



THE IMPACT OF FEEDING CHILDREN IN SCHOOL: EVIDENCE FROM BANGLADESH

Akhter U. Ahmed

The Government of Bangladesh (GOB) devotes significant funding to incentives for rural families to send their children to school. The effort appears to be working: Today more than 90 percent of children eventually enroll in school, and few disparities exist between boys and girls. However, academic achievement is unsatisfactory, especially in primary schools. Hunger is a likely reason.

The School Feeding Program

In July 2002, in order to diminish hunger in the classroom as well as to promote school enrollment and retention rates, the GOB and the World Food Programme (WFP) launched the School Feeding Program (SFP) in chronically food-insecure areas of Bangladesh. SFP is the first effort in Bangladesh to provide incentives directly to primary-school children themselves, as opposed to cash or food to parents for sending their children to school.

They look like ordinary biscuits, but for more than a million Bangladeshi children, they may be a ticket out of malnutrition, illiteracy, and abject poverty.

The SFP provides a mid-morning snack of eight fortified wheat biscuits. One million children in approximately 6,000 primary schools receive the biscuits. The schools are located in highly food-insecure rural areas plus four slum areas in Dhaka City. At a cost of U.S. 6 cents per packet of eight, the biscuits provide 300 kilocalories and 75 percent of the recommended daily allowance of vitamins and minerals.

IFPRI's Evaluation

In late 2003, the International Food Policy Research Institute (IFPRI) conducted a comprehensive evaluation of the impact of the school feeding program. The study was commissioned by the United Nations University. Most of the program children had been eating SFP biscuits every school day for more than a year before the IFPRI surveys. Based on survey data, econometric models captured the impact of the SFP alone, isolating the effects of income and other factors.

Major Findings of IFPRI Research

The SFP significantly increases rates of enrollment and attendance, and reduces dropout. It has raised school enrollment by 14.2 percent and increased school attendance by 1.3 days a month. It has reduced the probability of dropping out of school by 7.5 percent.

The SFP also improves academic performance. Participation increases test scores by 15.7 percent. Participating students do especially well in mathematics. Students from urban slums do better in achievement tests than do students from rural areas, probably due to the difference in quality between urban and rural primary schools.

The SFP also substantially improves the diet of the children in the program. Energy (calories) consumed from SFP biscuits are almost entirely (97 percent) additional to a child's normal diet. In other words, the child's family does not give him or her less food at home for eating the SFP biscuits at school. These findings are based on a specifically designed experiment and an econometric model to assess the impact of SFP on children's energy intake.

The biscuits are the single most important source of vitamin A in the diet of program participants. After rice, they are the most important source of energy, protein, and iron. The average energy intakes of participating students are 11 percent and 19 percent higher in rural and urban slum areas, respectively, than in corresponding control areas.

Many participating students appear to share SFP biscuits with younger siblings and sometimes other household members. Sharing creates an interesting spillover effect: SFP biscuits account for 7 percent of total energy for children aged two to five in beneficiary households in the rural area.

The SFP improves child nutritional status: it increases the body mass index (BMI) of participating children by an average of 0.62 points. This represents a 4.3 percent increase compared to the average BMI of schoolchildren in the control group—a sizable increase that is partly due to the fact that most participating children were malnourished to begin with.

An extremely high percentage of mothers report several positive effects of the SFP on their children. They note that children's interests in attending school and concentration on studies have increased; they are livelier and happier than before, and their incidence of illness has declined.

"Let alone the grown-up children, my three-year-old daughter now wants to go to school for biscuits."
--A mother in a program village

Urban slums in Bangladesh are considerably underserved. SFP is the only national intervention that operates in urban slums—and it only covers four slum areas in Dhaka City. This evaluation shows that about half of all primary-school-age children in control, and 41 percent in program, urban slums do not go to school. The corresponding figures in rural areas are 15 percent and 6 percent. In control urban slums, only about half of those who enter primary school stay to complete it. In addition, children in urban slums have lower nutritional status (BMI) than children in rural areas.

Direct and opportunity costs of schooling are likely to be the main causes for children from poor households in slums not to attend school. Besides low enrollment and high dropout rates, urban slum children are threatened by violence and other social disruptions. Some of these threats can be mitigated if children can be drawn to school.

The study corroborates other recent literature in finding that a mother's education has a positive effect on her child's nutritional status as well as school enrollment and test scores. A mother's BMI is positively associated with child nutritional status: healthy mothers have healthy children.

The Way Forward

The encouraging findings of this study suggest that the SFP could well be scaled up to benefit many more Bangladeshi children—but care must be taken with targeting. To achieve maximum benefit for the cost, the program should cover those areas where undernutrition is a serious problem, school enrollment and attendance rates are low, and dropout rates are high. Urban slums, in particular, are promising areas for expansion.

The Primary Education Stipend Program—a cash-for-education incentive program—is already active throughout rural Bangladesh. For SFP expansion in rural areas, geographical targeting methods—such as Vulnerability Analysis and Mapping (VAM)—could be refined to better identify places with the highest concentration of underfed children and the lowest educational attainment.

March 2005

Contact: IFPRI • 2033 K Street, N.W. • Washington, D.C. 20006 • USA • www.ifpri.org
Akhter U. Ahmed • Email: a.ahmed@cgiar.org • Tel: (202) 862-8180
Carole Douglis • Email: c.douglis@cgiar.org • Tel: (202) 862-5631