Education & Nutrition

The National Development Plan prioritises human capacity development as a key stimulus for economic development

In hopes that further gains in education and cognitive achievement will spur future productivity, earnings, and gross domestic product growth, the National Development Plan (NDP) aims to increase the net primary school enrolment rate from the current 93 percent to 96 percent and literacy levels from the current 74 percent to 82 percent by 2015.¹

The NDP objectives on human capacity development might not be met due to high malnutrition levels. Photo: Alex Mokori /RCQHC

However, although Uganda’s net primary school enrolment jumped from 65 percent in 1995 to 93 percent in 2010—mostly due to the Universal Primary Education initiative—the NDP objectives might not be met due to persistent low school completion rates. The World Bank reported that in 2008, only 56 percent of pupils completed primary school in Uganda,² compared to 81 percent in Kenya and 74 percent in Tanzania. In addition, 3 in 10 Ugandan children age 6-9 delayed starting school.³

A key contributor to these problems is malnutrition. Malnutrition limits a child’s intellectual potential during the critical development period from conception through the first two years of life. Uganda’s loss in human capital is due to four overlapping nutritional problems: maternal iodine deficiency, low birth weight, stunting, and anaemia. These forms of malnutrition are so rampant in Uganda that our greatest resource—the potential of our children—is being wasted. Investing in nutrition is critical to helping Uganda maximise its potential because mental capacity, intellectual development, and school performance all depend on good nutrition.

Malnutrition impairs cognitive ability and adulthood productivity

Iodine deficiency causes poor mental development

Iodine deficiency is the world’s most common cause of preventable mental retardation, brain damage, and physical disabilities in unborn children. Iodine deficiency also affects a child’s ability to learn, school performance, school-year repetition rates, and speech and hearing. Increased use of iodized salt has dramatically reduced rates of goitre, a visible condition caused by iodine deficiency, and only about 5 percent of pregnant women suffer from severe deficiency (goitre) in Uganda, down from 30 percent in 1995. But between 2006 and 2015, iodine deficiency among pregnant women will cause 19,300 children to be born as cretins—needing 100 percent support from the family or the government⁴—and an additional 543,000 children to be born with mental disabilities. The IQ of such...
children is an average 13 points lower than for children born of women without goitre, and their ability to compete in class and their future productivity are impaired. Continuing the promotion of and consumption of iodized salt can prevent iodine deficiency.

**Low birth weight linked to poor cognitive development**
Every year, about 162,000 children born in health facilities (11 percent of all births) weigh less than 2.5 kg at birth, a condition called low birth weight. Low birth weight can occur when mothers also were also born with low weight, were malnourished when they were young (the intergenerational effect of malnutrition), and/or did not get adequate health and nutrition care during adolescence or pregnancy. However, low birth weight has other causes, such as mothers giving birth when they are too young, when their last birth was less than two years earlier, and when they have numerous pregnancies without adequate time to recover their strength. Children with low birth weight face increased risk of poor cognitive development (construction of thought processes) during infancy and have a decreased attention span in school.

**Stunting is linked to class repetition and low cognitive achievement**
Stunting, or growth retardation, occurs when a child does not reach the expected height or length of a healthy child of the same age. Stunting can be caused by malnutrition during the early stages of human development. In Uganda, 11 percent of babies are born stunted. The number of stunted children increased from 1.6 million in 1995 to slightly more than 2 million in 2006—and that number likely will rise if we do not take action throughout Uganda. This level of stunting contributes to a substantial decline in mental capacity and school performance, even in mild or moderate cases of stunting.

Stunted children are more likely to start school late. In Uganda, children should start school by age 6. However, 1 in 4 7-year-olds and 1 in 6 8-year-olds had not started school in 2006. These children were more likely to come from the poorest households (28 percent, compared to 12 percent from the wealthiest households).3

Absenteism and repetition of school years are higher among stunted children. Hunger aggravated school absenteeism in Western, Eastern, and Northern regions, according to a 2003 study of 16 schools.5

**Other vitamin and mineral deficiencies affect cognition**
Anaemia is the largest nutrition problem in Uganda and has increased significantly in the past decade. About half of women are anaemic, as are 73 percent of children, whose anaemia rates are about equal in all parts of the country. Most of these children are at risk of having reduced cognitive abilities because of anaemia.
Anaemia can be caused by inadequate consumption of iron or iron losses due to malaria, parasites, and other infectious diseases. Other forms of malnutrition like vitamin A deficiency worsen school absenteeism by increasing the incidence and severity of infectious diseases. In Uganda, 36 percent of absenteeism is due to illness.5

The education sector can boost performance through improved nutrition

The high levels of malnutrition in pregnancy, infancy, and early childhood in Uganda impair later cognitive achievement and learning capacity during school years. This ultimately reduces the quality of education gained as a child, adolescent, and adult. Greater investment in preventive nutrition programmes and services is needed to strengthen the future intellectual and productive capacity of Ugandans.

Recommendations for action in the education sector

The education sector can further help reduce high malnutrition in Uganda by:

1. Endorsing and operationalising the School Health Policy. A draft has been prepared and must be approved by the Cabinet; the school nutrition guidelines must be finalised and disseminated.

2. Implementing activities that could improve the learning potential of malnourished schoolchildren, such as:
   - Organising mass deworming services and providing iron supplementation and/or appropriately fortified cereals to help prevent or control anaemia among school-age children
Conducting school feeding, particularly breakfast or morning snacks, to help hungry children stay attentive in class


4. Scaling up school participation in Child Health Days through a system for motivating more schools to participate in this initiative for preschool-age children to prepare children to succeed in school.

5. Developing a comprehensive nutrition curriculum for home economics and vocational schools and encouraging more children to take food/nutrition and home economics classes, which are currently optional.

6. Including nutrition as part of teacher training and school curricula.

7. Helping to prevent malnutrition in children under 2 to limit malnutrition’s impact on the school system in the future. The education sector could support community child growth promotion and monitoring activities, require a completed Child Health Card for admission to primary school, and support water and sanitation initiatives.

8. Encouraging schools to combat hunger and malnutrition by involving children in school food production, especially foods that can make household diets more diverse. This will equip children with practical experience in cultivating local healthy foods.

Sources
4. Uganda PROFILES based on 2006 UDHS data.

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