

Impact Evaluation of a Community Nutrition and Livelihood Program on Child Nutrition in Rural Bangladesh

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Objectives: Child undernutrition remains high in Bangladesh. Multi-sectoral approaches involving livelihood programs are needed to address the burden of undernutrition. This study examined the impact of an economic development (ED) program receiving poultry assets with/without gardening training added to the Positive Deviant (PD)/Hearth program in rural Bangladesh, compared to the PD/Hearth only (PDH), on child nutrition and health.

Methods: A total of 1,125 children aged 6–13 months with weight-for-age (WAZ) z-score < -1.0 who attended PD/Hearth sessions in September – November 2018 were enrolled in a cohort group in July – August 2019 for the program evaluation. Out of them, 532 were from ED households (PDH/ED). The cohort group was re-assessed in November 2020. A year of program impact between 2019 and 2020 on

food security, dietary quality, and health behaviors, accounting for the socio-economic differences between two groups, was estimated using a difference-in-differences approach.

Results: The prevalence of underweight in the PDH and PDH/ED group decreased to 18.6% and 24.7% ($p = 0.02$) in 2019, but increased to 47.7% vs. 56.2% ($p = 0.003$) in 2020 without significant difference in program impact by adding the ED. Compared to the PDH group, the PDH/ED group increased a child dietary diversity score by 0.32 score and minimum dietary diversity (defined as four out of seven food groups) by 13.7 percentage points (pp), and a maternal dietary score by 0.28 score. The PDH/ED increased the proportion of food secured households by 12.6 pp, diversified crop production for banana (9.7 pp), papaya (11.7 pp), carrot (3.8 pp), and lemon (5.9 pp) (all $p < 0.05$), compared to the PD group. The proportion of households having income $\geq 84,000$ Taka during the last year increased by 12.4 pp among PDH/ED group, compared to the PDH group ($p = 0.003$). There was no significant impact on child morbidity, maternal hand-washing practices.

Conclusions: Adding an ED program to the PD/Hearth program improved food security and dietary diversity among children and mothers in rural Bangladesh.

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