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Impact of implementing multi-component health and nutrition education as a sustainable model of intervention for improving nutritional status of vulnerable population in India

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Undernutrition among under five children in India is a major public health problem[1]. There is a paucity of evidence on improvement in malnutrition status after follow-up intervention among malnourished under-five children[2]. This multi-centric task force study was coordinated by Indian Council of Medical Research, Ministry of Health and Family Welfare, Govt. of India on the directives of Planning Commission in 34 high burden districts in 20 States. The data presented here is for two districts (i.e. Gurgaon and Faridabad) covered in the State of Haryana. The objective of the study was to improve the nutritional status of vulnerable segment of population (pregnant women, adolescent girls and children) by implementing multi-component health and nutrition education as a sustainable model of intervention.

The study was prospective, pre and post intervention study. From each of the two districts covered, 10 villages were selected by PPS and 48 pre-school children, 24 pregnant women and 24 adolescent girls were covered in each village, making the final sample to be 960 pre-school children and 480 each of pregnant and adolescent girls in the two districts. During the formative research, information was collected on demographic and household. Further the knowledge, attitude, practice and perception of the beneficiaries about common nutritional disorders were collected. Based on the findings of the formative phase, intervention strategy was developed and implemented with the help of existing health personnel working in the area. Intervention was provided for 18 months following two different approaches: i) Home visits/Household intervention – households having target group respondents were covered; ii) Mass approach – visit in each village was made and intervention was imparted creating awareness and emphasizing behaviour change. An endline impact evaluation was done at end of intervention period.

The categorical data were presented as frequencies and percentages. The impact of intervention was assessed by comparing important indicators in pre and post intervention survey. Pearson's Chi-square was performed, as appropriate. A two-sided $P < 0{\cdot}05$ was considered statistically significant. Among pregnant women, percentage going for antenatal check ups (ANC) increased from 95.3% at baseline ($n = 466$) to 98.7% at post-intervention ($n = 475$; $p = 0.000284$). Further, institutional deliveries increased from 89.1% to 97.1% ($p < 0.000001$) and 70.1% of the mothers initiated breastfeeding within one hour of delivery as compared to 36.7% ($p < 0.000001$) at baseline. The consumption of Iron Folic Acid tablets during pregnancy (more than 90 tablets) increased from 50.2% to 53.9% ($p = 0.258$). The practice of exclusively breastfeeding upto 6 months increased from 39.2% at baseline to 69.1% ($p < 0.000001$) at post-intervention.

The study demonstrated that rigorous community intervention has the potential to bring behavior change at community level; however regular follow up and re-enforcement is necessary. The community health workers needs to be trained for sustainable behavior change intervention.

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