



# Nutrition Knowledge and Women's Empowerment Improve Child Nutrition Outcomes in Rural Ethiopia

*Mequanint B. Melesse*<sup>1</sup>

January 2021/No.CRAf003

## Context

Ending malnutrition in its various forms is a key policy challenge for national and international development efforts. The long-standing approach to ending malnutrition in poor countries has had its focus primarily on improving the availability and affordability of food (Popkin, 2014; Maestre et al., 2017). However, while increased food production is required for food availability, it does not in itself guarantee that poor and vulnerable people have access to enough food, nor does the gross quantity produced say much about the

---

1 mequanintbis@gmail.com; International Crops Research Institute for the Semi-Arid Tropics (ICRISAT); Nairobi, Kenya

quality or nutritional value of people's diets. As a result, poor nutrition outcomes are not always the result of resource constraints but also of other factors related to poor consumer food choice behaviours and eating practices. One such widely acknowledged factor is women's role in improving children's nutrition outcomes. Women are more likely than men to invest in children's well-being, and generally, income and other resources controlled by women tend to wield strong effects on health and nutrition outcomes (World Bank, 2012; Malapit and Quisumbing, 2015). The Ethiopian government has long started taking policy measures to improve women's empowerment. Two recent such policies are the joint household land certification and reform in the country's family code. Both policies seek to improve the status of women by emphasizing and strengthening gender equality and non-discrimination based on gender.

## The problem

Malnutrition in its various forms is a major global challenge with huge social and economic costs (Gillespie and van den Bold, 2017). Children are the most nutritionally challenged group due to their special dietary requirements for growth and development. Globally, malnutrition in some form is a cause of 45% of all deaths of children under five (Black et al., 2013). In Ethiopia, children consume diets that are least diversified and lack nutrients essential for growth and development. With 38% of children under five years stunted, Ethiopia has one of the highest levels of chronic child undernutrition in the world (CSA, 2017). Addressing the state of this poor malnutrition requires multi-approach and cross-sectoral interventions. Recently, the Ethiopian government has made remarkable progress in mainstreaming nutrition across different sectors, including agriculture, health, and rural development. The National Nutrition Programme (revised in 2008, 2013, 2016) and the Nutrition-sensitive Agriculture Strategy emphasize multi-sectoral, multi-approach and multi-stakeholder strategies and intervention to address the challenge of severe malnutrition in the country. Both policy documents have stressed the role of women in improving household nutrition outcomes. The National Nutrition Programme emphasizes that lack of control of women over household resources, time, knowledge, and social support networks constitute a major barrier to improving poor nutritional outcomes in Ethiopia. The Nutrition-sensitive Agriculture Strategy also highlights women's empowerment and knowledge as an important impact pathway through which agricultural policies and interventions can yield better household nutrition outcomes. However, empirical evidence backing the role of women in improving household nutrition outcomes is lacking in Ethiopia. Particularly, research is needed on the effects of women's nutrition knowledge and empowerment—important impact pathways—on malnutrition to inform interventions that can improve women's role in household nutrition.

## Background

This study seeks to provide rigorous empirical evidence on independent and interacted effects of women's nutrition knowledge and empowerment on children's nutrition outcomes in rural Ethiopia. Nutrition knowledge is a key determinant of nutrition and health outcomes as ideas about what is healthy or good can influence food choices and consumption. If women do not understand the importance of providing children with certain foods, or if they perceive healthy foods to be harmful, they will not provide these foods to their children even when they are available in the household. For example, mothers in rural Ethiopia do not feed young children with vegetables because vegetables are perceived to be difficult to digest, leading to stomach illnesses (USAID, 2011). Some mothers also do not feed young children meat or other animal-source foods, as they believe that children cannot digest them (Alive and Thrive, 2010). Mothers with better nutrition knowledge are more likely to make healthful food choices, allocate food efficiently within the household by getting it to those who need it most, and increase efficiency in food purchases in markets. However, women need the agency—decision-making power within the household—to translate nutrition knowledge into food choice and dietary behaviour. Mothers in many rural areas are frequently not the decision makers, and rarely the sole decision makers with respect to health and nutrition of their children, which is likely to be a limiting factor on the effectiveness of nutrition knowledge. Empowering women can benefit nutrition by enabling women to negotiate for women's role in food production and use of income, women's control over household resources and other household decisions, and women's employment as a source of income.

The analysis was based on primary survey data collected from three districts of the Amhara regional state in Ethiopia. The data covered 486 children between 6 and 60 months of age from 412 rural households. The key nutritional outcomes of interest are child dietary diversity—number of food groups consumed, and stunting—an anthropometric measure. While child dietary diversity is a short-term nutrition outcome, stunting reflects long-term nutritional outcomes. Mothers' nutrition knowledge is assessed through nine statements about appropriate infant and young child feeding practices. The measurement of women's empowerment involves seven relevant domains of household decision-making: (i) household decisions about agricultural production; (ii) power in non-agricultural household decisions; (iii) access to and decision-making power about productive resources; (iv) control of use of income; (v) leadership in the community; (vi) freedom of physical mobility and autonomy (including attitudes toward verbal and physical abuse); and (vii) time allocation. An overall women's empowerment index is constructed based on all domains of empowerment. The instrumental variables (IV) approach is used for causal inference by addressing the potential endogeneity of mother's nutrition knowledge and empowerment.

## Results

The average child consumed about three food groups out of seven food groups. This suggests that the child dietary diversity in the study districts is lower than the World Health Organization (WHO) recommended minimum dietary diversity of four food groups. Also, about 35% of the children in the sample were stunted. The rate of stunting is relatively lower in the study districts than the national average of about 38%. Stunting is affected by a range of factors, including water, sanitation and hygiene (WASH) and other environment-related factors. It is the result of chronic or recurrent undernutrition, usually associated with poverty, inappropriate feeding and poor care in early life. As a result, the lower stunting rate in the study districts may be a result of interactions of a multitude of factors.

It was found that nutrition knowledge and women's empowerment lead to significant improvements in child nutrition outcomes. Specifically, improving a typical woman's nutrition knowledge to the level of the most knowledgeable woman in the sample (knowledge score = 2.2) would result in a 2.36 food group increase in children's diets and a 2.72% decrease in the likelihood of a child being stunted. Similarly, improving a typical woman's overall empowerment to the level of the most empowered woman in the sample (overall empowerment score = 2.27) would result in a 1.11 food group increase in children's diets and a 1.22% decrease in the likelihood of a child being stunted. The interaction between nutrition knowledge and women's empowerment is significantly correlated with stunting. Specifically, improving a typical woman's nutrition knowledge and overall empowerment to the level of the most knowledgeable and empowered woman would further decrease the likelihood of a child being stunted by 0.63%. However, the interaction between nutrition knowledge and empowerment is not related with child dietary diversity, perhaps suggesting its relevance for long-term child nutrition outcomes rather than for short-term outcomes. Child dietary diversity (i.e. food groups) is measured using the 24h recall approach that reflects dietary behaviour in a single day. It is highly likely to be determined by available resources and choice options in that specific day. However, stunting reflects the cumulative long-term effects of undernutrition and infections since and even before birth. Therefore, stunting is a nutritional outcome that better reflects the importance of nutrition knowledge and decision-making power of child caregivers, and their strategic interaction over a long-time.

A disaggregated analysis of domains of empowerment reveals that women's empowerment in agricultural household decisions and access to and control of resources are the most promising domains for improving child nutrition.

## Implications for policy

The findings of this study have important implications for programmes and interventions geared towards improving children's nutrition outcomes. Overall, policy makers and programme implementers need to ensure that efforts to improve children's nutrition in rural Ethiopia are complemented by efforts to improve women's nutrition knowledge and empowerment. Notably, results related to nutrition knowledge point to a role for behaviour change communication interventions in improving dietary quality and hence children's nutrition outcomes. The findings related to empowerment suggest that interventions (e.g. joint land titling programmes and family law reforms for gender equality) not only increase women's empowerment but can also improve household nutrition outcomes. Furthermore, while overall empowerment remains important, the domains of power in agricultural household decisions and access to and control of economic resources are the most promising areas for policy intervention. However, the importance of the different domains and indicators of women's empowerment may vary in different settings as dietary choices are deeply embedded in social norms, cultural values and religious beliefs. As a result, the results of this study should not be simply generalized to other contexts—their external validity may be limited.

## References

- Alive and Thrive (eds). 2010. *IYCF practices, beliefs and influences in Tigray region, Ethiopia*. Addis Ababa, Ethiopia.
- Black, R. E., Victora, C. G., Walker, S. P., Bhutta, Z. A., Christian, P., de Onis, M. and Ezzati, M. 2013. "Maternal and child undernutrition and overweight in low-income and middle-income countries. *Lancet*, 382: 427.
- Central Statistical Agency - CSA of Ethiopia. 2017. Ethiopia Demographic and Health Survey 2016. Addis Ababa, Ethiopia.
- Gillespie, S. and van den Bold, M. 2017. "Agriculture, food systems, and nutrition: Meeting the challenge. *Global Challenges*, 1.
- Maestre, M., Poole, N. and Henson, S. 2017. Assessing food value chain pathways, linkages and impacts for better nutrition of vulnerable groups. *Food Policy*, 68: 31–39.
- Malapit, H. J. L. and Quisumbing, A. R. 2015. "What dimensions of women's empowerment in agriculture matter for nutrition in Ghana? *Food Policy*, 52: 54–63.
- Popkin, B.M. 2014. "Nutrition, agriculture and the global food system in low- and middle-income countries". *Food Policy*, 47: 91–96.
- USAID. 2011. Integration of nutrition education into the Ethiopia urban gardens programme: Results of recipe trials and focus group discussions. Edited by USAID: Infant & Young Child Nutrition Project. Washington DC.
- World Bank. 2012. *World Development Report 2012*. Washington, DC.



## Mission

To strengthen local capacity for conducting independent, rigorous inquiry into the problems facing the management of economies in sub-Saharan Africa.

The mission rests on two basic premises: that development is more likely to occur where there is sustained sound management of the economy, and that such management is more likely to happen where there is an active, well-informed group of locally based professional economists to conduct policy-relevant research.

[www.aercafrica.org](http://www.aercafrica.org)

## Learn More



[www.facebook.com/aercafrica](https://www.facebook.com/aercafrica)



[www.instagram.com/aercafrica\\_official/](https://www.instagram.com/aercafrica_official/)



[twitter.com/aercafrica](https://twitter.com/aercafrica)



[www.linkedin.com/school/aercafrica/](https://www.linkedin.com/school/aercafrica/)

## Contact Us

African Economic Research Consortium  
Consortium pour la Recherche Economique en Afrique  
Middle East Bank Towers,  
3rd Floor, Jakaya Kikwete Road  
Nairobi 00200, Kenya  
Tel: +254 (0) 20 273 4150  
[communications@ercafrica.org](mailto:communications@ercafrica.org)