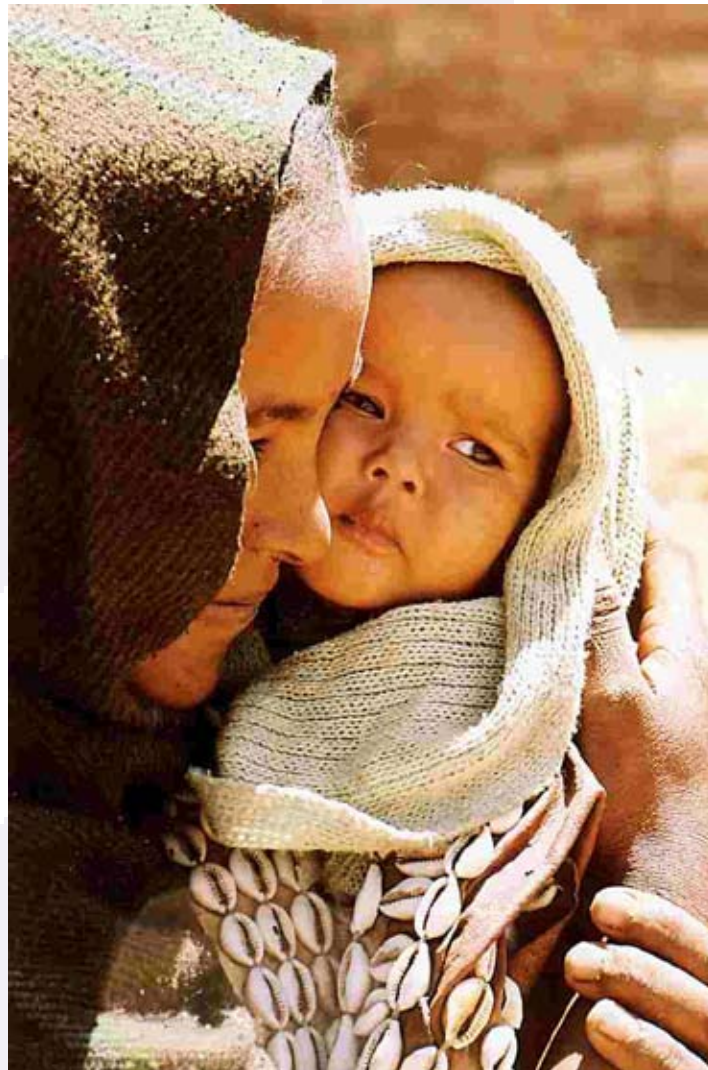


Executive Summary

**Tackling Child Malnutrition in Ethiopia:
to what extent do the SDPRP's underlying policy
assumptions reflect local realities?**



Photograph: Feleke Deneke/Young Lives

Tackling Child Malnutrition in Ethiopia: to what extent do the SDPRP's underlying policy assumptions reflect local realities?

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I. Child Malnutrition as a Major Public Health Problem

With a 17 percent under-five mortality rate in 2001, of which an estimated 57 percent is linked to severe and mild to moderate malnutrition, malnutrition constitutes one of Ethiopia's most important public health problems. National data from 1999-2000 found that wasting (acute malnutrition) and stunting (chronic malnutrition) in children aged six to fifty-nine months were 9.6 and 56.7 percent, respectively. These figures are among the highest in the world and are severe even by sub-Saharan African standards. Survivors of child malnutrition can suffer from impaired physical development and limited intellectual abilities, which in turn may diminish their working capacity during adulthood with negative effects on economic growth. Child malnutrition may also lead to higher levels of chronic illness and disability in adult life and these may also have intergenerational effects as malnourished females are more likely to give birth to low-weight babies. Failure to effectively tackle the prevalence of malnutrition in children under five will also lead to the non-accomplishment of one of the key targets of the first Millennium Development Goal, eradicating extreme poverty and hunger.

While the problem of malnutrition in Ethiopia is relatively well-documented, its specific determinants are not well understood. To reduce malnutrition one must understand its causes. Not only are extant studies based predominantly on small-scale surveys that focus on particular regions of the country, but there is a lack of agreement about the relative importance of factors affecting nutritional status. For example, some empirical studies stress the importance of parental education and/or nutritional knowledge, while others recommend the need to focus on improving the poverty/wealth status of households. This question is not only of academic interest but of considerable policy relevance, both among national and international policy-makers. Thus it is important to better understand the child, household, community and policy-level determinants of malnutrition and the way in which they differ across different sub-national regions. Such knowledge will facilitate the development of effective policy strategies.

¹ This summary is based on a longer Young Lives paper by the same title written by Alemu Mekennon (Department of Economics, University of Addis Ababa), Nicola Jones (Save the Children UK, London) and Bekele Tefera (Save the Children UK, Ethiopia). The research was generously funded by Canada's International Development Research Centre and the UK Department for International Development.

II. Policy Context

Although the Ethiopian government has adopted a cross-cutting approach to nutrition over the last decade, there is no specific nutrition policy. As the National Plan of Action for Ethiopian Children (NPAEC) 2003-10 points out:

In spite of the recognition of the problems and impacts of malnutrition on child survival and development, no concerted intervention schemes and guidelines have been designed and implemented at national level...to date the country has no nutrition policy and strategies (Ethiopian Ministry of Labour and Social Affairs, 2004: 12).

The Sustainable Development and Poverty Reduction Program (Ethiopia's PRSP) incorporates elements of the public health, food and gender approaches to addressing malnutrition. However, cross-linkages and synergies are not well developed and nor is there a systematic approach to coordinate these policy components. The SDPRP includes an emphasis on health promotion and prevention, especially among the poor. It aims to address food insecurity through the Agricultural Development Led Industrialization (ADLI) strategy and related food security initiatives and supports women's empowerment to improve women's control over resources. However, our qualitative and quantitative findings show much could be done to strengthen the linkages and sequencing between different types of policy interventions. While the National Plan of Action for Ethiopian Children includes nutritional intervention and supplementation programmes, nutritional education, school feeding schemes and community involvement, it pays little attention to the differential impact of family livelihood patterns and caregivers' productive work responsibilities on child well-being. It also does not acknowledge the importance of family planning and spacing and differences between children in rural and urban areas and in food surplus and food insecure regions.

The overall objective of this paper is, therefore, to examine the determinants of children's nutritional status – using the internationally accepted criteria of wasting, stunting and underweight as outcomes – to contribute to debates about the development of a more comprehensive policy approach to tackling child malnutrition².

III. Methods

We combine quantitative and qualitative research methods. The quantitative data is from the 2002 Young Lives Ethiopia survey involving 1,999 households with 6-18 month-old children from five regions. This data was collected from 100 children in each of 20 purposefully selected sentinel sites – mainly from food insecure areas. Eight of the sentinel sites are urban areas/towns while the remaining 12 are rural. The methods used for the quantitative analysis are descriptive statistics, bivariate and multivariate analysis. The qualitative data was collected in 2005 from a total of five sentinel sites, one from each region, to complement the quantitative analysis. Techniques used included semi-structured in-depth interviews with a sub-sample of households with malnourished children and key informants, and focus group discussions with parents and development workers.

² We use weight-for-height, weight-for-age and height-for-age as indicators of child nutritional status. While height-for-age (stunting) is primarily indicative of chronic or long-term malnutrition, weight-for-height (wasting) can assess acute or recent malnutrition. Weight-for-age (underweight) reflects short-term or long-term malnutrition or both.

IV. Key Findings

Our findings can be grouped into three main levels: child, family/household and community characteristics.

A. *Child characteristics*

Sex: The multivariate analyses show that being a male child increases the likelihood of being wasted, stunted and underweight – a result which also holds when we stratify the data by location (rural and urban). This is consistent with results of other studies in Ethiopia and other African countries and is largely attributed to possible genetic factors.

Age: Within the group of 6-18 month-old children included in the sample older Young Lives children are more malnourished (wasted, stunted and underweight) in both urban and rural areas. This suggests there may be problems associated with premature cessation of breast-feeding and inappropriate weaning/feeding practices. Our qualitative findings also suggested that inadequate birth spacing (which leads to multiple demands on a mother's breast-milk supply) and the need for caregivers – especially market women – to leave infants at home while they pursue livelihoods may contribute to the poorer nutritional status of older children.

B. *Family/household characteristics*

Household composition: The results suggest that the number of children below five years of age increases the likelihood that the child is stunted or underweight in both rural and urban areas. As having more children below five years of age would imply both shorter birth intervals and more difficulty in caring for children, this highlights the importance of birth spacing and family planning.

Caregiver's marital status: In households where the caregiver has a permanent partner, children are less likely to be wasted, stunted or underweight. Given that almost all caregivers in our sample are female, the results imply that children of female-headed households are more wasted, stunted or underweight than those of male-headed ones. This may be a reflection of factors such as limited availability of resources, income and household labour supply – which were not fully captured by the wealth index – as well as the more limited time available for childcare. Our analysis by location shows that this result holds for wasting and underweight in urban but not rural areas. This may be because mothers work more regularly away from the home or because they lack the support from an extended family more commonly found in rural areas.

Household wealth/assets: Lower household wealth increases the likelihood that the child is wasted, stunted or underweight. However, this result was only significant in urban areas, perhaps because the wealth index we used includes items more likely to be found in urban areas. When we employed indicators of more typical rural assets – land and livestock ownership – we similarly found that rural households with more livestock are less likely to have children who are wasted or underweight, but in urban areas the reverse was the case. This could be because urban dwellers with livestock belong to the urban periphery and are generally poorer than households engaged in non-farm occupations.

Shocks: Households that experienced a decrease in food availability had children who were more likely to be stunted, and households who experienced crop failure had children who were more likely to be

wasted. Such results are to be expected as such shocks could affect the availability of food/milk to the child either directly or through their indirect effects on the mother. However, we also find the unexpected results that crop failure decreases the likelihood that the child will be stunted and that decreased food availability makes wasting of the child less likely in urban areas. One possible explanation could be that different kinds of support that cushion households against such shocks have not been captured in our data, especially food aid and food-for-work programmes.

Parental education levels and access to information: Households with better educated male members tended to have children who are less stunted (a result which holds true in both rural and urban locations). However, counter-intuitively we found that households with more educated female members are more likely to have children who are wasted and underweight. Given that the average level of education of caregivers in our sample was only two years, however, we suggest that this result be interpreted with caution. Moreover, our qualitative results found a general tendency for higher levels of maternal education to be associated with better caring practices, especially health-seeking behaviour.

To tap the possible role of information dissemination in affecting child nutrition we used ownership of radio and television. We find that households that own radios have children who are less likely to be stunted and underweight, suggesting that radio programmes on nutritional promotion are having some impact.

Access to water and sanitation: Households that use water from unsafe sources such as a river are more likely to have underweight children, particularly in rural areas. Children of households that use a pit latrine or flush toilet are less likely to be stunted or underweight, except in urban areas probably reflecting the unsanitary conditions of latrines in urban slum areas.

Health care/health-seeking behaviour: In households where the mother made more antenatal visits the child is less likely to be wasted, and children vaccinated against measles are less likely to be underweight. If we take antenatal visits and child vaccinations as proxies for health-seeking behaviour, these results suggest the significance of health facilities/services in reducing the incidence of underweight and wasting. However, no significant correlation was found in the case of stunting.

C. Community characteristics

Urban/rural divide: Young Lives children in urban areas are more likely to be wasted and underweight compared with those in rural areas, controlling for all other factors³. This result is surprising given that international literature suggests that the nutritional status of urban children is usually better. One possible explanation is that because Young Lives purposefully selected poor households, the urban poor in the sample may be relatively worse off. Longitudinal data also suggests that urban poverty is increasing more rapidly than rural poverty in Ethiopia and thus our data may be capturing part of the influence of this trend (Dercon, 2000).

Average distance to public health facilities: Communities with better access to public health facilities were found to have a higher incidence of child wasting, which we are unable to explain. However, as discussed below it may be because the quality of services, availability of drugs and affordability of health services is more important than distance to health services.

³ Note however that in absolute terms rural children are still more malnourished than urban children: wasting: 16.8% compared to 10.5%, underweight: 48.6% compared to 29% and stunted: 29.4% compared to 44.4%.

V. Policy implications

The policy implications of our findings can best be discussed by referring to UNICEF's three-part conceptual framework on child malnutrition. We would emphasise, however, that a broad understanding of the factors that underpin the three core variables – “caring practices”, “food security” and “health services” – as well as their inter-linkages is necessary to develop a holistic, child-sensitive nutrition policy.

A. Factors related to caring practices

Whether to concentrate greater resources on providing more education to caregivers and communities so as to enhance their nutritional knowledge and related caring practices has become a hotly debated development issue⁴. Our findings suggest this debate needs to be more nuanced. Our qualitative findings underscore the importance of focusing on what caregivers and local communities do and do not understand about child nutrition, and how and why such knowledge does and does not translate into behavioural change.

Focus group discussions and in-depth interviews with women with both malnourished and well-nourished children indicated that caregivers can identify the symptoms of malnutrition and are knowledgeable about such key reasons for malnutrition as lack of a balanced diet, premature cessation of breast-feeding, inadequate birth spacing, poor sanitation, unvaccinated children and diarrhoea. However, our research suggested that there is often a disconnect between this awareness and follow-up behaviour and/or the capacity to act on this knowledge. In some cases financial and/or cultural constraints hampered household's preferred caring practices. For example, although mothers were aware of the importance of sanitation practices they were unable to afford soap, or were constrained from practising birth spacing due to their husbands' resistance to family planning and/or community stigmatization. In other cases, though, the solutions sought to deal with symptoms of child nutrition were based on misinformation and were often likely to exacerbate the child's illness. Examples include turning first to traditional healers—whose remedies are likely to be either ineffectual or aggravate the child's condition—to treat infant diarrhoea or fever and relying on water decanting to ensure a clean water supply.

The reason children do not get proper care is lack of family planning. If there are nine or ten children in a house who could manage to care for their food, clothes and hygiene? This is a common problem of our society. From our experience, when two or three children are found in a household they are raised properly and they are clean and well-fed (Health worker from Arato, Tigray, 2005).

In short, the Ministry of Health's health extension package needs to take as its starting point local understandings about child malnutrition and resulting local practices. Educational programmes about nutritional care then need to be developed that seek to bridge the gap between problem identification and solutions. For example, households need to know how to address diarrhoea and inflammations associated with teething (infant milk-teeth) and to be aware of how the remedies provided by traditional healers in these solutions can be injurious to their children. Community education about the particular nutritional and food intake needs of pregnant and lactating mothers, as well as the particular problems faced by teenage mothers is also needed. In addition, complementary interventions that should be incorporated

4 SC(UK) (Save the Children UK) (2003) “Thin on the Ground: Questioning the Evidence behind World Bank-funded Community Nutrition Projects in Bangladesh, Ethiopia and Uganda”. London, Save the Children Fund UK.
Christiaensen, L and H Alderman (2004) Child malnutrition in Ethiopia: can maternal knowledge augment the role of income?, *Economic Development and Cultural Change*, 52(2), 287-312.

into the health and development extension packages include: a) the distribution of subsidised or free soap; b) efforts to expand availability of sources of safe water; c) the construction and maintenance of clean community latrines, especially in urban areas; and d) the provision of low-cost radio receivers in order to facilitate rural communities' access to information on nutrition, sanitation, health and development programmes.

Lastly, although our quantitative findings inexplicably found a negative relationship between adult female education and child malnutrition, our qualitative research results were in line with the broader international literature and suggested that maternal education was important in terms of shaping care-giving practices. Policies to expand nutritional knowledge as well as general adult education should thus be developed in tandem.

B. Factors related to food security and income

We do not have land and thus we do not produce food...we purchase food to eat. We couldn't therefore treat her medically, and we couldn't feed her the necessary food that children should have because we did not have anything (mother from Uduga, 2005).

Understood broadly as factors related to household livelihoods, food security and income issues were identified as being at least as important as maternal nutritional knowledge and caring practices in both the qualitative and quantitative findings. Our research suggests that the food security dimension of tackling child malnutrition needs to be concerned with improving aggregate household wealth (which enables families to purchase appropriate food in seasons of plenty and scarcity), the intra-household distribution of power and resources and the introduction of mechanisms to allow women to better balance their caring and productive work responsibilities.

Seasonality

Food security is most obviously linked to seasonality and crop success or failure. Particularly in drought-prone rural areas, but also in urban areas such as Addis where the cost of food rises in winter and variety decreases, seasonal differences emerged as a major contributing factor to acute forms of malnutrition, including wasting. Such differences were further exacerbated by crop failure, suggesting that food security and safety-net programmes need to be designed to take into account the particular deprivations suffered during seasons of scarcity.

Wealth and assets

Household wealth and assets also emerged as being significantly related to lower incidences of stunting, wasting and underweight in one-year old children. Wealth and assets mattered for three main reasons: the ability to provide appropriate weaning food, the ability to ensure that both expectant mothers and mothers are well-nourished (thereby reducing the likelihood of underweight babies and facilitating longer breast-feeding) and the ability to seek timely help from modern health services in the case of child illness (see discussion below). In this regard, the Rural Development Sector's policy emphasis on providing vocational training for farmers, introducing low-cost technologies (which will in turn decrease the demand for household labour) and initiatives to diversify household income sources constitute welcome developments. Similarly positive are the micro-finance programmes run by NGOs and micro-finance institutions that are targeting women in order to improve urban and rural household incomes. However, because these programmes are generally small-scale, we suggest that governmental efforts should be made to strengthen and expand micro-finance initiatives.

In addition to improving aggregate household wealth, the intra-household distribution of resources also emerged as important. Women with at least some control over household income and/or access to credit in their own name are better able to address their children's dietary and healthcare needs. We would also add here that the Ministry of Agriculture's proposal to introduce gender-sensitive agricultural initiatives—i.e. facilitating the production of consumption-oriented, low-labour intensity, nutrition-rich crops—is a welcome step.

Caregivers' employment

The type of caregiver employment was found to have a more mixed impact. While access to independent income was generally positive, in some communities—especially in Guraghe/ Wurib—focus group discussants identified problems linked to the arduous hours worked by women market traders. Typically infants in such households are weaned as early as three months and left in the care of older siblings while the mother spends all day or even several days travelling and selling goods at market. Not only is child health potentially compromised by premature weaning and introduction of age-inappropriate foods, but in the absence of community child-care mechanisms this employment pattern reduces the amount of time available for child-care. Caregiver involvement in agricultural or construction work may also lead to similar outcomes, suggesting that safety nets to allow lactating mothers to practise exclusive breast-feeding would be a crucial long-term investment at a key juncture in a child's life.

In this regard, it is important to emphasise that the 2004 Food Security Package's inclusion of community child-care mechanisms and safety net programmes for pregnant and lactating mothers represents a very positive development. In the case of community childcare, however, no such initiatives had been started in the five sites where our research was carried out by March 2005, suggesting that more resources are needed to ensure that these programmes are reaching rural communities. Secondly, while it is important that the government recognises that it is difficult for women to work at full capacity during the later months of pregnancy and the first six months of lactation, cash transfers are needed to cushion the impact of women's (partial) withdrawal from productive and reproductive tasks during this period.

C. *Factors related to health services and health-seeking behaviour*

My daughter has been sick because of her milk teeth. She became very thin. I took her to the clinic but she did not get better. People told me it was the evil eye. She always used to cry. They told me that her birth had been untimely. They advised me to take her to the spiritual healer. But I didn't because I don't believe in that (mother from Ibesta, 2005).

Rather than proximity to health services, our findings underscored the importance of the quality of health services. Respondents complained about inadequate equipment, poorly trained and/or insufficiently sensitive health professionals and excessively expensive medication. Coverage of health services may have expanded significantly but the disappointingly limited and costly services available discourage users. Moreover, even though a health-fee waiver system has been introduced for poor households, it is excessively time-consuming and bureaucratic and thus discourages health-seeking behaviour among targeted households. As a result, many respondents still access traditional healers first and only turn to modern clinics as a last resort when the child's illness is already severe. This not only reduces the chances of a remedy but also contributes to further mistrust of clinic services.

In order to address these problems, our research suggests that the following measures would contribute significantly to tackling child malnutrition:

- **Training programmes for nutritionists** by the Ministry of Health, who would work alongside other health professionals in the implementation of the health and development extension packages. Expanding the country's nutritional expertise is necessary in order to better coordinate policy strategies that would tackle the multi-dimensionality of malnutrition.
- **Health professionals need sensitivity training** so as to improve care-givers' confidence in their services. Such training should also include methods about how to provide caregivers with useful information so that they understand how and why their children are being treated and feel empowered to take better care of their children at home. Given that the kebele-level women's associations are involved in providing education about birth spacing and contraceptives, they may also benefit from similar capacity building. For monitoring purposes, user satisfaction of services would be a useful indicator of improvement.
- Concerted efforts also need to be made to ensure that **essential quality drugs are available and that health personnel know how to administer these appropriately**. As our research found in the case of vaccinations that had led to physical deformities, one negative experience with modern medical treatment can have a powerful deterrent effect for the wider community. Therapeutic feeding should also be introduced to clinics to deal with acute cases of malnutrition.
- Although the **health waiver system for poor households** is positive in principle, because accessing this exemption is time-consuming and bureaucratic in practice, it serves to dissuade caregivers from seeking medical treatment. Particularly in the case of acute illness, we recommend that a new system of certifying poor households as eligible for free care should be introduced to replace the current system where households have to seek a waiver on a case by case basis.
- While the SDPRP's and HSDP's recognition of nutrition as an issue that cuts across multiple sectors is welcome, we nevertheless believe that **it is important to include specific nutritional indicators into the new PRSP** so that a designated governmental agency can be held accountable for progress in tackling nutrition. As the Ministry of Labor and Social Affairs noted in a recent report to the UN on Ethiopia's progress in implementing the UNCRC: *"The nutritional status of children is an indicator of the living standard level of households, the community and the Nation"* (MoLSA, 2005: 45).
- Lastly, more effort needs to be taken to eradicate the **harmful practices carried out by traditional healers**, which often exacerbate child ill-health. Although the SDPRP mentions the importance of promoting linkages between traditional and modern medical practitioners, our research suggests that more urgent measures are required. While traditional health providers may offer useful complementary services in some areas of health behaviour, the practices they advocate in the case of malnutrition are clearly unhelpful. This suggests that given the high levels of trust and reliance among rural (and to a lesser degree urban) Ethiopian communities in traditional medicine, the government would be well-advised to provide training for traditional healers in some aspects of modern medicine and solicit their support as front-line health workers. In addition, legislation should be introduced to ban harmful practices such as the removal of milk teeth and the uvula and to also prosecute those who provide such services.