

**THE INFLUENCE OF AGE AND EDUCATION ON NEUROPSYCHOLOGICAL
TESTS IN ZAMBIA**

BY

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SUBMITTED

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AUTHOR'S DECLARATION

I, Lisa Elizabeth Kalungwana do solemnly declare that this piece of work is my own and the efforts and works of others have been duly acknowledged and that this work has not been previously presented at the University of Zambia or indeed any other institution for similar purposes.

CERTIFICATE OF APPROVAL

This dissertation of Lisa Elizabeth Kalungwana has been approved as fulfilling the requirements for the award of the Degree of Masters of Science in Clinical Neuropsychology by the University of Zambia.

Examiner's Signature

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ABSTRACT

Introduction: The field of neuropsychology is considered to be fairly new. It uses different psychological tests for various reasons including diagnosis assessment and rehabilitation. However, these tests were developed mostly in western countries and may not be used in other countries easily. Therefore, in order to obtain the best results and use these tests efficiently they need to fit the society and the characteristics of the general population.

Aim: Certain demographic characteristics have been identified to have an effect on performance on neuropsychological tests. Education has particularly been known to be both potent and pervasive on neuropsychological tests affecting tests which had for a long time been known not to have educational effects. To find out an accurate measure of educational attainment, reading ability using the Zambia Achievement Test (ZAT) was used. Age equally affects performance on these tests with younger people performing better than older people.

Methods: The study was conducted in Lusaka, Kafue, Chongwe and Chibombo districts. A total of 324 Zambians were recruited in the study. They consisted of HIV negative adults from the ages of 20-65 years, from both rural and urban areas of Zambia. They were equally distributed in terms of gender and had a range of 5years to 19years of education.

Results:Results showed that reading ability is a better predictor of performance on neuropsychological tests than reported years of schooling. Reading ability had an especially powerful influence on tests in the fluency domain with an R^2 of 39.8 with a beta weight of 0.352, higher than both age with a beta weight of -.153 and reported years of schooling with a beta weight of .345.; age had a negative correlation with performance on all test domains. Schooling also offered protection against age related decline particularly in the verbal fluency.

Conclusion: Reading ability as measured by the Zambia Achievement Test proved to be a better predictor of performance on neuropsychological tests than reported years of schooling. Age also had an effect on the tests indicating that as age increased levels of performance declined. Schooling also offered protection against age related decline.

DEDICATION

This study is dedicated to my sisters Charity, Chishala and Chiluba. Thank you for being there for me.

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LIST OF ABBREVIATIONS

ADL	-	Activities of Daily Living
BVMT	-	Brief Visual Spatial Memory Test
COWAT	-	Controlled Word Association Test
DHMB	-	District Health Management Board
HIV	-	Human Immune Virus
HVLT	-	Hopkins Verbal Learning Test
IQ	-	Intelligence Quotient
MoE	-	Ministry of Education
PAOFI	-	Patients Assessment of Own Functioning Inventory
PASAT	-	Paced Auditory Serial Addition Test
SIP	-	Speed of Information Processing
TMT	-	Trail Making Test
VCT	-	Voluntary Counselling and Testing
WAIS	-	Wechsler's Adult Intelligence Scale
WRAT	-	Wide Range Achievement Test
ZAT	-	Zambia Achievement Test