Nutrition education and child development: Does reiteration matter?

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Despite recent economic development, India has the highest prevalence of malnutrition among children in the world. Undernutrition, through its negative impact on child health and physical and psychological development, embeds into the life course of the individual to adversely impact child education, socioeconomic prospects in adulthood, and old age health. Past work has emphasized that providing adequate nutritional information to women during pregnancy and breastfeeding would help improve nutritional status of children under age five. Nutrition education has been a major component of the public-funded Integrated Child Development Program (ICDP) in India, which is catered towards the low income families.

In assessing the effect of nutritional education received by women on the nutritional status of children, it is necessary to understand how the intensity of this education is important to achieve its desired effects. Hence, the first research question addressed in this study is: Does repeated emphasizes of nutrition through nutrition education at two stages – during pregnancy and at the time of breastfeeding – has greater impact on child's development compared to education imparted during only one of the two periods or none at all? Next, we assess if despite repeated emphasis on nutrition through these education programs there exist gender differences in the development outcomes?

Using the 2005-2006 National Family Health Survey (a.k.a. Demographics and Health Survey for India) data on children and women, we will assess the above-mentioned research questions. The sample for the analysis constitutes 4,713 children from the population who are up

to 24 months of age at the time of interview and whose mothers received some kind of benefit through the ICHD program during their pregnancy or at the time of breastfeeding. Out of these 4,713 children, 50.9% are boys and 49.1% are girls.

The outcome measure for the study, malnourishment, is based on three separate variables: stunted (children below more than two standard deviations of reference population on height-for-age index), underweight (children below more than two standard deviations of reference population on weight-for-age index), and wasted (children below more than two standard deviations of reference population on weight-for-height index). The independent variables of interest are nutrition education imparted only during pregnancy, only at the time of breastfeeding, and during both pregnancy and breastfeeding periods. For the selected sample, mothers of nearly 56% children did not receive any nutrition education, 5.1% received only during breastfeeding, 15.7% only during pregnancy, and 24% during both periods. The control variables used for the study include the sociodemographic characteristics of the mother and child, household characteristics, and other variables that have been shown to impact child development by past research. Using child as the unit of analysis, logistic regression techniques will be used to estimate the hypothesized effects.

The findings of the study will assist in determining the extent to which nutritional education must be emphasized to women during pregnancy and breastfeeding to combat childhood malnutrition in India, and help build our understanding of how delivery of nutrition education programs is as important as their content and coverage.