Associated Factors Contributing to **Child Stunting in Yemen**[1]

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Malnutrition is part of a vicious cycle involving associated underlying factors, which means that undernourishment is related not only to biological but also social aspects. As the causes of child malnutrition are complex, there are several models explaining its determinants. We have adapted the conceptual framework developed by Hien and Hoa (2009), which provides a way of understanding how different factors affecting child malnutrition may be connected. This framework allows us to verify how distal factors may operate through intermediate and proximal factors to affect children's nutritional status, so that the characteristics associated with child malnutrition in Yemen are disaggregated into three groups:

- distal factors, indicated by socio-economic variables such as region of residence, mother's education, and access to land;

- intermediate factors, including availability/use of water/soap for washing hands, protein intake and factors related to the mother's health; and

- proximal factors, such as incidence of disease, and age and sex of the child.

De Souza (2015) assesses child stunting in Yemen, given that nearly two fifths of Yemeni children (1.1 million children) are stunted. These results are based on the fourth round of the National Social Protection Monitoring Survey (NSPMS) in Yemen; within this round, data were collected over three months, from July to September 2013.

As our dependent variable is a dummy variable for stunting, in which 1 means the child is stunted and 0 means the child is not stunted, we estimate a logistic model. The figure shows our main results. For the complete list of the dependent variables and a detailed interpretation of the findings, please refer to de Souza (2015).

First, all odds ratios are below 1, which means that after controlling for a set of confounding factors, each characteristic reported in this graph operates to reduce child stunting compared to the reference category.[2] For instance, a child living in the Arabian Sea coastal area has an 89 per cent lower probability of being stunted than a child living in the mountainous area of the country. By the same token, eating protein would lead to a 13 per cent lower probability of stunting relative to not eating protein. The remaining characteristics represent reductions in the likelihood of being stunted that are between these values. In general, we found that higher nutrition and education levels of mothers, access to land, eating protein, having good hygiene practices, owning a refrigerator, living in the Arabian Sea coastal area, and not being sick are factors strongly associated with a lower likelihood of child stunting in Yemen.

Odds ratios showing the strength of the association between each of the main risk factors investigated and child stunting, Yemen, 2013
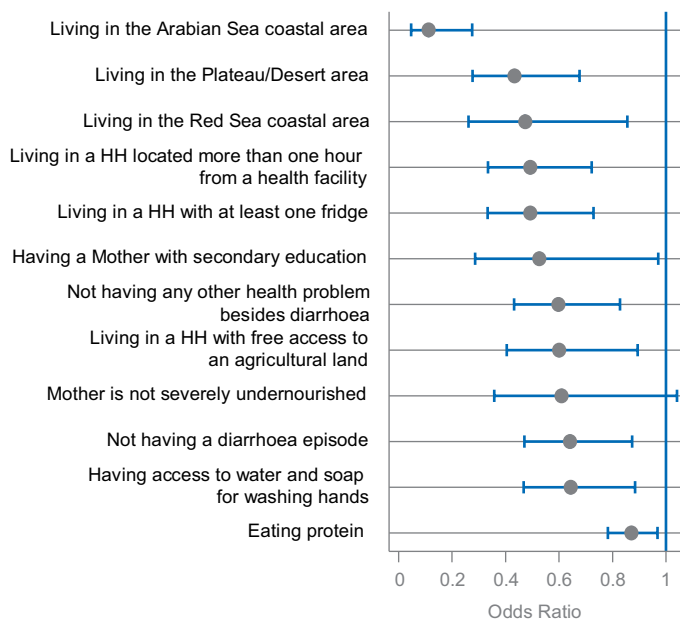
Source: NSPMS (2012–2013), round 4.   ● Point estimate ├── 95% conf. int.

To improve the nutritional status of Yemeni children, factors which are significantly associated with stunting should be addressed. First, the correlation between regions of residence and prevalence of child stunting could be reduced by putting in place culturally suitable policies to promote adequate food intake; these need to apply not only to the children but also to their mothers (especially while nursing). Such interventions, together with policies aimed at changing attitudes towards women's education, would also help to promote proper child feeding practices. Furthermore, pro-poor programmes should be implemented to reduce the positive association between household wealth and the likelihood of a child being stunted.

References:

de Souza, L.R. (2015). 'Stunting Among Children in Yemen: Prevalence and Associated Factors', *IPC-IG Working Paper,* No. 133. Brasília, International Policy Centre for Inclusive Growth.

Hein, N.N. and N.N. Hoa (2009). 'Nutritional status and determinants of malnutrition in children under three years of age in Nghean Vietnam', *Pakistan Journal of Nutrition*, 8(7): 958–996.

Notes:

1. This One-Pager is based on the IPC-IG Working Paper No. 133, 'Stunting Among Children in Yemen: Prevalence and Associated Factors'.

2. The only variable positively associated with child stunting is their age. As stunting is caused by long-term insufficient nutrient intake and frequent infections, children should be watched at all ages. This is why we did not highlight this outcome among our main findings.

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