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Validation of a new cognitive screening tool; Sudan Cognitive Assessment Test (SuCAT), for identification of cognitive impairment in a low-income country!

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Cognitive impairment affects low-income and limited technology countries by its magnitude but and the consequent impact. In Sudan, no real estimates of dementia, yet WHO listed Alzheimer/Dementia for 4,756 deaths (1.78% of 41.8 million the total population, 2018 Sudan census). It is expected to increase where Sudan carries many dementia potential risk factors. This necessitates a valid neurocognitive Test for the early detection where other advanced investigations might not be reachable.

In Sudan, research proved the unsuitability of Mini-Mental State Exam (MMSE) and the Montreal Cognitive Assessment (MoCA) to detect Mild Cognitive Impairment (MCI). This is explained by two main facts; the diversity of Sudan's cultural, educational, and linguistic background where Arabic with three informal dialects (colloquial Arabic; El-Darigia) and the literacy dependent nature of MMSE and MoCA. Sudan Cognitive Assessment Test (SuCAT) is developed in an attempt to overcome those limitations by modifying MMSE and MoCA to assess the known SEVEN cognitive domains.

This analytical cross-sectional study was composed of four piloting and validation phases.

Phase I; two studies; the first concluded that the Arabic version of the MMSE was not suitable for Sudan, while the second showed that MoCA and MMSE scores have a strong association with educational level (P. value 0.000). Phase II was conducted as a pilot test of the validity and reliability of SuCAT as a Literacy independent adapted Arabic version. It concluded that SuCAT is a potential test for cognitive impairment among Sudanese patients. Phase three was for SuCAT standardization at a larger, in which it significantly surpassed MMSE and MoCA in five of the seven domains, neutral in one and inferior in "Coping" (P. value 0.000). Phase IV is to validate SuCAT for specifying the cognitive disorders.

In conclusion, SuCAT is a promising neuropsychological test with expected good health impact in a low-income country like Sudan. This might pave the way for similar countries worldwide.

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Biography

Omer Eladil A Hamid is an Associate Professor of Internal Medicine and Neurology International University of Africa IUA, and Sudan Medical Specialization Board for Higher Education and Postgraduate clinical qualification SMSB. He is a Consultant Physician and Neurologist; Neurology Center-Bashayr University Hospital and Khartoum Teaching Hospital; Medical Educationalist IUA, SMSB. He is also an accredited trainer for Internal Medicine, Neurology and Psychiatry. His interests are in Dementia and cognitive impairment research. He established with colleagues dedicated neurology clinics and neuroscience centers in Sudan. Conducted and presented many researches; locally regionally and internationally including PanArab and WCN.

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