

## THE RELATION OF AGE OF ATTAINMENT OF MOTOR MILESTONES IN INFANCY TO FUTURE COGNITIVE AND MOTOR DEVELOPMENT

J. Hamadani<sup>1</sup>, F. Tofail<sup>1</sup>, F. Mehrin<sup>1</sup>, A. Hilaly<sup>1</sup>, S. Shiraji<sup>1</sup>, S. Huda<sup>2</sup>, S. Grantham-McGregor<sup>3</sup>

<sup>1</sup>Child Development Unit, ICDDR,B, <sup>2</sup>Institute of Nutrition and Food Science, Dhaka University, Dhaka, Bangladesh, <sup>3</sup>Institute of Child Health, University College London, London, UK

**Background:** It is difficult to assess children's development for evaluation of intervention programs or large surveys in developing countries and there are no readily available tools.

**Objective:** To assess if mother's report of attained milestones were reliable and if motor milestones in infancy predicted future cognitive and motor development.

**Methodology:** This was a supplementation trial during pregnancy (MINIMat). Five milestones from WHO Multicentre Growth Reference Study were selected viz. Sitting alone, Standing assisted, Walking assisted, Standing alone and Walking alone. Mothers were given pictures and shown how to assess the milestones. field workers (FW) made monthly visits collecting mothers' report and assessing the same milestones. At 64 months children were assessed on Wechsler Preschool and Primary Scale of Intelligence (WPPSI) and Motor Assessment Battery for Children (MABC).

**Results:** There was a significant sex difference with girls attaining most milestones earlier than boys. The correlations between mothers report and FW report ranged from 0.93 to 0.95.

Controlling for possible confounders in multiple regression analysis, a difference of approximately three months in the age of walking was associated with an effect of 0.9 IQ points and 0.19 of a standard score of the MABC score. The sensitivity of all the milestones was low and less than half of the children with disability were identified.

**Discussion & conclusion:** Mothers reports of age of attainment of motor milestones was accurate, however, the predictive ability of milestones of future IQ or motor development at 5 years of age is too low to be useful.