

Does HIV and Low Socio-Economic Status Impact on Neuro-Cognitive Performance in The Same Way? Implications for Occupational Therapy Practice, Policy and Social Service Delivery

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Background: About 48% of Zimbabwean national population are children under 18 years. To reap high demographic dividends from this youthful population, the country needs to invest in children in ways that facilitate optimal physical and mental growth as well as maximum achievement academically, socially, and productively. Research has consistently shown that socio-economic status and HIV have an impact on cognitive performance, what is not known is the nature and extent of the impact. The aim of the study was to determine independent predictors of children's neuro-cognitive performance, the nature and extent to which socio-economic status and HIV impacted on children's performance.

Methodology: A validated modified version of the Detroit Tests of Learning Aptitude 4th edition (DTLA-4) was used to collect data from 505 typically developing (TD) and 124 HIV-infected urban and peri-urban school children. Multivariate logistic regression analysis was done.

Results: HIV and socio-economic status were independent predictors of overall neuro-cognitive performance. Children with HIV and those at low socio-economic schools were respectively 10 times and 5.9 times more likely to score below the 50th percentile score. Children from disadvantaged communities were worst affected on items that require verbal, crystallised intelligence, cognitive level and simultaneous processing of information. Children with HIV performed significantly worse on all the sub-tests ($p < .001$), and worst performance was on non-verbal, fluid intelligence and associative processing items.

Conclusion: Low socio-economic status and HIV may be affecting neuro-cognitive performance through different patho-physiological mechanisms. These findings have implications on practice, social service delivery and policy.