ary intervention on the cognitive development of Kenyan school children

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Abstract:

Previous observational studies in developing countries have suggested that diet quality, particularly increased animal source food (ASF) consumption, is positively associated with child cognitive development. This report presents findings from a study in rural Kenya, designed to test the impact of three different diets on the cognitive development of school children. Twelve schools with a total of 555 Standard 1 children (equivalent to U.S. Grade 1) were randomized to one of four feeding interventions: Meat, Milk, Energy or Control (no feeding). Feeding continued for seven school terms (21 mo), and cognitive tests were administered before the commencement of feeding and during every other term of feeding. Hierarchical linear random effects models and associated methods were used to examine the effects of treatment group on changes in cognitive performance over time. Analyses revealed that children receiving supplemental food with meat significantly outperformed all other children on the Raven's Progressive Matrices. Children supplemented with meat, and children supplemented with energy, outperformed children in the Control group on tests of arithmetic ability. There were no group differences on tests of verbal comprehension. Results suggest that supplementation with animal source food has positive effects on Kenyan children's cognitive performance. However, these effects are not equivalent across all domains of cognitive functioning, nor did different forms of animal source foods produce the same beneficial effects. Implications of these findings for supplementation programs in developing countries are discussed