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The association of under nutrition and cognitive outcomes among 4-6 years old South African children

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Background: The study investigated 4-6 years old children's health, nutritional status and cognitive development in a predominantly rural area of KwaZulu-Natal, South Africa.

Methods: This was the baseline of a longitudinal cohort study (Asenze) Phase 1 study of pre-school children in a rural area of KwaZulu-Natal, South Africa. The study investigated the association of demographic variables, site (geographic area), child's HIV status, child's haemoglobin level, anthropometric measures (height-for-age z-scores), weight-for-age z-scores, mid-upper arm circumference on children's cognitive performance measured by Grover counter and Kauffman's KABC-11 subtests. The use of General Linear Models was employed to determine the effect of the predictors while the study also incorporated factor analysis to create global cognitive scores.

Result: Based on the data, the effect of haemoglobin, sex and weight-for-age were not as significant as other factors. The principal factors of children's cognitive outcomes were site, education, height-for-age, mid-upper arm-circumference, HIV status and age. Children who had any low cognitive scores came from poorer sites, had less pre-school education, and were older; while HIV positive children most likely had low scores in height-for-age and mid-upper-arm circumference.

Conclusion: There is a need to improve the nutrition of children in this region of KwaZulu-Natal, in order to improve their cognitive outcomes.

Biography

Rachel Oluwakemi Ajayi is a PhD student in Statistics, University of KwaZulu-Natal with research in the area of identifying factors which influence the Cognitive Development of Children in impoverished communities. She had a Master of Science in Statistics from University of Lagos, Nigeria, with research on Error Analysis of Generalized Negative Binomial and Bachelor of Science in Statistics from University of Ilorin, Nigeria, with research on Statistical Quality Study, Characterization and Control of Faults reported to NITEL. She has published one paper in reputed journal and is currently working on a manuscript.

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