that culminates in collaborative networks within the continent will be a means to impact on preparedness for future emerging infections.'

Further reading:

1. Kana MA, LaPorte R, Jaye A. Africa's contribution to the science of the COVID-19/SARS-CoV-2 pandemic. *BMJ Global Health* 2021;6:e004059. [Africa's contribution to the science of the COVID-19/SARS-CoV-2 pandemic \(bmj.com\)](#)
2. Siddhartha Mukherjee. Why Does the Pandemic Seem to Be Hitting Some Countries Harder Than Others? *New Yorker*, 22 February 2021. [Why Does the Pandemic Seem to Be Hitting Some Countries Harder Than Others? | The New Yorker](#)
3. David Leonhardt. Why has Covid's toll been surprisingly low across much of Africa and Asia? *New York Times*, 8 March 2021. [A Covid Mystery – The New York Times \(nytimes.com\)](#)

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