

# Nutrition, growth and potential for recovery

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- Despite economic advances and better food security, early malnutrition is still an enormous problem affecting hundreds of millions of children worldwide. There is growing global attention and recognition of child growth stunting and it is usually assumed that the effects (physical stunting and impact on cognitive development) are irreversible.
- However, while reinforcing the importance of early life, Young Lives research challenges the idea that all is lost after early childhood with the discovery that there are points in later childhood and adolescence during which children change their growth trajectories. What is most important about this is that where children physically recover, this recovery is associated with better performance on cognitive tests. Analysis points to good services and quality nutrition as factors which can help to reverse early deficits and enable physical and cognitive recovery.
- Our key findings have been picked up by organisations such as Save the Children, UNICEF and the World Bank and integrated into their recommendations for tackling early malnutrition.

## Setting the scene

Any child who fails to get enough good quality nutrition in the first 1000 days – from conception to age two – is likely to face consequences that last a lifetime. Quite apart from lower survival chances, physical stunting, poorer health overall, they suffer impaired brain development which seriously affects their educational and cognitive performance, and the impact on their life opportunities is often devastating. Estimates published by the Lancet have suggested that 200 million children under 5 years of age – about 1 in 4 of all children – are failing to fulfil their development potential as a consequence of early undernutrition. It is often assumed that the effects of deprivation during the first 1000 days are irreversible. Growing numbers of children now suffer obesity; although this superficially appears to be a different problem it is also linked to the issue of diets that are not sufficiently diverse or nutritious.

## What does Young Lives research show?

Although Young Lives is not specifically a study about diet and nutrition, the fact that we collect a wide range of multipurpose data at community, household and school level over long time periods has allowed us to gain important insights into the effects of nutrition on children's development. The study has also identified a greater degree of change in physical development trajectories after the first period of life than was originally expected. Where children physically recover from early losses, such gains have been linked with better performance in cognitive tests. Long term, longitudinal data is essential to track children's growth trajectories and to identify the determinants of such trajectories. These study findings could not have been arrived at without the cohort approach, and are much stronger given that we have multicountry data and so the commonality of findings across contexts suggests this finding has important relevance for other low- and middle-income countries.

A synthesis of findings, which includes discussions of technical debates around the potential for recovery, is [available online](#).

## 1. Undernutrition is a serious problem

By following the same children over many years Young Lives has strengthened the evidence for the following findings:

- **The harm caused by chronic under-nutrition is severe and long-lasting, with large numbers of children affected.** In 2006, between 25% and 36% of Young Lives' Younger Cohort 5-year-olds in each of the four study countries were found to be suffering from physical stunting caused by poor nutrition in early infancy.
- **Consequences of stunting spill over to the next generation:** being born to a stunted mother increases the risk of the child being stunted and underweight in infancy through early adolescence. This is especially true for adolescent mothers.
- **Early is best, but it is not always too late for children's nutrition and growth.** Study collaborators have identified significant and meaningful evidence across the four countries of recovery and faltering in growth trajectories after the first 1000 days.

On average, child nutrition and health have improved in the Young Lives countries as access to services and material conditions have improved. These changes have been rapid in Peru and in Vietnam. But improvements have not been equally experienced by all groups of children. It is the poorest children who are most likely to be affected, and the problem is worst for those who also lack access to safe water and sanitation. Child nutrition is a key channel by which poverty undermines later outcomes.

## 2. There is potential for recovery

Given the scale of the problem, it is important that no opportunities are lost in working to improve child nutrition. Young Lives' Theory of Change (2015) has as its aim 'that the consensus over the importance of the early years is strengthened, supporting proponents of the 'first 1000 days' but also making the case that early gains have to be sustained by later investments, with wider recognition of the potential of remedial actions such as school feeding'. Evidence from the study challenges assumptions about childhood nutrition in several important ways:

- **The evidence now suggests that meaningful growth recovery CAN happen after early childhood, providing a longer window of opportunity to invest in disadvantaged children.** By studying children's growth over time, Young Lives points to the potential for growth recovery after infancy, suggesting that children and young people can recover some early losses.
- **School can be a platform for better nutrition.** Interventions such as the Midday Meal Scheme in India, aimed at primary school children, can help recover children's physical growth. School feeding schemes are important both for sustaining early gains and for supporting children's later development.
- **Tackling undernutrition is a strategy for improving children's learning.** Where children recover physically, this has also been linked to them performing better than would be expected in cognitive tests. Young Lives has led

the way in generating multi-country observational data to document the relationship between nutrition after the first 1000 days and cognitive achievement.

- **Adolescence as a critical second window of developmental opportunity.** Recovery may take place over a much longer period of time than originally thought. Recovery was also observed over adolescence, especially early adolescence. There is growing awareness and interest in the potential of adolescence as a second critical window. Analysis of Young Lives points towards the need for much greater attention to this life phase.

## 3. Other findings

- **In Peru, Young Lives has played an important part in demonstrating the success of the government's Juntos Conditional Cash Transfer Programme in reducing stunting.** Growth stunting rates have halved in Peru in the past ten years, which represents a major success story. This is often attributed to Juntos, which makes cash transfers to poor families on fulfilment of certain health and education conditions. Young Lives has identified that other factors such as better health services and economic growth have also made an important contribution.
- **Also in Peru, childhood overweight and obesity are on the increase** with one of the factors being lack of dietary diversity and a shift towards processed foods high in fat and sugar. Overweight and obesity rates were seen to rise fast during the adolescence period. What is striking is early signs of the emergence of overweight in the lower middle income countries of India and Vietnam, suggesting a looming public health crisis. SDG measurement of overweight is focused on younger children. These findings highlight the need to monitor what is happening for adolescents also.
- **Dietary diversity among adolescents is associated with health growth.** Dietary intake is changing over time. With the exception of Ethiopia, which remained constant, across our other study countries, when compared with children at the same age 7 years earlier, the more recent generation ate a slightly more diverse diet (tracked in terms of the number of the 7 food groups consumed in the past 24 hour period). Young Lives has identified that food expenditure data (and patterns of dietary diversity) is one of the predictors of height growth, widening the data sources which can be mobilised to generate evidence to improve child health.

## The impact of Young Lives research

Young Lives' growth and nutrition research, especially on the potential for recovery from stunting, has been extensively published in high-impact journals such as [the Lancet](#). This reflects both the quality of the research and the high level of interest in it, and also enhances the ability of the research to be noticed and have impact. Our analysis which questions accepted hypotheses is shifting the focus of global debate on how undernutrition can be tackled. Our key messages on the possibility of some recovery from stunting have been picked up by major organisations and influential individuals worldwide:

- **The World Bank** commissioned Young Lives researchers to write a chapter entitled 'Benefits of Interventions at School Age on Growth and Development' for its World Bank Disease Control Priorities (3rd edition), published in 2017. This book provides the most up-to-date evidence on intervention efficacy and program effectiveness for the leading causes of global disease burdens. It is significant that Young Lives evidence that challenges mainstream views is included in a well-regarded publication making recommendations worldwide.
- **Save the Children** used Young Lives evidence on the potential for recovery in stunted adolescent girls in their publication 'Unequal Portions: Ending malnutrition for every last child' (2016). In March 2017 Save the Children published a joint blog with Young Lives, again making the case for the importance of adolescent nutrition, and timed to coincide with the meeting of G7 'Sherpas' in Rome.
- Prior to this, Save the Children had also requested specific policy input from Young Lives on the impact of environmental shocks on children for the *Rio Summit on Sustainable Development 2012*, and on stunting and education outcomes for the *Food for Thought* report for the G8 Summit pre-meeting 2013. Save the Children also incorporated Young Lives analysis into their briefing for the IF Hunger Campaign in 2013, *Food for Thought: Tackling Child Malnutrition to Unlock Potential and Boost Prosperity*.
- **UNICEF** picked up the same in a blog, which was followed up by a meeting to gather evidence on adolescent nutrition that Young Lives attended. Evidence on the potential of adolescence has also been picked up in programming circles, including in a briefing by ENN was and then from which argued the importance of what happens during adolescence for child growth, and will form the basis of further engagement with Save the Children, the International Food Policy Research Institute (IFPRI) and DFID.
- Another working paper on maternal undernutrition and childbearing has resulted in Young Lives being invited to attend a meeting with GAIN and WHO on adolescent nutrition in June 2018. This again shows the take up of findings and the potential for this finding to help bring together actors with interest in nutrition and adolescence (especially in girls).
- Lawrence Haddad, Executive Director of the **Global Alliance for Improved Nutrition** (GAIN) and an influential voice in this field, has disseminated Young Lives findings through his widely-read Development Horizons blog. These have included the use of food expenditure data as a predictor of child growth, and the evidence for recovery from stunting.



- **The Government of South Africa has shown interest in Young Lives' analysis of the impact of Juntos in Peru.** In March 2018 a delegation that included senior government officials from South Africa's Department of Planning, Monitoring and Evaluation and Department of Health requested a meeting with Peru Country Director Santiago Cueto and lead researcher Alan Sánchez. The objective was to help them develop their understanding of how stunting rates have successfully been reduced in Peru. By documenting exactly how Peru has achieved such a positive result, Young Lives is thus helping the lessons to be transferred to other countries.

“ We have been delighted to collaborate with Young Lives, drawing upon their unique research to provide evidence about the importance of nutrition, particularly in adolescence, to breaking the intergenerational cycle. We are using this research to inform our new 3 year Global Campaign 'Every Last Child'. In this campaign we are focusing on both nutrition, excluded groups and adolescent girls. The campaign will specifically focus on girls, with coordinated activity taking place globally, for which this research will be invaluable. The research also features in the flagship nutrition report for the campaign, highlighting the importance of adolescence as gender issues are examined. All outputs provide political arguments for why Governments and donors should invest in adolescent girls' nutrition. ”

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