

Food and nutrition security in East Lombok

Nicholas MINOT, Husnul MAAD, Arti INDALLAH, Mei TATENKENG,
Mohammed TAQUIDDIN, Samson DEJENE, and Rachel HUANG

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INTRODUCTION

In recognition of the persistent problem of child stunting in Indonesia, the government has launched a program to reduce child stunting, targeting 100 districts and cities including East Lombok. Within East Lombok, 10 villages were identified for priority action. The district government requested assistance from the SNV Voices for Change Partnership (V4CP) to gather information on these ten villages. KONSEPSI and SNV implemented the survey with technical support from the International Food Policy Research Institute (IFPRI). This report provides the results of a household survey covering these ten villages in East Lombok.

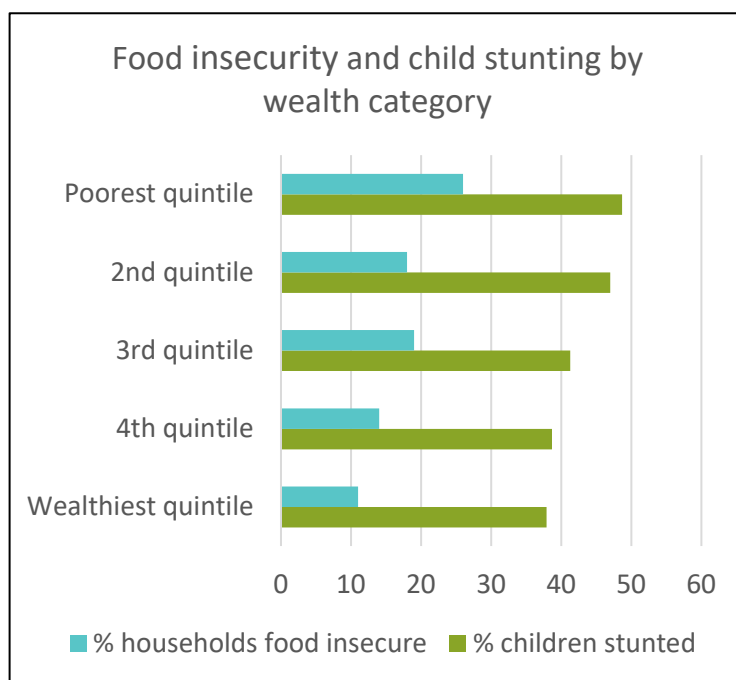
METHODS

This questionnaire covered characteristics of household members, housing and assets, water and sanitation, use of safety net programs, and child nutrition. The sample includes all households with at least one child less than ten in ten villages of East Lombok, Nusa Tenggara Timur. The ten villages were targeted by the Presential National Action Plan to reduce child stunting. The survey was carried out in May-June 2018 and covered 2,725 households and 2,843 children under the age of five. The data were collected through face-to-face interviews with trained enumerators using tablets programmed with the questionnaire design. The height (or length) and weight were measured for all children under the age of five.

RESULTS

One of the main findings of the study is that poverty is a strong risk factor for both food insecurity and child stunting. This type of study cannot prove that poverty *causes* child stunting, but it seems likely given the fact that low-income households cannot afford the quality and quantity of food needed for good nutrition, are less likely to have access to safe water and improved sanitation, and may have less access to quality health care and medicine. One implication of this result is that *effective, well-targeted, and well-funded safety-net programs will help to reduce child stunting.*

This study examined three safety net programs. The Rastra program is designed to provide 10-15 kg of rice at subsidized prices to low-income. Our survey indicates that poor households are more likely to receive Rastra rice than wealthier households, but one-third of the wealthiest 20 percent of households in the sample received Rastra rice. We realize that identifying and helping only the neediest households is not an easy task, *the government should improve efforts to target Rastra rice at the poorest households and avoid leakage to non-poor households.* In addition, the survey found that beneficiaries receive, on average, just 6 kg



of rice per month instead of 10-15 kg per month. This same issue was found in our survey of NTB and NTT (Minot et al., 2018a and 2018b), as well as other studies. *The government should study the Rastra program to identify and correct the problem of leakage that results in small quantities being distributed to each household.*

The study also examined the PKH conditional transfer program. Similar to Rastra, the PKH program is somewhat targeted at low-income households, but there seems to be a significant number of beneficiaries who are relatively wealthy, according to our wealth index. In addition, the amount of the transfer seems to vary substantially across households and across villages. This implies that *the government should improve the targeting of the PKH program to low income households.* In addition, *it should standardize the monthly payments or at least make transparent the method of calculating monthly payments.*

The BKM program provides scholarships to cover the cost of secondary education. Although the program is not aimed at improving nutrition, by relieving the burden of educational costs for poor households, it has the potential to allow families to spend more on food. In theory, the program is targeted at poor households, but we find no relationship between wealth and the likelihood of receiving a BKM scholarship. In light of these results, *the government should consider either focusing the benefits of the BKM program on low-income households or discontinuing the program.*

Low birthweight is a strong predictor of child stunting. As mentioned above, having a low birthweight increases the risk of stunting by almost 50 percent. Since low birthweight is caused by poor nutrition and health of pregnant women, this implies that *continuing and expanding antenatal programs to improve the nutrition and health of expecting mothers will reduce low birthweight and child stunting.* It also implies that *there is value in targeting low birthweight children for additional postnatal assistance in nutrition and health.*

This study finds that households with improved water sources are less likely to have stunted children than those using unimproved sources, though this result loses its statistical significance when we include wealth and other covariates. This could be explained by the fact that “improved source” is only roughly correlated with water safety: not all “improved” sources are actually clean and some “unimproved” sources may be acceptable. In addition, water treatment such as boiling may make unimproved water safe.

Although 76-80 percent of East Lombok households have access to improved sources of water, the percentages is as low as 50 percent in some villages. Therefore, *efforts to improve access to improved sources of water should focus on villages in with low access and villages with high incidence of diarrhea.*

The sanitation conditions facing a household depend on many factors, including the type of toilet, sanitation among neighbors, proximity of toilets and water sources, ownership of livestock, and sanitary precautions. This probably explains why this study did not find a statistically significant difference in child stunting between households with and without improved sanitation, defined as a toilet with septic tank. *Given the large variation in sanitation access the ten villages, efforts by the government and development partners should focus on villages with low access to improved sanitation.*

Factors associated with stunting in children under 5 years of age

Factor	Results
Gender	Girls have stunting rates 5 percentage points below those of boys.
Age	Children ages 1-4 have stunting rates 14-24 percentage points above those of infants less than a year old.
Wealth quintile	The stunting rate for children in households in the top 60% in terms of wealth is 7-10 percentage points lower than children in the bottom 40% in terms of wealth.
Birthweight	Children with low birthweight (under 2.5 kg) have stunting rates 18 percentage point higher than children with normal birthweight.

Source: Based on logit regressions analysis of 2,665 children under the age of five. All results statistically significant at the 5% level.

This study did not find an association between improved water, sanitation, and hygiene (WASH) and reduced stunting. Putting these results in context, international research on the effect of improvements in WASH on stunting is mixed. One study combining data from 171 Demographic and Health Surveys found relationships between improved water and sanitation on the one hand and lower stunting on the other (Fink et al., 2011). A study of survey data in Indonesia found that households with both untreated water and poor sanitation had higher rates of child stunting (Torlesse et al., 2016). An analysis of the Indonesia Family Life Survey concluded that children living in communities where open defecation was less common had lower stunting rates, after controlling for income and other variables (World Bank, 2017). In a review, Prendergast and Humphrey (2017) identify seven other studies that find an association between WASH and lower stunting. On the other hand, three recent large-scale randomized control trials in Bangladesh, Kenya, and Zimbabwe focused on measuring the effect of WASH improvements failed to find a significant impact on stunting (Humphrey et al., 2019; Luby et al., 2018; Null et al., 2018).

These results have led to some hypotheses to explain the difficulty of finding a causal link between WASH improvements and lower stunting. One possibility is that WASH improvements have non-linear effects. For example, reducing open defecation from 50 percent to 20 percent may have little effect, but perhaps a reduction from 20 percent to 10 percent does. Second, perhaps our indicators are not good measures of the true quality of water and sanitation. If piped water is as contaminated as open-well water, then we cannot expect “improved water sources” to be associated with lower stunting. Third, it may be that sanitation at the household level is less important than community sanitation, as suggested by the World Bank (2017) study in Indonesia. For example, children in a household with an improved toilet may be exposed to contaminants in a neighbor’s yard. *If so, an implication would be that WASH programs need to focus on community-level improvements in sanitation and water quality to improve child nutrition.* In the end, there remains a consensus that investments in WASH have a high return in terms of the incidence of diarrhea and other health outcomes, even if questions are being raised about the link with stunting.

Our study found that 18 percent of the sample households reported a period of food shortage in the previous 12 months. The most common period was from January to March, just before the main harvest. *One implication is that the government and development partners should consider seasonal variation in the benefits provided by the safety net programs, particularly Rastra and PKH.* In addition, the results indicate that borrowing money to purchase food is the most common response to food shortage. Additional research could examine the source of these funds, the terms of the credit, and whether poor households fall into “debt traps”.

With regard to antenatal and postnatal care, the study finds relatively high levels of compliance with recommended practices such as antenatal visits to the health clinic, tetanus injections, iron supplements, blood and urine testing of expecting mothers, early breastfeeding, and so on. Although the overall compliance is high, there are some weak points. For example, the share of expecting mothers getting blood and urine testing was only 85 and 80 percent, respectively. In addition, about 40 percent of mothers whose children had suffered from diarrhea in the previous two weeks did not know that the child should be given additional fluids during this time. Furthermore, in some cases, the overall average was high, but some villages were underperforming. *The government and development partners should focus efforts in increasing compliance with recommended practices, which may imply health education and/or better funding of health clinics, particularly for villages that are underperforming and for procedures where compliance is less than 90-95 percent.*

Finally, it is important to keep in mind that most child stunting in East Lombok is occurring outside these ten villages. Even if the rates of stunting are higher in these ten villages than elsewhere, they represent a small portion of the population of East Lombok, which is about 1.2 million inhabitants. *The ten villages should be used as a pilot for testing interventions to improve child nutrition, but the successful interventions will need to be scaled up to the entire district to have a substantial effect on district-wide stunting rates.*

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About the Authors

Nicholas Minot is a Senior Research Fellow, **Samson Dejene** is a Research Analyst, and **Rachel Huang** is a former Research Assistant at the International Food Policy Research Institute (IFPRI). **Husnul MAAD** is the V4CP country director for SNV/Indonesia, **Arti INDALLAH** is the Food and Nutrition Security Advisor for SNV/Indonesia, and **Mei TATENGKENG** is the Monitoring and Evaluation Advisor for SNV/Indonesia. **Mohammed TAQUIDDIN** is the Director of KONSEPSI.

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- 1201 Eye Street, NW - Washington, DC 20005-3915, USA
- Tel: +1-202-862-5600 | Fax: +1-202-862-5606

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