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# FAMILY PLANNING AND ECONOMIC WELL-BEING: NEW EVIDENCE FROM BANGLADESH

Families in communities where the FPMCH program was implemented became wealthier and healthier than families who lived in other, similar communities.

## 43%

The amount that average home values in the program area exceeded those in the comparison area.

Women living in the program area had on average 1.5 fewer children than women in the comparison area.

Family planning is one of the most cost-effective health interventions in the developing world.<sup>1</sup> For decades, research has shown that for a relatively modest investment, family planning saves lives and improves maternal and child health. Although it seems intuitive that investing in family planning would also lift families out of poverty by helping poor women have fewer children, there have been relatively few studies to shed light on this relationship. Now, a new study on Bangladesh provides evidence that long-term investment in an integrated family planning and maternal and child health (FPMCH) program contributes to improved economic security for families, households, and communities through larger incomes, greater accumulation of wealth, and higher levels of education.<sup>2</sup> The evidence indicates that family planning and maternal-child health services help reduce poverty, the first goal of the Millennium Development Goals.<sup>3</sup>

This policy brief draws primarily on the research of Shareen Joshi and T. Paul Schultz, who used the 1996 Matlab Health and Socioeconomic Survey and census data collected in 1974, 1978, and 1982 to examine the effects of long-term investment in the Matlab, Bangladesh, FPMCH program.<sup>4</sup> Their findings indicate that families in communities where the FPMCH program was implemented became wealthier and healthier than families who lived in other communities that were similar when the Matlab program was begun. Joshi and Schultz will be publishing a series of papers that explore the long-term benefits of the Matlab program. Other important sources for this brief include the works of Vincent Fauveau and Ruth Levine.<sup>5</sup>

## Sustained Investment in Family Planning

In designing the FPMCH program, Matlab program managers selected similar villages, putting half of the villages in the program group to receive integrated FPMCH services, which over time included family planning, maternal tetanus inoculations, antenatal care, measles immunizations, and oral rehydration therapy, among other services. The other half of the villages, referred to as the comparison group, received services routinely provided

by Bangladesh's Ministry of Health. Data from the 1974 census of the area indicated that the education levels among children and adults, as well as the type of housing they lived in, were similar between the two groups.

However, within the first four years of the program, some significant changes took place in the program area: the percentage of married women using family planning had increased; women in the program area were having fewer children; and pregnancy-related deaths had

## What Difference Does the FPMCH Program Make?

Families living in the FPMCH program area experience better health and well-being than those in the comparison area. For example, a 37-year-old woman and her children in the program area are healthier and better off than a similar family in the comparison area:

- The woman has one less child (a 15 percent reduction in fertility).
- The time between her second and third births was nine months longer.
- She weighs 1.7 kilograms (almost 4 pounds) more.
- Her body mass index is not only higher but crosses the threshold of 17.5 kg/m<sup>2</sup>—believed to be associated with a significant reduction in mortality risk from undernutrition.
- The daughters have a higher body mass index.
- The family is more likely to obtain water from a source at home.
- The family has greater assets and a more valuable home.
- The children are more likely to be vaccinated against DPT, polio, and measles.

dropped. By the time the 1996 survey was conducted, women ages 45 to 49 living in the program area had on average 1.5 fewer children than similar women in the comparison area. These reductions in fertility and improvements in health confirmed what research was showing elsewhere about the benefits of family planning.

But the FPMCH program also contributed to unexpected results that improved community and household well-being: higher incomes, higher valued homes, greater savings and assets, higher educational achievement, and greater access to water, in addition to better health (see box on page 1). Overall, according to the 1996 survey, the program villages were significantly better off. The results suggest that with fewer children, families have higher incomes and more savings, helping them attain a higher quality of life.

**TABLE 1**

**Households and Women in the FPMCH Program Areas Are Economically Better Off**

INDICATOR	MEAN VALUES (1995 TAKA)	
	PROGRAM	COMPARISON
Total household assets	209,219	145,945
Home value	114,827	80,160
Women's income	1,483	891

**Note:** Numbers in this table are unadjusted means.

## About the Matlab Program

In 1977, the International Centre for Diarrhoeal Disease Research, Bangladesh (ICDDR,B) initiated an experimental family planning and maternal and child health (FPMCH) program in the religiously conservative Matlab area, which included 149 villages with a total population of 180,000. In the program's initial stages, community health workers made regular home visits to married women in the villages and offered them a choice of family planning methods. The field workers were women from influential families in the village; they were married and had eight or more years of education. They were also contraceptive users. Over time, the FPMCH expanded to include other cost-effective interventions, such as immunizations, to improve family health.

A remarkable aspect of the FPMCH program was that it allowed unrelated men and women to work together in a professional environment, rather than in a traditionally segregated way. The FPMCH program trained more than 25,000 women to serve as family welfare advisers, and they received civil service benefits usually available only to men.

## Higher Incomes and Wealthier Families

Twenty years after the FPMCH services began, families who lived in the program villages were more prosperous (see Table 1). The study findings reveal that for any given education level, women in the program area were financially better off. And as women's education increased, so did their earnings—women in the program area earned an additional 450 taka for each year of schooling than women in the comparison area, representing six months of added salary, based on the average woman's income in the comparison area.

Families and households in the program area also had greater assets. On average, households in the program area had total assets that exceeded those of households in the comparison area by as much as 43 percent, depending on how different assets are defined. Households in the program area—especially those where women were educated—were more likely to:

- Own more farmland.
- Have greater investments in ponds for aquaculture and orchards for raising perennial crops.
- Have more valuable homes.
- Have other forms of savings and assets that may be more profitable than farmland because they require less manual labor.

The average home value for older and more educated women in the program area was as much as 19 percent higher than the average for similar women in the comparison villages. With fewer children to support, families in the program area accumulated greater assets over their lifetimes. This relationship between smaller families and greater wealth highlights the benefit of sustained investments in family planning and MCH programs as a poverty reduction strategy.

## Better-Educated Children

School attendance contributes to poverty reduction by building literacy and preparing youth for higher-skilled, better-paying jobs. Based on two indicators of school attendance—current enrollment at the time of the interview and average education level achieved—sons and daughters in the program area were better off. Sons between ages 9 and 14 in the FPMCH program area had completed higher average levels of schooling than sons in the comparison area. Daughters in the same age group whose mothers lived in the program area and had attended school were also more likely to have been enrolled in school than the daughters of women living in the comparison area.

The older sons and daughters (ages 15 to 30) whose mothers lived in the program area were also better educated, which contributed to better economic opportunities. Again, the older sons in the program area had higher average levels of education than older sons in comparison areas. Older daughters in the program area were also better educated—especially when their mothers had gone to school—than young women in the comparison area.

The launch of the FPMCH program coincided with the government of Bangladesh implementing policies that supported education for girls. Prior to that time, boys consistently received more schooling than girls. Nevertheless, the sons and daughters of women in the program area benefited more from additional educational opportunities than the children of women in the comparison area. Although education was not part of the FPMCH program, the fact that families in the program area were economically more secure may also have led to better educational opportunities for both girls and boys.

## Improved Access to Water

An additional benefit of the long-term presence of the FPMCH program was that, by 1996, households in that area had invested in making well-water more accessible. Table 2 indicates that water for both drinking and cleaning was more available at households in the program area. With water being easier and more convenient to collect, women and children in those households did not have to carry it from rivers or other distant sources. It also meant that with fewer children to care for and better access to water, women in the program area could spend their time on activities that improved their families' well-being—earning higher incomes, obtaining and preparing better food, and improving family health.

## Better Health for Women

In addition to the economic benefits, the FPMCH program contributed to better health for women and children. The prosperity of families in the program area translated into women having better nutritional status (see Table 3). On average, women in the program area weighed 1 kilogram more, but in some age groups the increase was as high as 2.4 kilograms (more than 5 pounds). Women in the program area also had higher average body mass index (BMI), with the greatest increase among women ages 45 to 50.<sup>6</sup> The increase in weight and BMI may reflect households in the program area having more income to purchase food that benefited the entire family. The higher BMI places women above a threshold where the risk of dying may be decreased by as much as 20 percent, and it may also contribute to these women being more economically productive.

Other health improvements for women, such as increased use of antenatal care and greater coverage of tetanus immunization among pregnant women, were also greater in the program area. In addition, because women in the FPMCH area had fewer pregnancies and births, they also had a lower risk of pregnancy-related death and disability than women in the comparison villages.

## Saving Children's Lives

The FPMCH program included interventions to reduce child mortality. Overall, child mortality rates (deaths before age 5) declined by 20 percent or more.

Two key interventions contributed to the improvements in child survival: birth spacing and immunizations. One of the successes of the FPMCH program was that it increased the spacing between the second and third births, contributing to lower rates of infant and child death and better overall child health. For women in the program area, the timing between the second and third births was extended by at least eight months due to family planning use. Although the program had little effect on the timing of the first or second birth, it enabled women to adopt family planning to space the third and subsequent births and to avoid later, unplanned pregnancies.

Immunizations also played an important role in reducing child mortality. In the FPMCH program area, children were significantly more likely to be immunized against polio, measles, and diphtheria/tetanus/pertussis than children in the control area. The size of the differences shown in Table 3 highlights the benefits that integrated family planning and MCH programs can achieve when incorporated into outreach programs.

## The Success in Matlab

Long-term investments in comprehensive family planning and MCH services contribute to many economic and health benefits for women and their families. The Matlab experience shows that when a range of family planning methods are easy to obtain, many poor women choose to have fewer children, and with smaller families, they are able

TABLE 2

Households in the FPMCH Program Area Have Better Access to Drinking and Cleaning Water

INDICATOR	PERCENTAGE	
	PROGRAM	COMPARISON
Drinking water	63	55
Cleaning water	53	43

Note: Numbers in this table are unadjusted means.

TABLE 3

Women and Children in the FPMCH Program Area Are Healthier

INDICATOR	MEAN VALUES	
	PROGRAM	COMPARISON
Weight	41.9 kg	40.9 kg
Body mass index	19.0	18.4
Tetanus toxoid injection (%)	21	13
Measles vaccination (%)	80	45
DPT vaccination (%)	90	56
Polio vaccination (%)	93	61

Note: Numbers in this table are unadjusted means.

to earn higher salaries and accumulate greater wealth. In an area where fertility rates were high and health facilities were poor or unavailable, the program helped reduce the number of pregnancies, which lowered the risk of pregnancy-related death and disability, and contributed to better health for women and children. Thus, the program helped achieve a number of development goals.

The successful FPMCH program serves as a model for similar programs around the world. To achieve similar results elsewhere, policymakers and program managers should:

- Advocate to decisionmakers at all levels to obtain political commitment for family planning and reproductive health programs. Without their support, advances in economic and health well-being will not be as great or long-lasting.
- Invest in family planning programs as a long-term effort. In many places, addressing cultural issues contributes to the uptake of reproductive health programs and services.
- Recognize the economic and health benefits and the contributions of investments that family planning and MCH programs make in achieving the Millennium Development Goals.
- Develop sustainable approaches that help community members understand birth spacing options and the associated health, economic, and social benefits. In Matlab, having local women serve as community health workers encouraged neighbors to adopt family planning and was a crucial component of the success of the FPMCH program.
- Raise awareness among women and men about the health, economic, and social benefits of smaller families.

Family planning programs can play a vital role in poverty reduction and sustainable development. The FPMCH program in Matlab, Bangladesh, offers evidence that when policymakers make a long-term commitment to family planning and maternal and child health, families and communities can improve both their wealth and health.

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- 2 Shareen Joshi and T. Paul Schultz, "Family Planning as an Investment in Development: Evaluation of a Program's Consequences in Matlab, Bangladesh," working paper (2007), Yale University Economic Growth Center, available at: <http://ssrn.com/abstract=962938>.
- 3 The Millennium Development Goals consist of eight goals related to ending poverty and improving education, women's empowerment, health, and the environment by 2015. World leaders adopted the goals following the UN Millennium Summit in 2000. For more information: [www.un.org/millenniumgoals/](http://www.un.org/millenniumgoals/).
- 4 The researchers estimated the effects of living in the villages where the FPMCH program was conducted on a variety of measures of women's well-being. Their analysis considers the effects of age, education of the woman and her husband, religious affiliation, marital status, and numerous community characteristics. Numbers reported in Tables 1, 2, and 3 are unadjusted means and do not reflect the effect of these factors. (Exchange rate in 1995/1996 was approximately 40.5 taka/dollar.)
- 5 Vincent Fauveau, ed., "Women, Children, and Health," *ICDDR,B Special Publication No. 35* (Dhaka: International Centre for Diarrhoeal Disease Research, Bangladesh, 1994); and Ruth Levine, *Millions Saved: Proven Successes in Global Health* (Washington, DC: Center for Global Development, 2004).
- 6 Body Mass Index (BMI) is a statistical measure of the weight of a person scaled to height, used to determine if a person is underweight or overweight. BMI units are defined as kg/m<sup>2</sup>.



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