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Factors associated with the health and cognition of 6-year old to 8-year old children in Kwazulu-Natal, South Africa

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Aim: The objective of this paper was to examine factors associated with children's development in a prospective study which investigated the health and cognitive outcomes of children living in a resource-poor area in Kwazulu-Natal, South Africa in order to identify key factors associated with health and cognition, so that remedial action may achieve optimal development.

Methods: A Cohort study of 1383 children investigating the association of demographic variables (area of residence, sex, pre-school education, HIV status, height for age and hemoglobin level) and family variables (socioeconomic status, maternal and paternal level of education), with children's cognitive performance. The latter was measured using the Grover-Counter Scale of Cognitive Development and subtests of the Kaufman Assessment Battery for Children, second edition (KABCII) General linear models were used to determine the effect of these predictors in a univariate and multivariate context. Linear regression analysis of the test scores was performed to examine the associated factors.

Results: The child's HIV status, gender and their socioeconomic status were not significant in any of the cognitive tests, nor was the maternal level of education but the effects of site and paternal level of education were significant in all three cognitive test results. The effects of pre-school education, the area of residence and height-for-age was significant for the children's cognitive scores.

Conclusion: Children with low cognitive scores tended to be stunted (low height-for-age scores), lacked pre-school education and were younger. Area of residence and their parents' educational level also influenced their cognition. There is a need to improve the health of children in this region of KwaZulu- Natal and ensure the provision of pre-school education in order to improve their cognitive outcomes.

Biography

Oluwakemi Rachel Ajayi is a Postdoctoral researcher at the University of KwaZulu-Natal Medical School. She had her PhD (Statistics) from the University of KwaZulu-Natal, research focused on cognitive development in children, aged 4-8 years living in KwaZulu-Natal, South Africa. Her MSc and BSc (Statistics) from the University of Lagos and Ilorin respectively. She has taught statistics to university undergraduate students, invigilated tests and exams checked and collated exam scores/reports. She is a member of European Academy of Allergy and Clinical Immunology, a Chartered Member of Management and Biometrics and Statistical Sciences Facilitation, she has served in the position of a Biostatistician, Data analyst and Consulting Statistician. She has published papers in reputed journals while there are some others under review and has been serving as an editorial board member of repute.

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