



Summary

The sharp increase in food prices both in world markets and in local markets since 2006 has raised serious concerns about the food and nutrition situation of poor families in many countries. Particularly in urban areas, where people cannot grow their own food, household budgets have been squeezed. The rapid price increases are especially bad news for young children, as any disruption to their nutrition tends to have serious long-term implications, both in terms of stunting, and lower educational outcomes, affecting their earning potential in later life. This policy brief looks at evidence from the Young Lives cohort study to show how the food price crisis will have both short-term and long-term impacts on children's health, education, and psycho-social well-being. It also discusses policy options available to alleviate the consequences of the present crisis on children.

Introduction

Poor families and children are particularly vulnerable to crisis and shocks, and an unexpected event such as illness or injury can put great strain on already stretched household budgets. Such shocks are a major risk to children with effects on both in terms of their own life-course and also in terms of the intergenerational persistence of poverty, as missed opportunities in childhood may trap these children into a poverty trap in adulthood.

This policy brief argues that high food price increases over recent years, and particularly since 2006 (the current food price crisis), will impact on children in two ways. First, there is the direct effect of constrained household budgets that mean that not only is less food likely to be available or poorer quality cheaper food is purchased (affecting children's short- and longer-term nutritional outcomes), there is also less money for non-food items such as healthcare and education. Second, the impact of poor nutrition can have serious long-term implications for children's health and psycho-social well-being, as well as their educational achievements. This in turn can lead to lower aspirations, lower life-chances and lower earning potential later in life, catching children in a poverty trap.

KEY POINTS

- There are two likely impacts of the current food price crisis on children's health: its short-run impact as it puts pressure on family budgets reducing their spending power, and its predicted long-run persistent impact on young children through stunting.
- We also found that there are both short and long-run impacts on children's educational and cognitive attainment. Children living in households with lower spending power often do less well in school, even compared to children in the same community. Similarly we found that malnourished children have lower educational outcomes.
- Lower spending power and chronic malnutrition in children are linked, resulting in lower self-esteem, agency, perceived inclusion and aspirations by these children.
- Finally, analysis emerging from our latest survey shows how families with low education levels are increasingly concentrated in the poorest sections of society. So these nutrition and education outcomes of the current food-price crisis may have long-term implications for the intergenerational transmission of poverty.

How rising food prices affect poor families

The rapid rise in food prices across the world has been bad news for many poor families. In urban areas, where people spend a large part of their budgets on food, the impact is unambiguously bad. In rural areas, too, households have been affected. Many are net buyers of food since the areas they live are not necessarily suitable for food crops. Moreover, encouraged by government and donors, many families had started the process of diversifying away from agriculture to off-farm activities, as until recently prices were too low to offer them a route of poverty via food production. These families are now hit as well. In the medium term, living standards in such poor rural areas may start to improve if farming households decide to switch back to increase food production in response to the higher returns offered, but this will take some time, as farming systems adapt.

In areas that generally produce a surplus but are vulnerable to droughts or other natural disasters, food imports are now unaffordably expensive, putting extra pressure on families at a time of crisis. In Ethiopia, for example, in some areas, including Young Lives survey sites, failures of the short *belg* rains caused the crops to fail in early 2008. In most years this would be relatively easily resolved with food imports, but high international prices have made it difficult for both the government and donors to import food. The limited international food aid delivery there has been has fuelled increases in domestic food prices, and Ethiopians have seen food price inflation of more than 50 per cent in the last 12 months.

The outcomes of poor nutrition

The rapid price rises we have seen have the gravest implications especially for young children, as any disruption in nutrition in the first two years of life can have serious long-term consequences. Adults tend to recover from disruptions in nutrition with relatively limited long-term costs to their health or general well-being. Children in general tend to be more affected in the long-run by poor nutrition. Very young children, however, are especially vulnerable around the age when they switch from dependence on breastfeeding to family foods, and any nutritional deficiencies can translate into growth deficiency (low height for age).

Much research has shown that children who face nutritional deficiencies in early childhood also face learning difficulties, as brain development is affected leading to lower educational attainment (*Grantham-McGregor et al. 2007*). Furthermore, these physical effects of stunting are often compounded by other aspects of poverty: stress, low education and low social capital of a child's primary caregiver lead to poor care and home stimulation, which in turn result in poor cognitive, motor and socio-emotional development, compounding the poor school outcomes. In short, chronic malnutrition in early life is a poverty trap with many consequences from which children

cannot escape. Young Lives research graphically illustrates how these multiple risks affect children even more widely: early childhood malnutrition influences not only educational attainment, but also children's aspirations and psycho-social competencies, such as self-esteem and the sense of inclusion.

Evidence from Young Lives

Our conclusions are based on longitudinal analysis, using data from our older cohort of children (aged 12 when the last survey round was carried out), comparing data from the first survey round (when they were aged 7). In our statistical analysis we carefully controlled for other key factors, such as child and family characteristics, access to services and a broad range of other community- and household-level factors, so that we could isolate the specific impact of childhood malnutrition and limited spending power, as distinct from other dimensions of poor living conditions. The data were collected in 2006 (when food prices had already risen steeply since 2000 but before the very rapid changes seen more recently), but our results can offer important predictions of the impact of the recent squeeze in purchasing power and the likely long-term impacts of the resulting crisis via malnutrition of young children, as reflected in stunting. In particular, we identified two potential impacts of the current food price crisis: its short-run impact on children as it puts pressure on family budgets reducing their spending power, and its predicted long-run persistent impact on young children through stunting, by showing the association of being a stunted child in this cohort with a broad set of cognitive and other indicators.

LINKS BETWEEN POOR NUTRITION AND EDUCATION

In terms of the links between poverty, nutrition and learning outcomes, our results confirm the findings of other researchers. Within our 12-year-old cohort of children we found that stunting is considerable (almost a third of all children) in all our study countries: from 28.7% in Peru to 32.3% in India. These figures mask great inequalities between urban and rural areas: with generally about 20% of urban children but over a third of children in rural areas (and up to a half in Peru) suffering from chronic malnutrition in the form of stunting.

In all of our study countries, consumption expenditure (in terms of purchasing power) has increased in recent years reflecting economic growth in general and poverty has come down. But poverty is still considerable, not least in our Ethiopia sample (where 69% of the sampled children lived below the national poverty line, compared to 38% of the population nationally).

First, we found that there are both short and long-term associations with children's cognitive development and educational attainment. Children living in households with lower spending power tend to do less well in school, even compared to children in the same community. Table 1 offers

detailed descriptive statistics on cognitive outcomes, comparing children in the poorest and the richest quartile in terms of spending power. Our multivariate statistical analysis showed that a number of these patterns are significantly valid and robust after controlling for a broad set of other household and community factors. In the table, those indicators for which the association between spending power and cognitive outcomes was statistically significant (at at least 10%) are marked by asterisks.

THE IMPACT OF POVERTY

In India, we found significant impacts on learning and achievement. We observed that children from poorer families were up to one grade behind at school at age 12 in Ethiopia and Vietnam. Writing skills were substantially lower in Ethiopia, India and Vietnam, while reading skills were lower in Peru. The Peabody Picture Vocabulary Test (PPVT) and the Cognitive Development Assessment (CDA) showed similar substantial differences between richer and poorer children with significant associations in Ethiopia, India and Vietnam.

Table 1. Educational and psychosocial indicators (comparing average children from the poorest quartile with average children from the richest quartile)

	Ethiopia	India	Peru	Vietnam
Grade deficit (in years), between poorest and richest quartile	-0.8*	-0.3*	-0.9*	-0.6*
Writing skills: % of children that write without difficulty (deficit in percentage points)	-10.7*	-24.7*	-14.2	-14.3*
Reading skills: (% of children that can read without difficulty (deficit in percentage points)	-10.8	-11.2	-7.1*	-9.3
Sense of shame/ embarrassment index (deficit in percentage points)	-4.3*	-5.1*	-18.8*	-9.4*
Grade aspiration gap (in years)	-0.7*	-1.2*	-0.7*	-1.4*

Richest and poorest 25% of households defined in terms of household total consumption per capita

* Denotes statistical significance of spending power to explain outcomes, at 10 % or less.

IMPACT OF STUNTING

We also found long-term cognitive and educational associations linked to the persistent impact of chronic malnutrition in all countries (Table 2). In all of our study countries, after controlling for current family resources and a number of child, family and community factors, malnourished children have lower grade attainment. In Vietnam and Ethiopia, we found significant impacts on language (vocabulary) skills (PPVT) and maths skills. In Peru and Ethiopia we found significant impacts on writing skills; in Vietnam and Ethiopia, on reading skills. PPVT tests and CDA tests also showed statistically significant effects from chronic malnutrition in Ethiopia and Vietnam.

Table 2. Educational and psychosocial indicators, comparing (average) stunted and non-stunted children

	Ethiopia	India	Peru	Vietnam
Grade deficit (in years), between stunted and non-stunted children	-0.9*	-0.3*	-0.5*	-0.4*
Writing skills: % of children that write without difficulty (deficit in percentage points)	-18.1*	-7.0	-13.4*	-6.8
Reading skills: % of children that read sentences without difficulty (deficit in percentage points)	-15.6*	-2.5	-2.3	-5.4*
Sense of shame/ embarrassment index (deficit in percentage points)	-0.6	-3.0*	-10.3*	-2.4
Grade aspiration gap (in years)	-0.4*	-0.4	-0.4	-0.7*

* denotes statistical difference at 10%.

SELF-ESTEEM AND PSYCHO-SOCIAL WELL-BEING

Young Lives is one of the few longitudinal studies to try to measure children’s own perceptions as well as the material dimensions of poverty. We have found that both stunting and low spending power of families have further profound impacts on children’s lives and experiences, in terms of their self-esteem, sense of shame, respect and of inclusion. Other work, such as Trzesniewski et al. (2003), has shown how such indicators can be used effectively in research. Children were asked whether they agreed or disagreed with a set of probing questions about their lives, using survey-based psycho-social instruments. The answers are summarised in a simple scoring indicators scaled between zero and one. In particular, we explored concepts of self-esteem, with dimensions of shame and pride related to the child’s circumstances, of respect and inclusion, and of child agency.

Self-esteem and other related perceptions are connected to many different influences in a child’s life, including the support given by family members, the quality of friendships, cultural values and other factors. Nevertheless, we found that low household spending power is strongly associated to many of the indicators explored in the multivariate statistical analysis. It reduces children’s self-esteem and increases shame. In India and Ethiopia it decreases agency. In India and Peru it also increases their sense of lack of respect or inclusion. Furthermore, there appear to be statistically significant associations of stunting, as children’s responses imply that even controlling for current family resources, self-esteem is affected further by stunting in Peru and shame is affected in India and Peru. In addition, children’s agency is affected in India and Vietnam and their sense of respect is also compromised in Peru. These psycho-social indicators are important as other research shows that young people with high self-esteem have better mental and physical health, achieve better educational outcomes and better economic prospects than their peers with lower self-esteem (Trzesniewski et al. 2003).

These processes are also reflected in very simple indicators of how children experience their lives at home and in the playground. In India children from poorer backgrounds tend to have fewer friends; in Vietnam they tend to be excluded from games on the playground. Stunted children in Peru and Ethiopia told us they find it hard to talk to other children in school, while in India and Vietnam they are less likely to be considered leaders in games.

CHILDREN'S ASPIRATIONS AND OPPORTUNITIES

If anti-poverty policies can create opportunities for poor children, it is crucial we build their self-esteem so that they will feel able to take up those opportunities. Again, we found that both spending power and malnutrition are affecting children's hopes and aspirations for the future, irrespective of their current educational and other achievements. In all countries, we found the poorest children had significantly lower aspirations of education, typically they aim to finish only secondary rather than going to tertiary education. And when we factor in current household resources, we found that stunted children in Ethiopia and in Vietnam have further lower aspirations for themselves. Whether they are just being realistic about their life-chances is not what is important here: the mere observation that the hopes and aspirations of 12 year olds are affected by their families' current spending power and their own malnutrition does not bode well for their future and is another unwanted long-term consequence of the current food crisis. While children's resilience in the face of adversity is well documented, lower aspirations will affect their ability to take responsibility of their own lives when opportunities are offered.

Implications for policymakers

Higher food prices not only lead to poorer diets but also limit household expenditure on non-food items such as healthcare, education, and other basic services such as water and sanitation. The expenditure choices families make will ultimately determine the severity of the impact of higher food prices on their children's well-being. Similarly, access to microfinance and social protection schemes will be a key determinant of how families are able to cope with the crisis.

What can be done? To support poor families and their future well-being, the food price crisis requires an immediate response in the form of carefully planned social protection interventions (such as cash transfer and employment programmes), as well as a longer-term response to bring prices down, including support to food production programmes. For adults, both are important and a balance has to be struck.

For children, the short-term nutritional costs are by far the most pressing. For younger children, programmes to ensure adequate nutrition in the first two years, such as breastfeeding and complementary feeding promotion can prevent short- and long-term effects of the food price crisis. For older children, school feeding programmes such as the Midday Meal Scheme in India can help to reduce the short-term effects, simply by reducing hunger and thereby improving concentration and school performance. For the whole family, it is clear that the priority has to be social protection measures, carefully targeted to benefit children. In addition to their immediate benefits, social protection measures also help to ensure that families are better protected and better able to cope with shocks that occur – before they happen.

FURTHER READING

Joachim von Braun et al. (2008) *High Food Prices: The What, Who and How of Proposed Policy Actions*, IFPRI Policy Brief, May 2008

Stefan Dercon and Alan Sanchez (forthcoming, 2008) *Poverty, Malnutrition and its Psycho-social Impact on Children*, Working Paper 39, Oxford: Young Lives

S. Grantham-McGregor, Y.B. Cheung, S. Cueto, P. Glewwe, L. Richter, B. Strupp and International Child Development Steering Group (2007) 'Developmental Potential in the First 5 Years for Children in Developing Countries' *The Lancet* 369(9555):60-70

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