

ABSTRACT

The Short Term Effects Of Breakfast on the Cognitive Functions of School Children

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A large sum of money is spent annually on school feeding programmes in developed and developing nations. However few of these programmes have been evaluated in developing countries.

The short term effects of breakfast on cognitive functions were examined in 97 undernourished (weight-for-age ≤ -1.00 SD) and 100 adequately nourished (weight-for-age > -1.00 SD) children attending grades three and four of four remote, rural schools in Jamaica. Half the children were given breakfast and the other half a quarter an orange as a placebo at 8.30 a.m.. Treatment began at least one week prior to testing. Children were retested a few weeks later when the treatment order was reversed. The cognitive functions measured were sustained attention (Memory and Search), auditory short term memory (Digit Span), generation of ideas and motivation (Fluency), and reaction time and information processing (Number Choice). Girls performed better than boys in tasks of sustained attention and reaction time ($p < 0.001$ and 0.002 respectively), breakfast had a beneficial effect in scores of Fluency in the undernourished children, and boys had higher scores

in Digit Span with breakfast but the scores of girls declined (with breakfast). The results suggested that a breakfast program of this type can have some benefits on children's cognitive functions.