

## Literature Review – Benefits of ending hunger and malnutrition

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A literature review on the benefits of ending hunger and malnutrition identified four major areas of benefit: economic, health, social, and education. While the strength of the evidence across these four areas vary, it provides valuable insight into the major findings as well as remaining gaps.

### *Summary of main findings*

The review of economic benefits from ending hunger and malnutrition found country-level studies as well as other literature reviews detailing increased productivity and earnings from improved childhood and adult nutrition status. Studies also modeled gains in productivity, earnings, and GDP from investments in nutrition-specific interventions and, less commonly, agriculture. Another set of studies estimates economic benefits of improved health and education outcomes resulting from improved nutrition. Country-level studies from Africa and Latin America were found that estimate health, education, and productivity costs of hunger. Nearly all studies report economic benefits in cost-benefit ratios, and all studies suggest that the benefits significantly outweigh the costs. However, almost all studies model these benefits instead of observing and assessing them. Overall, aside from Hoddinott et al.'s 2008 Guatemala study, the review found no rigorous assessments of the wage benefits of improved nutrition, a view confirmed by other recent reviews of the literature.

Studies also discussed several health benefits of ending hunger and malnutrition. The review found evidence for decreased morbidity and mortality, with these benefits reported most frequently in terms of averted loss of disability-adjusted life-years (DALYs). Some studies estimated the number of deaths averted. The review found several empirical studies showing anthropometric improvements from reduced hunger and malnutrition, as well as improvements in the effectiveness of treatments of diseases such as tuberculosis and HIV. Several clinical studies showed how improved nutrition facilitates cognitive development, and some studies showed improvements in mental health, particularly among children, adolescents, and women.

Social benefits to ending hunger and malnutrition were also found. A review of the 2007-08 and 2009-10 food crises indicated a link between hunger and the risk of political unrest and conflict. Better food security and nutrition improve women's empowerment by improving the status of women and lowering their risk of negative impact from emergencies or conflict. Studies also found reductions in individual and household-level violence, including intimate partner violence, with improvements in hunger and malnutrition, as well as reduced likelihood of criminal activity and increased self-control.

Improved food security and nutrition also improves education outcomes, including school enrollment, grade attainment and completion, as well as academic achievements. Several studies found the positive impact of food security and nutrition to be greater for girls.

### *Gaps*

One of the gaps in the current research is cost-benefit analyses for investments in different pathways for improving nutrition, such as women's empowerment and crop and dietary diversity, which are omitted from many cost-benefit analyses. Moreover, the review found no studies that incorporate social benefits of increased social stability and reduced crime and interpersonal violence in CBRs. Additional comprehensive country-level studies could also bring further insight for national contexts.

Another key gap is that the evidence on the various areas of benefit is scattered. Bringing together the economic, health, and social benefits within a single framework or study could be helpful. Furthermore, much of the economics and some health literature convert the wide-ranging benefits of ending hunger and malnutrition into CBRs or DALYs. Doing so makes sense analytically, but masks some of the benefits achieved along the way—for example, ending Vitamin A deficiency would end a form of night blindness, which may be worth noting separately from DALYs saved from ending undernutrition in aggregate.