

ABSTRACT FORM

Abstract Category: Oral Poster

1. GASTROENTEROLOGY

2. HEPATOLOGY

3. NUTRITION

Abstract Title: Role of stunting in early child development: findings from an urban Bangladeshi birth cohort

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Body of Abstract - (Aim/ Methods/ Results/ Conclusions):

Aim: To explore the difference in early child development (ECD) skills between stunted and non-stunted children in Bangladesh.

Methods: This was a cross sectional study which used data from a child cohort (n=265) followed from birth up to 24 months of age, living in an urban slum of Dhaka city. Nutritional status was assessed by measuring weight and height/length of the children monthly and z-scores were calculated using WHO growth standards. ECD includes cognitive development, motor activity and language and communication skills. A trained psychologist unaware of the child's nutritional status assessed ECD by using a questionnaire at 6, 15 and 24 months. Children's global intelligence level were assessed using the Bayley's Scales of Infant Development-III; language development using modified version of Mac Arthur's Communicative Development Inventory; quality of home environment using modified Infant/Toddler version of the Home Observation for Measurement of the Environment Inventory and temperament.

Results: About half of the study children were male (49%). At enrolment, about 18% of study children were stunted and majority of them were mildly stunted (82%). Stunting prevalence increased with age: 18%, 42% and 48% at 6, 15 and 24 months respectively. The children who were stunted at 6 months had significantly lower cognitive (p=0.02); fine motor (p=0.01); gross motor (p =0.003) and total motor (p =0.002) scores. The stunted children at 24 months had significantly lower developmental score: cognitive (p=0.02); gross motor (p<0.001); total motor (p=0.004); receptive communication (p=0.022); expressive communication (p=0.001) and total language (p=0.001) scores, than their counterparts. Severity of stunting was also significantly associated with concurrent developmental scores. Similarly, underweight and wasted children lagged behind than the non-malnourished children at the developmental level.

Conclusion: Early childhood stunting in urban Bangladesh is linked to poor developmental outcome. Therefore, effective interventions in early life to reduce the risk of stunting and investment in ECD program are needed to yield lifetime gain and sustainable improvement in Bangladesh.

Key Words:

Stunting; early child development; cohort; urban; Bangladesh