



Early is best but it is not always too late. Young Lives evidence on nutrition and growth in Ethiopia, India, Peru and Vietnam

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A mother feeds her children in Ethiopia

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ETHIOPIA, INDIA, PERU & VIETNAM

What this article is about: Anthropometric data, taken from 12,000 children across the Young Lives cohort, was analysed to determine the impact of malnutrition and the key determinants of child growth.

Key messages:

- The Young Lives data supports the hypothesis of 'growth plasticity', where malnutrition within the first 1,000 days of life is not necessarily irreversible.
- The risk of stunting was highly influenced by household income and housing conditions as well as by the health and education levels of mothers.
- While changes in dietary patterns contributed to healthier growth for some children, it also increased the risk of overweight and obesity due to the higher consumption of total energy, sugar and saturated fat.

Background

Despite substantial gains in child wellbeing in low- and middle-income countries, poor health and nutrition remain significant challenges to children's survival, growth and development. Both stunting and wasting in early childhood, particularly during the first 1,000 days (from conception until the child's second birthday), are associated with poor physical growth, neurological development, cognitive functioning and progression in school. The impacts can also extend through generations when undernourished adolescent girls and young women become mothers. The possibility that early linear growth deficits can be recovered in later childhood and adolescence has been widely debated.

As a contribution to monitoring and policy guidance for the Millennium Development Goals, and now the Sustainable Development Goals, the Young Lives study explores the determinants and outcomes of childhood poverty and inequality in Ethiopia, India, Peru and Vietnam. This report summarises the extensive body of evidence from the Young Lives study regarding the factors that threaten children's growth and development as well as which children are most susceptible and at what point in their lives.

Methods

Young Lives is a longitudinal study co-ordinated by the University of Oxford in partnership with national research and policy institutions. Since 2002, Young Lives has followed the progress of 12,000 children in 80 poor communities across Ethiopia, India, Peru and Vietnam. At the outset, children were included from two age groups: 4,000 born in 1994 (the Older Cohort) and 8,000 born in 2001 (the Younger Cohort). Data collection has occurred at approximately three-year intervals, taking anthropometric measurements and interviewing children and adolescents, as well as their caregivers, to develop detailed profiles of their households and communities.

Findings

The extent of malnutrition

In the Older Cohort, the prevalence of stunting at eight years of age was 31% in Ethiopia, 33% in India, 28% in Peru and 29% in Vietnam. By 15 years of age, the prevalence of stunting had increased in India to 36% but reduced in Ethiopia (29%), Peru (26%) and Vietnam (24%). For the Younger Cohort, the prevalence of stunting increased from 21% to 27% in Ethiopia between the ages of eight and 15 years but decreased in India (29-28%), Peru (20-16%) and Vietnam (20-12%). At all ages, the prevalence of stunting

was lower in the Younger Cohort who were 15 years of age in 2016 compared to the Older Cohort who were 15 years of age in 2009.

While those in the Younger Cohort were at a lower risk of being undernourished, they were at greater risk of developing overweight and obesity in later childhood and adolescence. Specifically, at 15 years of age, the prevalence of overweight and obesity was higher in the Younger Cohort compared to the Older Cohort in India (6.5% vs. 3.8%), Peru (25.7% vs. 20.1%) and Vietnam (8.9% vs. 3.2%).

Key determinants of child growth

Across the countries included in the Young Lives study, the risk of stunting was highly influenced by household income and housing conditions as well as by the health and education levels of mothers and, to a lesser extent, other household members. In all countries, children and adolescents living in rural areas were more likely to be stunted.

Between 2009 and 2016, improvements in economic conditions were associated with increased food security and dietary diversity. In India, Peru and Vietnam, the Younger Cohort also consumed more animal-source foods during this period. While changes in dietary patterns contributed to healthier growth for some children, it also increased the risk of overweight and obesity due to the higher consumption of total energy, sugar and saturated fat.

Exposure to extreme weather, famine and violent conflict has adverse effects on children's growth, either directly or indirectly, if livelihood and food supplies are disrupted.

Overall, boys were at a greater risk of malnutrition than girls due to a combination of genetic, biological, economic and sociocultural factors, particularly in the younger years. However, in India, gender bias contributed to reduced stunting prevalence in older boys who were likely to consume more diverse diets than adolescent girls.

Principles for policy and programming

The Young Lives study has provided detailed evidence of the key influences on child nutrition and growth. These findings have informed six overall priority areas for policy and intervention:

- **Investing throughout childhood**
It is well established that early life is the most sensitive period and should be prioritised for investments in healthy child nutrition and growth. However, Young Lives showed that there may be gains from sustaining investment through adolescence. Measures to improve later nutrition not only consolidate early growth and prevent faltering but also help those children who were initially stunted to recover.
- **Providing robust social protection**
Social protection mechanisms, including cash transfers, food supplementation (including school feeding) and health coverage, can help to prevent malnutrition and may compensate, at least partially, for stunting.

- **Improving water, sanitation and hygiene services**
Young Lives research confirms that children's healthy growth depends on effective water, sanitation and hygiene services. Measures to achieve this can include composting toilets, septic tanks or different types of pit latrines in the shorter term, with piped sewer systems being prioritised in the longer term.
- **Supporting girls and mothers**
Since mothers' health is so important to children's health, measures that target women's nutritional status, such as investing in nutrition during adolescence, have the potential for positive benefits in the next generation.
- **Responding to global concerns over climate change.**
Climate change poses a significant risk to nutrition for children and adolescents. The global response should include measures to reduce the extent of climate change

Growth through Nutrition: The adolescent nutrition SBCC programme in Ethiopia



Save the Children (2019). *Documenting Research on the USAID Growth through Nutrition Activity Adolescent Nutrition SBCC Program: Outcomes and Lessons Learned*. Available from: <https://www.advancingnutrition.org/resources/adolescent-resource-bank/documentation-research-usaid-growth-through-nutrition-activity>

The Adolescent Nutrition Social Behavioural Change Communication (SBCC) Program is just one component of Growth through Nutrition, a multi-sector nutrition project in Ethiopia, initiated in 2019 in 20 woredas (districts) in Tigray, Amhara, Oromia and Southern Nations, Nationalities and Peoples Region (SNNPR). The Adolescent Nutrition SBCC Program currently uses pre-tested, nutrition awareness-raising,¹ nutrition knowledge² and skills-building³ SBCC materials in school-based clubs and other community platforms where adolescents and their families are reached. In addition, adolescent nutrition education radio spots are broadcast

in classrooms. The 'star food' concept was introduced across SBCC materials; the concept supports communication about priority nutrient-rich foods to improve dietary diversity.

This report details the early, rapid assessment of the Adolescent Nutrition SBCC Program to identify strengths, weaknesses and opportunities for improvements. The study consisted of 11 focus group discussions (FGD) with primary, secondary and out-of-school adolescents, 16 individual and small group interviews with mothers and fathers, in- and out-of-school adolescents, nutrition programme facilitators, educational radio personnel, regional SBCC managers and one direct observation. One woreda from each intervention region was chosen; these were randomly selected from Amhara, Oromia and SNNPR. Neadir Adet woreda from Tigray was purposefully chosen as it contains both food secure and food insecure areas.

The assessment found schoolteachers had been trained in all four regions. In SNNPR and Tigray, SBCC managers were also training education officers and health staff while in SNNPR, Amhara and Oromia SBCC managers were training out-of-school programme facilitators. Trained teachers had introduced adolescent nutrition activities into existing gender or health clubs or

- while helping countries to adapt to climate change.
- **Using research to support evidence-based policy**
The Young Lives study identified multi-country evidence for recovery from growth faltering after infancy. However, gaps remain in our understanding of adolescent growth recovery, what its implications are and how it may be brought about. Progressive policies targeting the early adolescent period may contribute to improvements in nutrition across the life-course.

Conclusion

It used to be thought that deficits in linear growth during the first 1,000 days of life were irreversible. The Young Lives data supports the hypothesis of 'growth plasticity' in older children, even up to 15 years of age. This suggests that investments in nutrition during the later years of childhood and early adolescence may contribute to improved growth, development and health outcomes in current and future generations.

had created nutrition clubs. Adolescents reported high satisfaction with these clubs and felt the information provided had been previously lacking. They appreciated being able to borrow materials such as games. However, not all adolescents were provided with other materials such as leaflets to take home due to fear of shortages.

Overall, the Adolescent Nutrition SBCC materials appear to be well-received, understood and used with regions tailoring activities to suit their context. Almost all FGD participants said they had shared the nutrition information gained from the clubs with their parents. Adolescents and parents also reported changes in behaviours such as adding a vegetable or protein to breakfast. Topics such as dietary diversity seemed to be well assimilated. However, some topic areas such as nutrition during menstruation and gender were much less mentioned by adolescents, suggesting a need for a greater emphasis on these topics moving forward. The role of radio was yet to be optimised as none of the primary school students had heard a nutrition radio spot and radio staff expressed the need for a mechanism to assess and maximise listenership. Valid concerns exist about the need for further evidence of a change in nutritional and nutrition-sensitive practices, sustaining interest in improving adolescent nutrition and the ability of the programme to help adolescents and families to overcome resource-related impediments to good nutrition. Several opportunities exist for the programme to begin to address these issues and to improve in other areas moving forward.

¹ Materials include girls' "Bright Minds, Bright Futures" poster and "Five Household Doable Actions for Girls and Boys" poster.
² Materials include the "Nutrition Practices Card Game", the "Best Nutrition Secrets to Share" Conversation Leaflet for girls and the "Nutrition Hookworms and Ladders" Game.
³ Materials include the Menu Planning game and the Earn and Buy game.



A mother in her vegetable garden, SNNPR, Ethiopia

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