Maternal Participation in a Nutrition-Sensitive Agriculture Intervention Matters for Child Diet and Growth Outcomes in Rural Ghana

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Objectives: Little is known about how level of participation affects nutrition outcomes in rural interventions. This study examined the association between participation level in a nutrition-sensitive agriculture intervention (NSA) and children’s diet and anthropometric outcomes.

Methods: The Nutrition Links was a 2016–17 cluster RCT (clinicaltrials.gov NCT01985243) which enrolled caregivers with children < 18 mo in rural Ghana. Women in the intervention communities self-selected to receive poultry layers for egg production as part of a loan package, garden inputs, and nutrition education. Weekly meetings were used for education, for the staff to document egg production, and for the women to repay their loan and purchase feed. After endline, project participation was evaluated with a summative score that reflected 5 criteria: 1) egg productivity 2) timely and complete payment for feed and loan 3) meeting attendance 4) answering questions and making comments during the meetings and 5) attentiveness and helpfulness with the group. The field staff evaluated all criteria – from 1 (very poor) to 5 (excellent) – for each intervention woman who received poultry. Their participation was classified as high, medium, or low, based on tertiles. The participation of intervention women who never received poultry was ‘none’. Logistic and linear regressions tested the likelihood of consuming eggs and having a minimum diverse diet (MDD) and changes in anthropometric indices for the participation levels compared to those of the controls, who received standard-of-care services.

Results: In comparison to the control group, only a high participation level was significant for having a MDD (aOR = 3.1, 95% CI [1.1, 8.8]). Both medium and high participation levels were associated with an increased likelihood in egg consumption (aOR = 2.1, 95% CI [1.0, 4.1]; aOR = 2.7, 95% CI [1.3, 5.4]), and length-for-age (LAZ)/height-for-age (HAZ) z-scores (β = 0.4, 95% CI [0.2, 0.6]; β = 0.4, 95% CI [0.2, 0.7]), and weight-for-age (WAZ) (β = 0.2, 95% CI [0.0, 0.4]; β = 0.2, 95% CI [0.0, 0.5]), respectively.

Conclusions: These results show the potential effect of NSA interventions and highlight the importance of facilitating high participation of beneficiaries.

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