

Cultural Adaptation And Validation Of Low-cost Neuropsychological Battery For Early Alzheimer’s Detection In Nigeria

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Nigeria’s first validated neuropsychological tool detects MCI with 92% sensitivity; cultural items improved accuracy by 15–20%, enabling low-cost, scalable screening.

INTRODUCTION	METHODS	RESULTS	CONCLUSIONS	REFERENCES
Alzheimer's disease disproportionately burdens low- and middle-income countries (LMICs), yet culturally sensitive screening tools are scarce in sub-Saharan Africa. Nigeria's aging, multi-ethnic population (e.g., Yoruba, Igbo, Hausa) experiences diagnostic delays from Western-centric assessments ignoring linguistic and cultural factors. This study adapts a brief neuropsychological battery for early detection in resource-limited settings.	We adapted the Montreal Cognitive Assessment (MoCA) and Addenbrooke's Cognitive Examination (ACE-III) into a Yoruba/Igbo/Hausa multilingual battery, integrating local idioms (e.g., proverb recall for executive function) and low-tech visuals. In a prospective cohort of 250 community-dwelling adults aged ≥60 years in Lagos (n=150) and rural Bayelsa (n=100), we evaluated reliability (Cronbach's $\alpha > 0.85$), validity (correlation with neuroimaging, $r > 0.75$), and sensitivity/specificity (AUC=0.89 for MCI) against gold-standard clinical diagnosis. Cutoffs were calibrated for low-literacy groups.	The battery detected mild cognitive impairment (MCI) with 92% sensitivity and 85% specificity, outperforming standard MoCA (78% sensitivity) in low-education subgroups. Cultural items (e.g., market bargaining tasks) improved executive function scores by 15-20%. Preliminary data revealed 28% MCI prevalence, higher in rural areas, linked to environmental risks like pesticide exposure.	This validated, open-source tool fills a key gap in global dementia research, enabling scalable LMIC screening. It advocates integrating African perspectives into international trials for equitable prevention. Next steps: digital app for tele-neuropsychology.	1.WHO.Dementia fact sheet (2023). who.int/news-room/fact-sheets/detail/dementia 2.Gureje O, et al. Neuropsychology in Africa (Lancet Neurol, 2021). doi:10.1016/S1474-4422(21)00123-4 3.Nasreddine ZS. MoCA guidelines (moca.org). 4.Akinyemi R, et al. Vascular risk in Nigerian elderly (J Alzheimers Dis, 2022). doi:10.3233/JAD-215472 CONTACT  SULTON OLUWATOSIN ABDULLAHI PSYCHOLOGIST AT FEDERAL MEDICAL CENTER, MENTAL HEALTH DEPARTMENT, YENAGOA, BAYELSA STATE, NIGERIA PSYCHOLOGIST / RESEARCH ASSISTANT AT NEUROCEPT SPECIALTY HOSPITAL, RIVERS STATE, NIGERIA PSYCHOTHERAPIST AT RIPUS HOSPITAL, YENAGOA, BAYELSA STATE, NIGERIA. PSYCHOLOGIST AT MINDLABCLINIC, LAGOS STATE, NIGERIA. Sultonbigcity3@gmail.com mindlabclinic1@gmail.com 