



Evaluating the Impact of a School-Based Deworming and Nutrition Education Programme on Cognitive Performance in Kisumu County Primary Schoolchildren

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Abstract

Soil-transmitted helminth infections and undernutrition are common public health issues in low-resource settings, negatively affecting children's cognitive development. Combined school-based interventions are frequently implemented, but rigorous assessment of their joint impact on cognition is required. This study evaluated the impact of an integrated school-based deworming and nutrition education programme on the cognitive performance of primary schoolchildren in Kisumu County. A quasi-experimental, longitudinal design was used. Participants were primary school pupils aged 8–12 years from 30 schools, assigned to intervention or control groups. The intervention included biannual albendazole administration and a structured nutrition education curriculum delivered by teachers over one academic year. Cognitive performance was assessed using digit span and coding subtests at baseline and endline. Data were analysed with mixed-effects regression models. Pupils in the intervention group demonstrated a statistically significant improvement in cognitive test scores compared to the control group. The mean difference in composite cognitive score was 2.4 points higher in the intervention group (95% CI: 1.1–3.7, $p < 0.001$). The integrated deworming and nutrition education programme improved the cognitive performance of primary schoolchildren in this setting. This supports the implementation of combined health and education interventions in schools. Integrating such programmes into routine school health services in similar contexts should be considered. Further research should examine the long-term sustainability of cognitive benefits and the specific contributions of each programme component. Deworming, nutrition education, cognitive performance, school health, soil-transmitted helminths, Kenya This study provides empirical field-based evidence for the cognitive benefits of an integrated school health programme.

Keywords: *Soil-transmitted helminths, school-based intervention, cognitive performance, nutrition education, Sub-Saharan Africa, cluster-randomised trial, primary schoolchildren*

ABSTRACT-ONLY PUBLICATION

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