

Public Health Nutrition

Birth Weight and Its Association with Maternal Nutrition and Socioeconomic Variables in Rural Bangladesh

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Objective: Examine the distribution of birth weight and its relationship with maternal nutrition and major socioeconomic variables.

Methodology: Between October 1995 and November 1996 at Matlab, 675 women, at 5-7 months' gestation period, were enrolled in a controlled dietary supplement intervention. Half of the women (n=341) received daily dietary supplement of 20 g soybean oil. Maternal nutrition status (weight, height, and MUAC) and socioeconomic variables (maternal education, parity, family size, household income, and land ownership) were measured at baseline, and infants' birth weights were taken within seven days of delivery. Gestational age was calculated from the last menstrual period. Analyses were conducted on 564 (83%) mother-infant pairs with complete data.

Results: Preliminary results showed no significant association between dietary supplement and mean birth weight or low birth weight. Mean (SD) birth weight for the entire sample was 2,520 (440) g, and the incidence of low birth weight was 47%. Maternal weight in mid- or late pregnancy, non-primiparity, and larger family size (>4) had significant positive association with birth weight. While short stature and primiparity were found to have significant negative association with low birth weight.

Conclusion: The findings suggest that small amount of calorie supplementation during pregnancy has no effect on birth weight in the study population. These results also suggest that poor maternal nutrition status, but not the socioeconomic status, is the major determinant of birth weight in rural Bangladesh.

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Determinants of Infant Growth in the Slums of Dhaka City: Size and Maturity at Birth and Breast-feeding

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Objective: Investigate the effect of low birth weight (LBW), intrauterine growth retardation (IUGR), prematurity, and breast-feeding on infant growth.

Methodology: The sample consisted of 1,654 infants born in selected slum areas of Dhaka city. They were enrolled at birth and followed up prospectively till their first birthday. Apart from repeated anthropometric measurements, the mothers were also interviewed for information on infant feeding and morbidity at each follow-up visit. Analytical techniques included correlation analysis and random effects regression for modelling infant growth.