

Local Sustainable Food Gardens and Childhood Undernutrition: Evidence from Mombasa Kenya

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INTRODUCTION

This paper reports on a longitudinal study of the impact of Participatory Action Research (PAR) on child undernutrition in an informal settlement in Mombasa, Kenya. PAR group membership included government sectors, municipal council, civil society and the community. The aim was to develop, implement and evaluate small scale co-ordinated interventions to change the social determinants of undernutrition. One of the main joint activities was to promote urban farming in the intervention area, relatively far from the main market in Mombasa. Child undernutrition was measured at baseline in July 2011 and again in June 2013.



METHODS

The PAR group was facilitated through three, bi-annual cycles of review, planning, action and reflection meetings with monthly follow-ups supported from the junior researcher who monitored group activities and learning.

Baseline surveys of nutritional and socio-economic status were carried out in an intervention and matched control area (Chaani and Kongowea respectively). Achieved sample sizes were In 2011, 213 boys and 176 girls in the intervention area and 208 boys and 229 girls in the control area; in 2013, 220 boys and 256 females in the intervention area and 268 boys and 255 girls in the control area.

Stunting rates are calculated using the WHO standard software. Tabulations and multivariate modeling of difference-in-difference in severe and moderate stunting was carried out with rather unexpected results.



Accordingly, based on responses to other sections of the household questionnaire, we examined changes between 2011 and 2013 in social determinants of health that possibly differentiated between the intervention and control areas, specifically in terms of employment, food distribution and consumption, food security, income and population change.

FINDINGS AND INTERPRETATIONS

Rates among 24-59 month old children measured in the two slum areas in Mombasa in 2011 were higher than the 2009 national rates. Severe stunting was about 18% for boys and 13% for girls with both rates higher – but not by much - in Chaani. In 2013, severe stunting was about 12% for boys and 10% for girls with both rates higher in Chaani.



The difference-in-difference is a 1.9% drop in Kongowea for males and a 0.9% drop for females relative to Chaani; the changes are similar and certainly not statistically significant; however, there were larger drops in moderate stunting in the control area, although the difference is only statistically significant for females.

An exploration of the reasons for this unexpected result revealed negative changes in employment, food security, income and population change, with Chaani suffering more than Kongowea. Economic collapse followed closure of the Export Processing Zones in Chaani which had provided vital employment. Residents became petty traders and had increased access to fresh vegetables from the urban farming (and income from selling surplus produce) but could not afford complete meals and resorted to coping mechanisms. Kongowea was closer to the city centre and tourist hotels provided ongoing employment. ■