

THE AAS IMPACT

DELTA Africa: African scientists contribute to improving the quality of life for people with HIV

AMARI at a glance

The Developing Excellence, Leadership and Training in Science in Africa, a programme of The African Academy of Sciences, supports the African Mental Health Research Initiative (AMARI), whose overall goal is to build an Africa-led network of future leaders in mental, neurological and substance use research in Ethiopia, Malawi, South Africa and Zimbabwe. AMARI aims to equip researchers to lead high quality mental health research programmes that meet the needs of their countries, and to establish a sustainable career path for these researchers.



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with HIV

HIV Associated Neurocognitive Disorders (HAND)

Background

Africa is the most affected region by HIV/AIDS in the world with an estimate of about 20.6 million people living with HIV in East and Southern Africa. HIV targets the immune system and weakens people's defense systems against infections and some types of cancer. It can also affect the brain and result in cognitive impairment commonly referred to as HIV Associated Neurocognitive Disorders (HAND), which affects approximately 50% of people living with HIV. The symptoms of HAND include difficulty in making decisions and learning, attention, concentration, and memory difficulties, which affect activities of daily living.

In Zimbabwe, the estimates of HAND are not known because there are not enough skilled personnel to administer the cognitive assessments. The detailed battery of tests used to assess HAND takes approximately three hours to administer. A new tool called the Neuroscreen was recently developed in the United States to assess these cognitive problems. The Neuroscreen is a smartphone application based cognitive screener to screen for cognitive problems in people living with HIV. It contains tests on the cognitive aspects commonly affected by HIV. The application works without internet and can be administered by a lay counsellor in the clinic.

Description of study

The Neuroscreen was validated in two urban community primary health care clinics in Zimbabwe. The tool was validated on 231 research participants from the two primary health care clinics. For effective outcomes, the Neuroscreen was contextualized. It was translated to Shona (local language) and some of the culturally invalid content were replaced with locally relevant items.

This was the first study to administer the full battery of neuropsychological tests to assess HAND. The battery consists of tests on executive functioning, attention, memory, learning, motor functioning, and speed of information processing. Using this battery, the prevalence of HAND in Zimbabwe in this population of adults living with HIV attending primary care clinics was found to be 49%.

Impact

- One of the major challenges in Zimbabwe is in bridging the knowledge gaps on the presentation and prevalence of HAND in the population. Previously, there was no tool to screen for cognitive problems
- Through the Neuroscreen researchers will be able to screen and identify people with cognitive problems and assess the prevalence of HAND in different populations for example adolescents.
- The Neuroscreen has brought efficiency, it has slashed the amount of time needed to administer the tests from three hours to 25 minutes.