

Mental health genetics: African solutions for African challenges

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6 Nov 2018

Over the past two decades, mental health research has advanced markedly. But most [mental health studies](#) haven't included African people - either as researchers or as participants. This raises an all too familiar concern that Africa could be a bystander as advances in molecular and genetic research of the brain proceed at a breakneck speed.



There are concerns that Africa may be excluded from advances in genetic brain research. Shutterstock

A turning point in this disparity has been the realisation that the involvement of Africa in mental health research is vitally important. This is true for two reasons. Firstly, science that doesn't include diverse population groups risks being biased, inaccurate and incomplete. Secondly, African populations are genetically [the most diverse](#) due to the continent's unique position as a [land of origins](#).

Missing this diversity has held back the progress of mental health genetics [research](#).

A dedicated [group](#) of African and non-African researchers, clinicians and institutions are working to reverse this trend and make up for lost time.

But, the challenges are formidable.

The first is that there's been a bias in medical research in Africa towards communicable diseases. This includes HIV, tuberculosis and malaria. The need to eradicate these diseases can not be over emphasised. But this shouldn't be at the expense of issues such as mental health and its associated repercussions.

The second problem relates to budgetary constraints. Mental health disorders account for [approximately 19%](#) of the overall years lived with a disability in African countries. But less than 1% of the health budgets of countries is attributed to mental health.

Thirdly, not many clinical trials and genetic studies have been done on the continent. Often, policymakers consider genetics a distraction to the more urgent problems faced on the continent.

Lastly, government agencies and institutions find it difficult to justify allocation of funds to genetics studies and mental health research. But given the pace of technical and analytic developments in the field, African scientists can no longer afford to ignore the possibility that the opportunities may outweigh the perils of genetic research.

Breaking down barriers

So what can be done?

One initiative that's trying to break down some of the barriers is the [Human Heredity and Health in Africa](#) (H3Africa). This organisation is invested in understanding health and disease in African populations by providing research opportunities to study the interplay between environmental and genetic factors that affect the spread of diseases.

The initiative is also leading efforts to get the public, institutions and governments engaged on genetic research in mental health disorders. This is part of an effort to close the knowledge gap so that insights from genetics are more accessible and understandable.

Another initiative, designed to address the problem of a lack of expertise, is being driven by the [Global Initiative for Neuropsychiatric Genetic Education in Research](#). Genetics research is highly complex and requires knowledge in areas ranging from computational sciences to ethical studies. The initiative is bridging the training and capacity gaps of mental health genetic research in Africa through online classrooms and onsite visits for early-career African researchers.

In addition to analytic experience, the curriculum teaches a range of skills including time management, communication, networking, and building interpersonal relationships. All are designed to help fellows become independent researchers.

The programme is committed to producing the next generation of African researchers. And to set the foundation for these fellows to mentor, train and produce a second generation of scientists.

The hope is that the programme will also spearhead a new level of collaboration between African institutions and overseas collaborators. This too can help overcome the shortage of skilled genetic researchers in Africa.

Two other initiatives are also helping advance mental health research, though they aren't specifically focused on the genetics of mental health. These are the [African Mental Health Research Initiative](#) and the [Friendship Bench Project](#). Both have paved the way for increased funding, collaboration and understanding of mental health in Africa.

Additional hurdles to overcome

Even after the research hurdles have been cleared, other challenges will have to be addressed.

Chief among these is the need to assuage people's fears about taking part in genetic studies. Misconception, stigma, and socio-cultural prohibitions have hampered genomic research in Africa. Participants tend to feel uneasy about the long-term use of their blood and tissue samples in genomic research.

This means that a lot of work still needs to be done to encourage people to take part in studies by contributing biological samples and clinical data.

On top of this, methods need to be found to extract samples that are both affordable and non-invasive. And finally, participants must be afforded the chance to make informed decisions about taking part in research. In particular, those with diminished or impaired autonomy need special protection.

Some work has already been done to address these issues. For example, H3Africa developed guidelines on the export of samples from African countries. But it's unclear if all institutions adhere to them.

And there are still big gaps. [Most African countries](#) don't have policies for health-related research so harmonisation isn't possible. There's also no comprehensive framework to guide mental health neuropsychiatric genetics research in Africa. This needs to be developed and should take into account how best to mobilise local and international resources.

Our continent provides incredible diversity and a wealth of knowledge that needs to be tapped.

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