Do Food Supplements Help Children in Times of Economic Crisis?

Good nutrition is a cornerstone of healthy child development, starting with conception through especially the first two years of life, when malnutrition can have an irreversible impact on growth and brain development. Without the right nutrition, children will face problems from the start in developing into healthy adults who can lead productive lives and have and raise healthy children. Making sure that children get enough food—and the right kinds of food—is particularly important during economic crises, when poor families may have to cut back on the amount and quality of food they consume, with children often suffering the most. But questions remain on how best to encourage proper nutrition. What steps can policymakers and development experts take when a financial crisis forces a country to cut back on social service programs and hurts families’ abilities to provide for their own needs? Should different age groups be targeted differently, and is there an optimal age group to focus on to get the most benefit from nutritional assistance?

The World Bank is working to ensure that good nutrition is recognized as an important part of healthy childhood development, a cornerstone of the Millennium Development Goals of eradicating hunger, protecting the health of pregnant women and reducing child mortality. To help policymakers better identify how to protect the health of these vulnerable populations, the World Bank supported a study of a program in Indonesia that gave young children special high-nutrition snacks. This supplementary feeding program, which ran from 1998 through 2001, during the East Asian financial crisis, reduced stunting in children aged 12 months to 24 months, an important gain during a time when families had trouble finding and buying needed foodstuffs.

The recent global financial crisis has raised concerns about malnutrition and food supplies, but we still lack data on the effects and repercussions. The Indonesia study, while it looks at a previous crisis, provides useful lessons into how governments and policy experts can work to support proper mother and child nutrition during times of economic crisis. Although Indonesia had the advantage of an already-existing network of local health clinics and village midwives, who were experienced in handling community health programs, this study makes clear that a targeted feeding program to provide children with special snacks can effectively protect healthy growth.

Case Study

Indonesia

Indonesia was hit hard by the regional East Asian financial crisis of the late 1990s. The economy contracted by about 14 percent in 1998, worsening living conditions for the poor. Rapid inflation, nearing 60 percent that year, eroded buying power, making it difficult for families to buy necessary food items. Financial pressure on the poor was exacerbated by rising unemployment and a sharp jump in the price of some agricultural products, including animal feed, which cut into food production and pushed up the prices of what was available.

Government and development officials in Indonesia were concerned that the economic crisis would make it difficult for families to meet the nutritional needs of infants, young children and pregnant women. In order to

Did You Know…

There are an estimated 129 million underweight children in the developing world today, which translates into 23 per cent of children in developing countries; 10 per cent of the children in the developing world are severely underweight.

Regionally, the highest percentage of underweight children is in Asia, with 27 percent, compared with 21 percent in Africa.

Approximately 195 million children under 5 years old in the developing world are stunted. Nearly half of these children live in South Asia.

The Findings

The program targeted poor children from age 6 months to 60 months and continued nutritional assistance for pregnant women.

Government officials and aid workers were concerned that the financial crisis of 1997-1998 would cut into the ability of families to provide the right food for their children. Without adequate nutrition, babies and young children would be at risk of developmental problems. The same held true for pregnant women, who needed proper nutrition to ensure their babies were born healthy.

In the feeding program, children were divided into three categories based on age, and each group received a specific nutritional supplement tailored to the age range.

Babies, aged 6-12 months, were given special soft foods to supplement breast milk. The daily 100 gram food packet, which was divided into 3-4 servings a day, had 10-15 grams of protein and up to 430 kcal of energy. The babies received the supplement every day for up to 180 days. Young children, aged 12-24 months, and children, aged 24-60 months, received a locally prepared snack. The snack had 9-11 grams of protein and up to 430 kcal of energy per 100 grams. The younger children received the snack every day for up to 90 days, while the older ones received it once a week for up to a year.

The program began in 1998, but it took time until all eligible communities had implemented it, partly because the potential effects of the financial crisis were not immediately anticipated.

Between 1998 and 2000, the program reached a total of 95 percent of eligible Indonesian communities. Communities in rural areas were defined as villages or other small population settlements. In urban areas, it was generally a neighborhood that included a public health clinic.

At first, the participation rate was around 70 percent, with a slightly higher take-up rate in urban areas, where 72 percent of communities took part compared with 68 percent of rural communities. Both urban and rural participation rose in the following 1999-2000 fiscal year, to 94 percent of urban communities and 86 percent of rural ones. In fiscal year 2001, the program’s last year, participation declined again, to 81 percent of urban communities and 80 percent of rural ones.

In total, some 5 million children under the age of 5 received food supplements through this program.

This bulletin summarizes the results of the research paper “Protecting Child Nutritional Status in the Aftermath of a Financial Crisis: Evidence from Indonesia,” by John Giles and Elan Satriawan. The full study can be found at http://go.worldbank.org/BWBRP91A50
Program implementation relied on close cooperation with the local public health clinics.

The central and regional governments decided which communities to include and money for the program was given to the local health clinics. In each community, the village midwife worked with local leaders to draw up a list of eligible children (if there was no midwife, then this was done by staff from the health clinic). The local midwife, who generally supervises any local health programs, also supervised the supplementary nutritional feeding program. According to country data, in 62 percent of the communities it was the midwife who handled the program, and in the remainder it was health clinic staff.

The program had a positive effect on children aged 12 months to 24 months...

Before the feeding program was implemented, 36 percent of children in this age group were stunted. Three years later, according to the 2000 Indonesian survey, 28 percent of children in this age group were stunted, a reduction of 8.3 percentage points. Without the program, stunting would have reached about 43 percent of children in this age group, but providing food supplements to children reduced the likelihood of stunted growth by 15 percentage points.

...but did not have a similar impact on infants, aged 6 to 12 months, nor older children, 24 months to 60 months, receiving the nutritional supplements.

There was a positive but statistically insignificant change in standardized height-for-age when all children in the program, from age 6 months to 60 months, are considered. Broken down by age group, stunting for infants declined 3.6 percentage points, while that for the oldest age group dropped by 2.8 percentage points.

The differing results by age group are not unusual in programs designed to improve children’s nutritional intake.

Numerous studies of community programs to improve the nutritional intake of babies and children through the age of five or six have found that younger children gain the most benefit.* (They also are most vulnerable to economic, climactic and other shocks that can reduce or limit access to food**). Infants, however, may not show as much of a gain as toddlers, because infant growth rates may be dominated by the effects of prenatal nutrition and breastfeeding decisions, despite additional supplements in the first year of life. At the same time, the older children in such programs show little if any boost when it comes to standard measurements for healthy development, including height-for-age and weight-for-age. Experts in nutrition say one reason may be that a child’s physical development (and cognitive) is most affected by what happens during the prenatal period and in the first two years of life. Even the best nutrition later on may not be able to strongly offset negative influences from early years, a cautionary note for those seeking the best ways to help young children grow into healthy adults.


In Indonesia:
9 percent of babies have low birthweight
18 percent of children under the age of 5 are moderately or severely underweight
35 percent of children under the age of 5 are moderately or severely stunted

Indonesia offers an excellent example for policymakers considering supplementary nutritional programs for their most vulnerable populations. As the study in Indonesia showed, giving children food supplements helped improve standard height-for-age among those aged 12 months to 24 months. The program was not as successful for older children and for infants.

Given the expected stress on food supplies in this decade, coupled with the continued effects of the most recent global financial crisis, nutrition is likely to become a key aspect of any successful program to fight poverty. Good nutrition is important to protect and encourage good early childhood development, which is key to giving children the best mental and physical start in life. In turn, children can grow into healthy and productive adults, who themselves have healthy children.

Policymakers and development experts concerned about helping support the most vulnerable populations, especially during crises, may want to consider supplementary nutritional feeding programs for pregnant women and young children in order to promote and protect healthy development.

The Human Development Network, part of the World Bank Group, supports and disseminates research evaluating the impact of development projects to help alleviate poverty. The goal is to collect and build empirical evidence that can help governments and development organizations design and implement the most appropriate and effective policies for better educational, health and job opportunities for people in developing countries. For more information about who we are and what we do, go to: http://www.worldbank.org/hdchiefeconomist

This Evidence to Policy note series is produced with the generous support of the Spanish Impact Evaluation Fund (SIEF)