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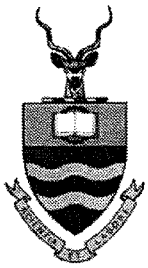
The neurocognitive profile of HIV infected adults attending Lufuno Neuropsychiatric Clinic as measured by the brief neuropsychological cognitive examination

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The Neurocognitive Profile of HIV Infected Adults Attending Lufuno Neuropsychiatric Clinic as Measured by the Brief Neuropsychological Cognitive Examination, Montreal Cognitive Assessment and International HIV Dementia Scale



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Abstract

Sub-Saharan Africa is home to the largest population of individuals infected with the Human Immunodeficiency Virus (HIV). Therefore, there is a high number of individuals who are at risk of developing HIV Associated Neurocognitive Disorder (HAND) and HIV Associated Dementia (HAD). This high number makes the need for neuropsychological screening in public healthcare vital. South African clinicians are challenged by few neuropsychological tests that are available to screen for HAND and HAD, as not all screening tests can be used on all populations and cultures, and for all budgets and clinical practices. Furthermore, South Africa is predominantly populated with clade C HIV which has a specific neurocognitive profile. Consequently, the aim of this study was to explore the neurocognitive profile of HIV infected adults attending the Lufuno Neuropsychiatric Clinic at Tara H. Moross

Hospital as measured by the Brief Neuropsychological Cognitive Examination (BNCE) as an alternative screening tool for HAND and HAD. The results were then compared to the neurocognitive profiles of the Montreal Cognitive Assessment (MoCA) and International HIV Dementia Scale (IHDS) as they are currently the most widely used screening tools for HAND and HAD in South Africa. Demograghic data were also included to determine whether they had an impact on the patients' neurocognitive screening test outcomes. All statistical analyses were conducted using R software. All tests were two-tailed, and statistical significance was accepted when alpha was smaller than or equal to 0.05. When screening for HAND using the BNCE, the results showed that more individuals scored significantly low for Constructive Praxis, Shifting Set, Incomplete Pictures, Similarities, Attention, and Working Memory. For the MoCA, individuals scored significantly low on Visuospatial, Abstraction, and Delayed Recall subtests; while Attention, Language, Orientation, and Naming were relatively intact. For the IHDS, significantly more patients scored low for Psychomotor Speed, and Memory Recall, while Motor Speed was relatively intact. Comparing the BNCE and the MoCA showed similar results in the same cognitive domains except for Attention, which was not significant in the MoCA. Comparing the IHDS was difficult as it only has 3 subtests and is largely biased towards Memory and Motor Speed, nevertheless for total scores, it was in keeping with the BNCE and the MoCA. The results showed that the BNCE was an adequate screen for HAND when compared to the MoCA and IHDS as the degree of impairment was equally measured across all three tests. With regards to demographics, all the participants were adults infected with HIV, with more of the sample being middle-aged individuals, the majority were black, female and had a higher education. More were employed, did not have a substance history, did not have co-morbidities, and had been on antiretroviral drugs (ARVs) for only a short period of time. Females had poorer BNCE scores while participants with a matriculation had better BNCE scores. Duration of treatment and CD4 count did not impact the outcome of BNCE scores.