

The Impacts of Adult Death on Child Growth and Nutrition

Evidence from Five Southern African Countries

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Introduction

The AIDS epidemic has caused a drastic increase in adult mortality. This study examines the impacts of adult deaths on child nutrition—specifically the impact on child food intake and growth with reference to their weights. Anthropometry data from five southern African countries are analyzed for this purpose, and we adopt new methods to investigate the impacts of (recent) adult deaths on short-run changes in child weight.

If households face credit constraints, and their risk-mitigating strategies do not ensure perfect smoothing of consumption, the death of adult members (who are likely income earners) can decrease consumption and therefore dietary intakes. Weight is a good measure of the nutritional status of children, and, because children are highly vulnerable members of the household, of the household's welfare.

Child nutrition has great importance to the formation of the child's human capital in the long run. Studies show that nutrition, especially in ages 0–3, affects subsequent development of cognitive skills, schooling performance, and labor market outcomes. Although child growth is measured by child height in many studies, our focus is on child weight, which fluctuates in the short run. Fluctuations and decreases in child weight adversely affect the growth process, which will be reflected in child height in time.

Empirical Settings and Data

The second objective of this study is the assessment of food aid distributed to a group of households in the study countries. The data we use are purposefully collected to assess the effect of the World Food Programme's food aid: Community and Household Survey (CHS). In each intervention site, the survey collected information that permitted an assessment of the difference in impact of adult death on child growth between beneficiary and non-beneficiary households.

There are a variety of mechanisms that we expect will mitigate the impact of adult deaths on child nutrition. Primarily, we expect that food aid will mitigate the adverse effects of adult deaths on child dietary intake and growth. Another potential mitigating mechanism is related to intra-household resource allocation. The impact of an adult death in the household does not have to be equal among all children. Parents or other adult members may take an action to equalize the welfare of children by absorbing more

of the shock to less-endowed children. In other words, well-endowed children may have larger negative impacts from the death of adult members, which equalizes child growth outcomes in the household. In this study, we investigate this intra-household issue by looking at impacts of food aid on children of different ages.

Approach

The CHS data used are cross-sectional, so we do not directly capture dynamic changes in child anthropometric measures, such as height and weight, from the surveys. Instead, we estimate the deterministic components of child weight by regressing the weight-for-age Z-score on the height-for-age Z-score, child age, mother's weight and height, and mother's education, under the assumption that child height measures the medium-to-long-term growth outcome, and mother's characteristics determine genetic and biological factors in child growth. Then, we take the difference between the current weight Z-score and the predicted Z-score (from the above estimation).

One possible complication involves the endogeneity of food aid targeting: if targeting is effectively done to cover the households that are losing adult members, we would observe more adult death in the beneficiary group in each community. To address this, we compared adult death incidences between food-aid and non-foodaid households. In all countries, we observed no significant difference between the two groups. In this sense, food aid was well targeted to children who lost adult members in their households.

Results

Analyses show that maternal weight is associated with child weight, but maternal height is not. Maternal education shows various results, but higher education of the mother seems important, and is associated with higher child weight. Preliminary analysis shows that the averages of weight residuals do not differ significantly between food-aid and non-foodaid groups in all countries.

We show that the impact of adult death on child weight is significantly negative among non-foodaid households in Lesotho, Zambia, and Namibia, negative but insignificant in Swaziland, and positive and significant in Malawi. In Lesotho, Zambia, Namibia, and Swaziland, the impact is insignificant in food-aid households. Except for Swaziland, all countries show smaller impacts of adult death on child

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weight in the food-aid group, which suggests that food aid mitigates the shock on child nutrition. In some countries, well-endowed children suffer more from adult deaths, probably because parents protect less-endowed children. Overall, our results confirm the role of food aid in mitigating the adverse effect of recent adult deaths on child nutrition.

Policy Implications

Given the results of this study, policymakers and international agencies should be encouraged to actively use food transfers to mitigate the negative impacts of AIDS mortality in the adult population on the next generation's human capital formation. It is important for governments to institutionalize

social protection mechanisms, such as food transfers to the poor and vulnerable, in order to prevent the negative impacts of AIDS on children. In our empirical context, this is probably the most important message, though in many countries, fiscal realities preclude the implementation of large-scale social protection programs without external aid.

In addition, our study showed the importance of intra-household distribution issues. Parents decide actual food distribution in the household, which affects the realized impacts of adult deaths on child nutrition. Policy instruments often ignore this hidden channel which critically determines the impacts of food aids on child welfare.



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About RENEWAL

Facilitated by the International Food Policy Research Institute, RENEWAL is a regional “network-of-networks” in Sub-Saharan Africa. Currently active in five “hub” countries (Malawi, Uganda, Zambia, South Africa, and Kenya), RENEWAL comprises national networks of food and nutrition-relevant organizations (public, private, and nongovernmental) together with partners in AIDS and public health research. RENEWAL aims to enhance understanding of the worsening interactions between HIV, food security, and nutrition, and facilitate a comprehensive response to these interactions. RENEWAL is grateful for support, at present, from Irish Aid, the Swedish International Development Cooperation Agency (SIDA), the International Development Research Centre (IDRC, Canada), and the United States Agency for International Development (USAID).

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