Conclusion: To combat malnutrition, intersectoral programmes targeted toward poverty alleviation need to be undertaken. In addition, the whole family needs to be educated on the nutritional needs of pregnant women.

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Determinants of Haemoglobin Level during Pregnancy and Relationship with Pregnancy Outcome in Bangladeshi Urban Poor

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Objective: Investigate the determinants of haemoglobin (Hb) level during pregnancy and relationship with the pregnancy outcome in Bangladeshi urban poor.

Methodology: As part of a zinc supplementation trial, 559 women from Dhaka urban slums were enrolled between 12 and 16 weeks gestation. On enrollment, Hb and serum zinc levels were assessed. Anthropometric measurements (weight, height, and MUAC) were taken, and information was collected on reproductive history, socioeconomic status, and dietary intake, including the use of iron supplements. Women were prospectively followed up until delivery, and repeated Hb assays were performed at 7 months gestation.

Results: Mean Hb concentrations at enrollment and at 7 months gestation were 11.5±1.3 g/dl and 10.8±1.2 g/dl respectively ($p<0.001$) with 34.6% and 53.7% of the women classified as anaemic (Hb<11 g/dl) at baseline and at 7 months gestation respectively. Lower nutritional status (body mass index, MUAC, and serum zinc) and lower socioeconomic status were associated with lower Hb levels at baseline. The use of iron supplements was very low in this population: only 10 women (1.9%) reported to have taken iron tablets in the last 14 days, and no relationship between the use of iron tablets, and Hb levels was observed. The Hb levels at 4 months gestation were positively related to gestational length at birth as measured by LMP even after controlling for other possibly confounding variables. Birth weight, length at birth, infant chest-head and MUAC at birth were not related to the Hb levels at 4 months gestation. The Hb levels at 7 months gestation were not related to pregnancy outcome.

Conclusion: Anaemia in early pregnancy may be associated with a higher risk of prematurity based on LMP.

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