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Nutritional Surveillance Project

Summary Report on the Nutritional Impact of Sex-Biased Behavior



HKI/IPHN

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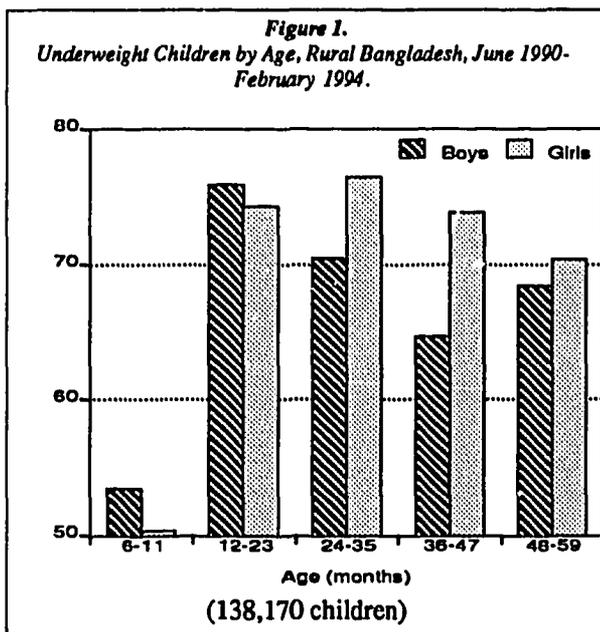
Summary Report on the Nutritional Impact of Sex-Biased Behavior

Considerable evidence exists that South Asian female children fare less well than male children during childhood in regards to health care, admissions to hospitals and in intra-household feeding decisions (1-7). The reasons for this bias against girls are complex, and often rooted in cultural practices which create disparities in educational and outside employment opportunities. The comparative discrimination against females in health and nutrition, starting in childhood is reflected in girls anthropometric status; the combination of the measurements of a child's weight, height, and mid-upper arm circumference with age, all provide direct evidence that girls are systematically worse off than boys. Definitions of the nutritional indicators used in this report can be found at the end of the document.

Helen Keller International has conducted the Nutritional Surveillance Project (NSP) in Bangladesh since April of 1990. Details of the methodology of this surveillance system have been detailed elsewhere (8). In brief, bimonthly cross sectional nutrition and socio-economic data is collected from 16 rural thanas (sub districts) of Bangladesh with approximately 8,000 children being surveyed each round. Strict quality control measures are in place and data quality has been found to be high. The following report summarizes some of the main sex based findings that the NSP has identified in Bangladesh since its inception.

Age

Figure 1 shows the percentage of underweight boys and girls by age in months. The nutritional status of both boys and girls gets dramatically worse between 6 months and one year of age with girls being slightly better off than boys until they reach 2 years. After this, boys' nutritional status starts to improve. Girls' underweight status continues to get worse until three years of age and then levels off



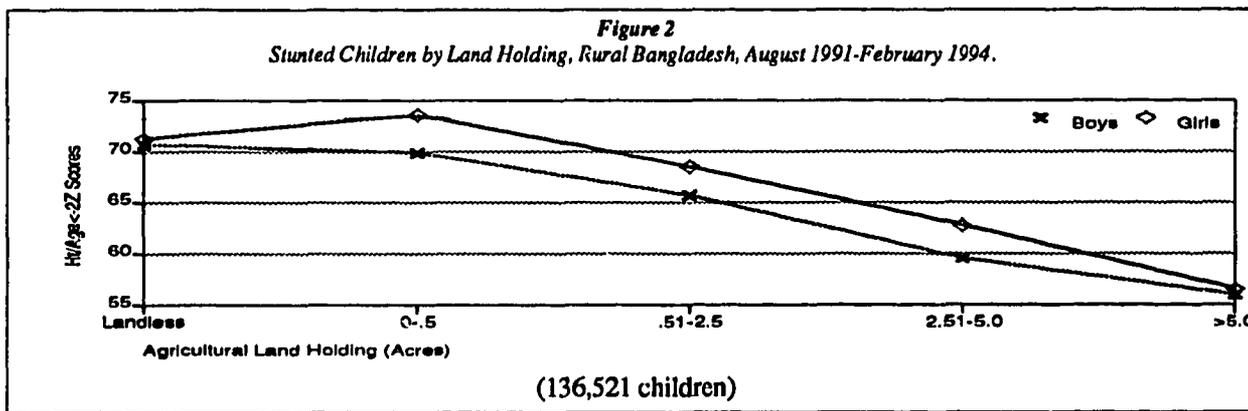
around 74%. These findings are similar when looking at stunting.

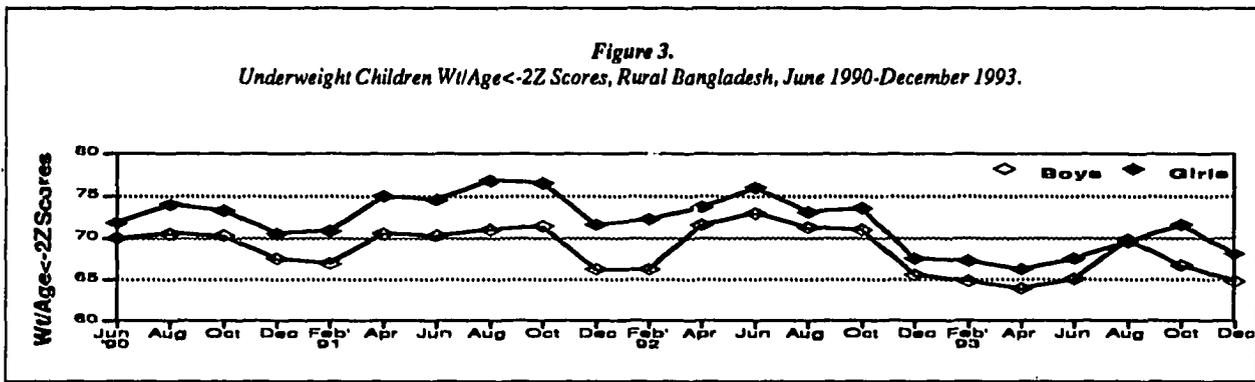
Landholding

In rural Bangladesh, landholding is a robust indicator of socio-economic status. The NSP routinely uses five categories of landholding (landless, 0-.5, .51-2.5, 2.51-5.0, >5 acres) with only the two higher categories being net grain producers. Figure 2 shows that while increases in landholding size have an overall positive impact on nutritional status, increases do not close the gender gap. The differences are smallest at the landless and large landholding categories and girls are consistently worse off than boys. Underweight shows similar patterns.

Longitudinal findings

The discrimination against girls is found consistently over time. Figure 3 shows the seasonality of nutritional status in Bangladesh. Girls and boys follow similar seasonal patterns but girls are always worse off than boys.





Mother's education

Much emphasis has been placed on the role of mother's education in increasing the health and well being of children. Clearly mother's education has a positive impact on the health of all children. However, as shown in Figure 4, mother's education does not reduce the gap between boys and girls. The promotion of "appropriate" education, which stresses the importance of the girl child, can play a key role in reducing sex differentials in morbidity and mortality (9).

Clearly sex biased behavior is not an isolated phenomenon. The nutritional impact of gender bias is evidenced by the anthropometric indicators in terms of season, age, landholding and mother's education. In depth analysis also shows that birth order is another important factor leading to sex discrimination. It is imperative that nutrition and comprehensive development programs not only treat the symptoms of undernutrition but also address the social attitudes and mores which lead to systematic gender discrimination.

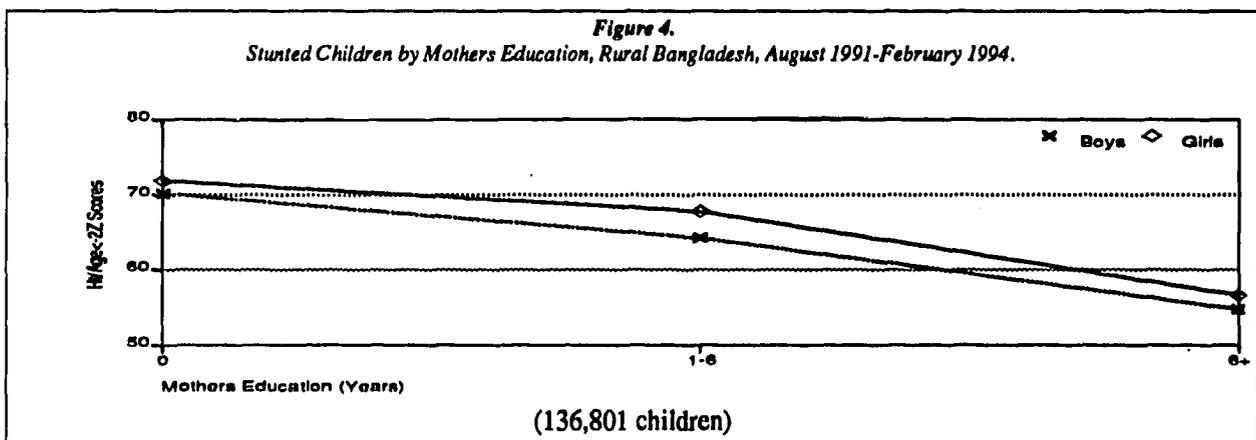
Notes: The following terms refer to children 6-59 months of age.

Stunting: The term is used in the text as shorthand to mean "the level of undernutrition as assessed by the prevalence of Ht/Age < -2 Z scores".

Undernutrition: The term is used in the text as shorthand to mean "the level of undernutrition as assessed by the prevalence of Wt/Age < -2 Z scores".

Z scores: A method of comparing a child's nutritional status with normal, well fed children using the internationally accepted NCHS reference tables. Undernutrition is defined as a Z score less than -2.

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Collaborating Organizations

Aga Khan Community Health Project (AKCHP)
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CONCERN
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