NUTRITION, HEALTH AND ACADEMIC ACHIEVEMENT OF

PRIMARY SCHOOL CHILDREN IN UGANDA:

A case of Kumi District, Eastern Uganda.

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ABSTRACT

Background: Due to the success of child survival programs coupled with increased access to primary schooling through Universal Primary Education, education systems are now faced with challenging health and nutrition related problems. This, combined with the recent growth of research quantifying some of the adverse consequences of ill health and malnutrition, call for prompt attention to the linkages among health, nutrition and education. Although studies relating schoolchildren’s health and nutritional status and their learning have been conducted else where, relatively little is known about the nutrition and health conditions of school aged children in Uganda and how these factors affect their learning. This together with information on educational performance of children Kumi district generated interest in exploring the linkages between health, nutrition and educational achievement among primary school children in Kumi district.

Aim: The over-all purpose of this study was to investigate the relationship between health, nutritional status and scholastic achievement of primary schoolchildren in Kumi district, a rural district in Eastern Uganda.

Methodology: The study was designed as a cross-sectional study. The population studied comprised of primary school children in class 4, between the ages of 9-16 years. All children sampled were from day schools. Sampling of schools was done using a modification of WHO 30x30 cluster sampling technique (using only grade one schools). The children were sampled randomly from a list of all children in the target class. Anthropometric measurements were done using standard methods, micronutrient assessments were done using standard methods with some slight modifications on stock and buffers used for standard preparation. Health assessments were done using the formal ether concentration technique and a rapid test for helminth and malaria infection respectively. Achievement was measured using un-standardized techniques.

Results: Out of all children sampled, 645 had complete information (anthropometry, demographic/socio-economic data, achievement), from which sub-samples were taken for micronutrient (iron= 145, vitamin A= 145, iodine= 87) and health studies (helminth= 189, malaria = 119).
Results indicated that; the prevalence rate of thinness was 10.1%, stunting was 8.7%, underweight was 13.0%, anemia was 24.1%, iron deficiency was 16.6%, vitamin A deficiency was 30.3%, iodine deficiency was 3.4%, malaria infection was 47.8%, and helminth infection was 4.8%.

Boys were thinner, stunted, and underweight than girls while the reverse was true for anemia and vitamin A deficiency. Older children were thinner, more stunted and more underweight, than younger children, while the reverse was true for vitamin A deficiency.

Factors that significantly predicted health and nutritional status were age, sex, type of household head, household size, maternal education, household wealth and quantity of land owned by the household.

The descriptive results show that there was no significant association between nutritional and health variables with achievement. However, HAZ, hemoglobin status and malaria infection were associated with good performance of children. Children with relatively higher HAZ, hemoglobin levels with no malaria parasites were more likely to score above cut-off compared to their stunted, anemic and malaria infected counterparts. The hierarchical logistic regressions also revealed no significant association between these variables and achievement at the individual level. Socio- demographic factors that explained achievement were; maternal education, feeding before or at school, and school attendance rate. Other positive predictors included household wealth, nature of household (headship and size of household) and distance of school from home.

Conclusions: Although a number of factors play a significant role in determining a child’s educational outcomes, this study has demonstrated that a child’s health, nutritional status are some of the potential factors that can influence educational achievement.

Recommendations: Much as Uganda has done well in the area of school enrolment, its time for the Health and educational sectors in their planning to refocus attention to schoolchildren’s health and nutritional status, as these are factors that can be modified in order to optimize educational achievement. School health programs should focus on delivery of health services (including iron & vitamin A supplementation, deworming, malaria chemoprophylaxis) and strengthening of education services (through targeting low performance, motivation of teachers, and increased provision sanitation and safe water facilities).