

# Forming families

## chapter 6

As young people form families, their ability to plan safe childbearing and raise healthy children depends on their education, nutritional status, and health knowledge—and on their use of health services. Many young men and women are not well prepared. They lack knowledge of good health practices, and available maternal and child health services may not fully meet the needs of first-time parents. Malnutrition, especially micronutrient deficiencies, are common among young women, who in many parts of the world become mothers when they are still teenagers, elevating the health risks for both mother and baby.

Young parents' decisions about the timing and number of children affect population growth and so directly affect economic development. If young people choose to have smaller families, the decline in births can bring about a rise in the share of the working age population, a potential bonus for countries with the right supporting policies.

Nutrition and reproductive health services are among the most important human capital investments that prepare young people to become the next generation of parents, helping them plan births and ensure the health of mother and child. Failing to provide a young mother with adequate nutrition before and during pregnancy increases the risk of low birth weight infants. Low birth weight infants are less likely to survive the first year of life. Low birth weight also causes irreversible damage to a child's ability to learn in school and be productive in the labor force. It increases susceptibility to chronic health conditions in adulthood, such as coronary heart disease.

Policies to broaden the opportunities for young men and women to be better prepared for parenthood include improving access to reproductive and child health services and

to nutrition services. Programs aimed at delaying marriage can also give young girls the opportunity to avoid entering motherhood too early. Because a young woman's nutritional status before pregnancy can significantly affect the baby's health, nutritional services should reach young women before and during pregnancy.

Strengthening decision-making capabilities, particularly in reproductive health and the nutrition and care of infants, will help young men and women prepare for parenthood. Health education can stimulate demand for child health and nutrition services, particularly if it also targets young men. Teaching life skills to young people can encourage them to delay marriage and to use health services. Early child development programs that promote parenting and child care skills can also develop the decision-making skills of young parents.

Second-chance programs can help teenage mothers overcome obstacles posed by low education and poor employment opportunities. Because most teenage mothers are from poor households, such programs must address the disadvantages of poor socioeconomic status.

### **Preparing for family formation is good for growth and poverty reduction**

Young people's transition to parenthood can have a lasting impact on the economy and demographic trends in a country because in most countries, first births—the entry into parenthood—take place during youth. Nearly 60 percent of girls in developing countries become mothers before age 25. Boys make this transition a bit later, becoming fathers between 25 and 29.<sup>1</sup> This difference largely reflects gender differences in the

age of marriage.<sup>2</sup> For many reasons, including societal pressures, newlyweds make a swift transition to parenthood (box 6.1). With the marriage age increasing for women and men in most countries, the interval between marrying and having the first child is becoming shorter: most become parents within a year and a half of marriage.<sup>3</sup>

### *Impact on growth and poverty reduction*

Preparing youth for the transition to family formation so that they can plan childbearing, have a safe pregnancy, and raise healthy children has an impact on productivity and savings, which affect economic growth and poverty reduction. Parents' labor supply and productivity increase because they can plan childbearing more effectively. Young children deter mothers' participation in work, particularly paid work, as in urban Morocco.<sup>4</sup> So having fewer unintended births can facilitate young women's participation in the labor force. Helping couples attain their desired family size—both through reduced child mortality and through planned births—also increases parental investment in their children's education, nutrition, and health. Because the survival of children can encourage couples to save, these higher savings can have an additional impact on growth.

Avoiding pregnancies at a very young age, having fewer unintended pregnancies, and spacing births prevent the depletion of mothers' health and reduce the risk of maternal and child mortality and ill health. Female genital mutilation, practiced in parts of Sub-Saharan Africa, can also exacerbate the health risks to young mothers.<sup>5</sup> Young women in many countries face the risk of becoming mothers at a very young age, largely because of early marriage (box 6.1). More than 10 percent of 15- to 19-year-old females are mothers in Sub-Saharan Africa, South Asia, and Latin America (figure 6.1). In Bangladesh and Mozambique, more than 30 percent of 15- to 19-year-old females are mothers or pregnant. Pregnant adolescents face higher risks of maternal mortality, delivery complications, obstructed labor, and premature delivery, mainly because their own physical growth

#### **BOX 6.1**

### *The sequencing of marriage and childbearing*

Marriage may be a precondition for childbearing in many parts of the world, but the trend varies across countries. In many developed countries, such as the United States and France, and in some parts of Latin America and Africa, out-of-wedlock childbearing is common. For example, in the United States, births to unmarried women account for nearly 30 percent of all births, which is the result of both an increased proportion of unmarried women and their higher fertility.

In many other parts of the world, such as Africa, South Asia, and Muslim societies, marriage is the only recognized state in which childbearing is permitted. The timing and cultural norms associated with marriage can significantly affect the quality of married life. The biggest concern is physical abuse by partners. In South Asia, violence by husbands, sometimes linked to dowry payments, is one of the major causes of death among young women.

Early marriage, and hence early childbearing, is prevalent in many regions of the world. The proportion of girls marrying before age 18 ranges from less than 20 percent in Central Asia to more than 60 percent in Bangladesh, Guinea, and Mali. A very early transition to marriage, before age 15, is also notable in some parts of the world. For

example, in Mali, nearly 36 percent of young women were married by age 15.

Although the causal effect of the age at marriage on various outcomes remains to be resolved (especially in developing countries), its association with negative outcomes for women is well documented. Early marriage is associated with early childbearing and higher fertility. Women who marry early are also more likely to have less say in decision making in a marriage. Increased risk of domestic violence is also associated with early marriage.

Strikingly, studies report early marriage as a risk factor in acquiring HIV/AIDS for girls. In Kenya and Zambia in 1997–98, HIV infection rates were 48–65 percent higher among married girls than sexually active unmarried girls of similar ages. A similar pattern is found in other Sub-Saharan African countries. Studies find that high HIV/AIDS prevalence among young married girls is associated with greater frequency of unprotected sex with an older partner who is more likely to be infected by HIV than younger men.

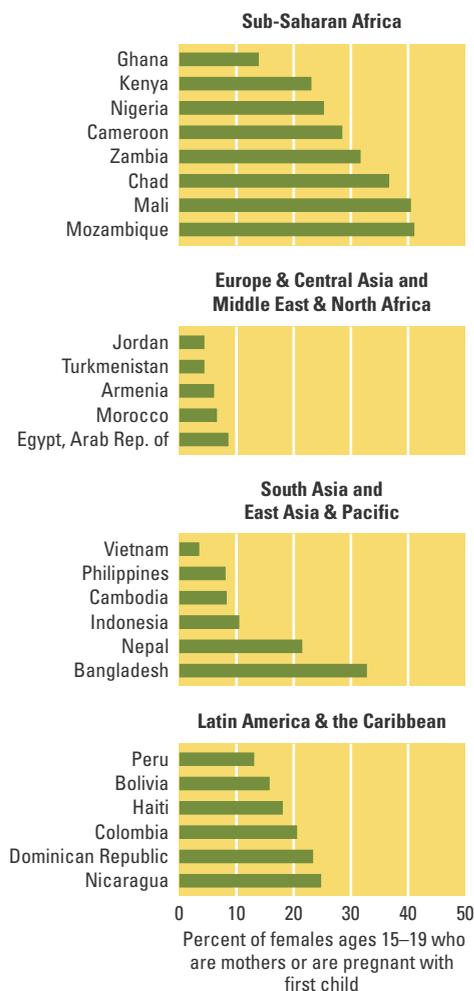
Sources: Bruce and Clark (2004); Buvinic (1998); Clark (2004); Eltigani (2000); Jensen and Thornton (2003); Lesthaeghe and Moors (2000); Singh and Samara (1996); Upchurch, Lillard, and Panis (2002); and Willis and Haaga (1996).

is incomplete. The risks are heightened for girls who become pregnant very soon after menarche. Pregnancy-related illnesses associated with early, frequent, or closely spaced pregnancies drain women's productivity, jeopardize their income-earning capacity, and contribute to their poverty.<sup>6</sup>

Pregnancy-related illnesses are a significant cause of death among young women ages 15–29. In South Asia, Sub-Saharan Africa, and the Middle East and North Africa, regions with high fertility, between 15 and 20 percent of all female deaths arise from pregnancy-related causes. Reducing those deaths has strong intergenerational benefits. Children benefit from lower maternal mortality because those who lose a parent are much more vulnerable, partly because of the loss of resources and partly because of the lack of parental care. In Indonesia, children whose mothers die are less likely to start school and are less healthy than other children.<sup>7</sup> In Ethiopia, children



**Figure 6.1 Teenage motherhood is common in some regions**



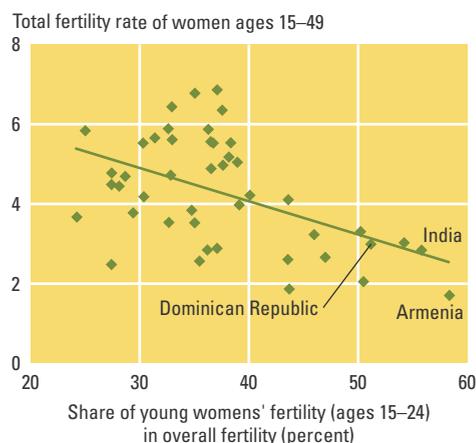
Sources: ORC Macro (2006) and MEASURE DHS STAT Compiler (surveys conducted between 2000 and 2005).

whose mothers succumbed to AIDS show less psychological well-being and lower participation in schooling.<sup>8</sup>

**Impact on growth through demographic trends**

The fertility decline witnessed around the world in the past 20 years has led to a concentration of births among women ages 15–24. As fertility begins to decline, childbearing patterns change in three ways: women may delay their first birth, space their births, or stop having children at an earlier age than previous cohorts. Even though women’s marriage age has increased, the average gap between marriage and the first birth has fallen,<sup>9</sup> suggesting very little net delay in

**Figure 6.2 The share of youth fertility is high in countries with low fertility**



Sources: ORC Macro (2005) and MEASURE DHS STAT Compiler (surveys conducted between 2000 and 2004).

the start of childbearing. In some countries evidence indicates that women are stopping childbearing earlier than did previous cohorts of women. In India in the late 1990s, there was a roughly one year drop in the age when women stopped childbearing, from 30.2 years (among women ages 45–49) to 28.7 years (among women ages 40–44).<sup>10</sup>

The compression of childbearing during youth is visible in the large share of births to young women in countries where fertility is low (figure 6.2). In many countries, births among 15- to 24-year-olds account for 30–50 percent of all births. In the Dominican Republic and India, where fertility rates are lower than three births per woman, births among 15- to 24-year-old women constitute close to 50 percent of all births. In Armenia, with fewer than two births per woman, the youth share is 60 percent.

Because of their larger share in fertility, young people’s decisions about parenthood will shape future demographic trends: as more couples are better able to plan their births, both fertility and mortality will decline, and the share of working-age population will rise. With the right set of supporting conditions, an economy can reap the benefits for growth of having more workers with fewer dependents (chapter 1). In some African countries, such as Chad, however, young women can expect to have six children or more during their lifetime.<sup>11</sup> In these countries, preparing young couples

for family formation will spur the decline in fertility and in dependency ratios, offering a window of opportunity to benefit from a larger working-age population.

### Preparation for family formation is poor

Many factors determine when young men and women become parents, the number of children they have, and how they raise their children. In some settings young people make these decisions, while in others, parents or extended family make the decisions for them (chapter 2). To some extent, these are purely private decisions that do not merit public intervention. However, there is a role for public investment in areas that will ensure safe passage through a first pregnancy and beyond, because young people may underinvest in family planning or maternal health services relative to the level that might be socially optimal.

Most governments finance maternal health services because of the positive externalities of the improved health of the (as yet unborn) child. Governments also provide these services because of the low demand on the part of prospective parents who have little education, little information, and are poor. A further justification for government investment in supporting the transition to parenthood is to ensure equity. Publicly financed or provided services broaden access to those who would otherwise not be able to avail themselves of the services, particularly women and adolescent girls.<sup>12</sup>

Among the many factors influencing family formation is the position of young women in their parents' households. A position of disadvantage can push them into pregnancy at a very young age, and it can also lead to lower investments in education, with significant consequences for the transition to parenthood (box 6.2). Young men's labor market outcomes are associated with the timing of transition to marriage and parenthood. Evidence from the Arab Republic of Egypt, the Philippines, Thailand, and Vietnam suggests that poverty and a lack of financial security are reasons for men to delay marriage. In rural Ethiopia, the unavailability of land is associated with delayed marriage for men.<sup>13</sup> Research

#### BOX 6.2

#### Education shapes family formation

Young women and men today are more educated than previous generations were when they become parents. Better educated parents plan safer childbearing and invest more in their children's education and health. Compared with the past, young people today are also more likely to marry later and have more say in whom and when they marry. Some attribute the decline in arranged marriages and the shift of marriage decision making from parents to young people to the increased education of women.

There is also a strong link between female education and reduced childbearing in almost all countries. In some countries, even a few years of attending primary school reduces the number of children ever born, and secondary education has a stronger impact. Mothers' education is also associated with reductions in desired family size and increases in contraceptive use.

In some countries, the push toward universal primary education in the 1990s and the incentives to girls to continue beyond primary have stimulated girls' enrollment in secondary school, evident in the educa-

tional attainment of teenage mothers in some countries. In Bangladesh during the 1990s, the percentage of teenage mothers who had ever enrolled in secondary school rose from 16 percent to 26 percent. To the extent that mothers' education is associated with better health outcomes, children of teen mothers may suffer fewer disadvantages today.

Expanding schooling and employment opportunities can delay entry into motherhood. A study from Guatemala spanning 35 years suggests that women delayed childbearing because of increased schooling. Using rich panel data, the study shows that education has a significant causal effect on age at parenting for women but not for men. Every additional grade of school attainment delayed the mean age of first parenthood for females by 0.52–0.87 years. It also reduced the probability of becoming teenage mothers (before age 18) by 14 to 23 percent.

Sources: Behrman and others (2006); Mensch, Singh, and Casterline (2005); and National Research Council and Institute of Medicine (2005).

from the United States suggests that labor market outcomes for men are linked to parenthood: fathers' earnings increase when they have children.<sup>14</sup>

While the nature of unions may vary, marriage or forming a union is a key transition in life. For many young people and their families, timing of marriage is affected by economic pressures and expected gender roles (box 6.3). Once married, newlyweds make joint decisions about contraceptive use and the timing of births. Discord between spouses in the demand for children can also affect the couples' use of contraceptives or maternal health care.

In addition to these factors, nutrition and reproductive health are important for a successful transition to family formation. Good nutrition and reproductive health have big payoffs for the young when they make the transition to parenthood. Young women who are underweight or who suffer from micronutrient deficiencies before pregnancy are more likely to have low birth weight infants.<sup>15</sup> Preventing low birth weight infants brings very high returns for the child: lower infant mortality, better cognitive ability, and reduced

## BOX 6.3

**Voices of Bangladeshi youth:  
Searching for the ideal spouse**

There is considerable agreement on what constitutes an “ideal” partner—of either sex. For both parties, education and good character is considered desirable. However, boys seek girls with good looks and girls seek boys with family wealth or a job. In Sylhet, an “ideal” husband is somebody who is established and honest and an “ideal” wife is somebody who is shongshari (good at household tasks), has good character, and is good looking. The Hindu male group in Chittagong is cynical about what brides look for in a boy: “all the girls want in a husband is money—none of the other characteristics matter. If a boy has money, he will get a bride.” The Kalyanpur *basti* (slum) boys had

a lot more discussion on what constitutes a good woman, and they seemed quite concerned about the “morality” of women today—particularly of their “easy” female colleagues in the garment factories. The Kalyanpur *basti* girls, however, were quite cynical in their comments about a good husband: “a bad husband is someone who beats you in public, in front of everyone; a good husband is someone who beats you quietly, at home, so no one realizes.”

*Source:* Ali and others (2006); Consultation meetings carried out with 23 youth groups (ages 10–27) in Chittagong, Dhaka, Rajshahi, and Sylhet, Bangladesh, January 2006.

chance of acquiring noncommunicable disease in adulthood. It also improves labor productivity in adulthood, with the economic benefits close to \$510 per infant prevented from falling into low birth weight.<sup>16</sup> Fathers’ nutrition can indirectly affect child health through the effect on household income. Well-nourished fathers are more productive in the labor market and have higher earnings.<sup>17</sup>

First-time parents experience health risks—for the mother and the baby. For example, firstborn children have a greater likelihood of dying within the first four weeks of life, perhaps due to a lack of health knowledge and to inappropriate care. HIV/AIDS poses an additional concern for young people starting a family. Because young women are more likely to marry older men, they face a greater risk of acquiring HIV.<sup>18</sup> That is why the incidence of HIV is higher among young women than young men in populations where the disease is prevalent, as in some Sub-Saharan African countries (chapter 5). This pattern will also emerge in low HIV-prevalence countries, such as India, where infections are spread mostly through sexual contact. Not having access to relevant information, counseling, and testing during pregnancy increases the risk of mother-to-child transmission of the virus.

As the rest of the section shows, undernutrition is not as widespread among the

young as it once was, but micronutrient deficiencies remain common. While the use of family planning, maternal, and child health services has increased in many countries, in others it remains low. Even where the use of services has increased, women may not receive all services, particularly hurting first-time mothers. Moreover, young women and men are poorly informed about sex and child health. Governments intervene in nutrition, family planning, and maternal and child health in almost all countries. The gaps described here suggest that these interventions have to be more effective in reaching young men and women.

**Youth suffer from  
nutritional deficiencies**

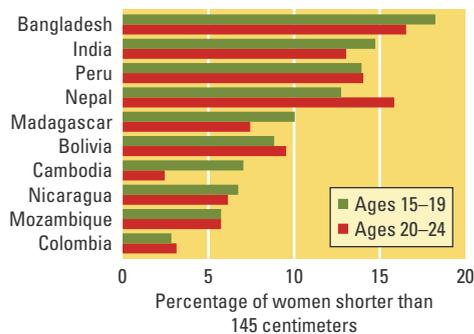
A young woman’s height can indicate whether she risks having a difficult delivery, because small stature is often related to small pelvic size. The risk of having a baby with a low birth weight is also higher for mothers who are short. Low maternal weight and micronutrient deficiency before and during pregnancy can cause low birth weight infants.<sup>19</sup>

In most developing countries, young girls appear on average to be well nourished, with heights greater than levels that signal obstetric risks (140–150 centimeters). Other than South Asian countries and a few countries in Latin America, the proportion of 15- to 24-year-olds shorter than 145 centimeters is 3 percent or less. Bangladesh, India, and Nepal have the highest prevalence of young girls who are stunted, ranging from close to 16 percent of 20- to 24-year-olds in Bangladesh and Nepal to 13 percent in India (figure 6.3). Among Latin American countries for which data are available, Peru has the highest prevalence, with close to 14 percent of 15- to 24-year-olds shorter than 145 centimeters. The prevalence of underweight young women ages 15–24 is less than 3 percent in Colombia, Egypt, Nicaragua, and Turkey, but is high in South Asia. In most countries, the percentage of young people who are overweight is greater than the proportion underweight (chapter 5).

In contrast to their generally good nutritional status, young people suffer from micronutrient deficiencies. Anemia, the



**Figure 6.3** Young women of short stature risk developing obstetric complications



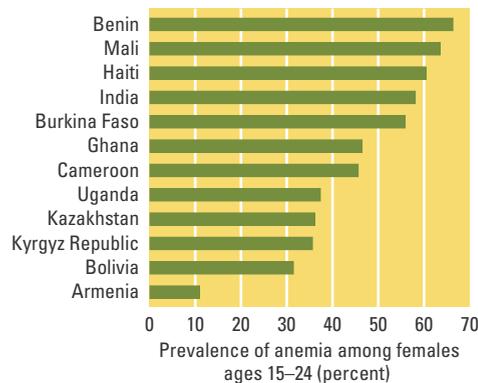
Sources: ORC Macro (2006) and MEASURE DHS STAT Compiler (surveys conducted between 1998 and 2005).

outcome of multiple micronutrient deficiencies, is prevalent among young people in most developing countries (box 6.4). During adolescence, the nutritional requirements for iron increase because of rapid growth and so does the risk of iron deficiency. Among boys the risk subsides after their growth spurt. Among girls and women, however, menstruation increases the risk of iron deficiency throughout the childbearing years.<sup>20</sup> Anemia is highly prevalent among young women ages 15–24, including those who are pregnant (figure 6.4).<sup>21</sup> In Benin, Mali, Haiti, and India, more than 50 percent of girls are anemic. In Egypt, close to 30 percent of boys ages 11–19 suffer from anemia.<sup>22</sup> In the United States and Europe, the prevalence of anemia among women and children is 7 to 12 percent.

### *Young people are not well informed—and are less likely to use key services*

Sexual and reproductive health knowledge is low among young people. Among sexually active youth in Nigerian schools, awareness of the risk of pregnancy from the first sexual encounter is very low.<sup>23</sup> Nor are young people able to identify the time of month when the risk of pregnancy is highest. Even married girls, who are most likely to be regularly engaging in sex, were no more knowledgeable than unmarried girls.<sup>24</sup> Of young people ages 15–24 in Indonesia,<sup>25</sup> 21 percent of girls and 28 percent of boys did not know any of the signs of puberty's physical changes for the opposite sex. Of those who

**Figure 6.4** Anemia is highly prevalent among young women



Source: Demographic and Health Surveys conducted between 1998 and 2004.

Note: Anemia is defined as hemoglobin (Hb) content in blood of less than 12 grams/deciliter (includes mild, moderate, and severe anemia). Adjustments in these cutoff points were made for women living at altitudes above 1,000 meters and for women who smoke, since both groups require more hemoglobin (Centers for Disease Control and Prevention (1998). Figure represents married and unmarried young women ages 15–24.

knew the signs, most reported that friends were the source of the information.

In Bangladesh few teenage mothers could identify life-threatening conditions during pregnancy. Only about 5 percent knew about conditions such as severe headaches, high blood pressure, and pre-eclampsia, that might threaten the life of the mother during pregnancy or delivery. Nearly 50 percent of teenage mothers reported not seeking any assistance for maternal complications.<sup>26</sup>

Young couples are less likely to use contraceptives than older couples, evident in the percentage of women by age who report using any method of contraception (figure 6.5). In Peru, 64 percent of 30- to 34-year-old women use contraceptives, nearly seven

#### **BOX 6.4**

#### *Anemia: The outcome of multiple deficiencies*

Anemia, characterized by a fall in the concentration of hemoglobin in the blood, arises from a deficiency of iron, folate (vitamin B9), vitamin B12, and other nutrients. Vitamin A deficiency is also known to increase the risk of anemia. Many other causes of anemia—hemorrhage, infection, genetic disorders, and chronic disease—have been identified. However, nutritional deficiency, primarily due to a lack of iron in the everyday diet, accounts for most cases.

Women with severe anemia can experience difficulty meeting oxygen transport requirements near and at delivery, especially if their blood loss is severe. This may be an underlying cause of maternal and infant deaths. Iron deficiency also affects physical work capacity, in both men and in women, but no studies have focused on adolescents.

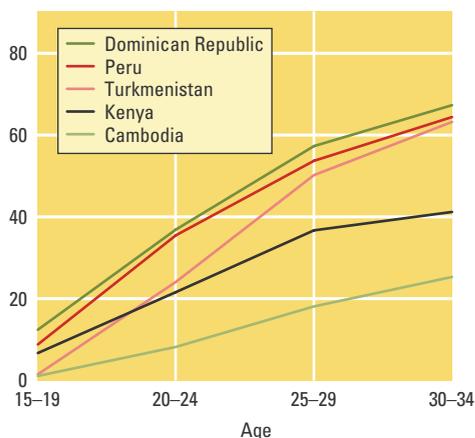
Sources: DeMaeyer (1989); International Nutritional Anemia Consultative Group (1979); International Nutritional Anemia Consultative Group (1989); Li and others (1994); and Yip (1994).



THE WORLD BANK

**Figure 6.5 Young women are less likely to use contraceptives than older women**

Percentage of sexually active young women, married and unmarried, who use contraceptives



Sources: ORC Macro (2006) and MEASURE DHS STAT Compiler (surveys conducted between 2000 and 2005).

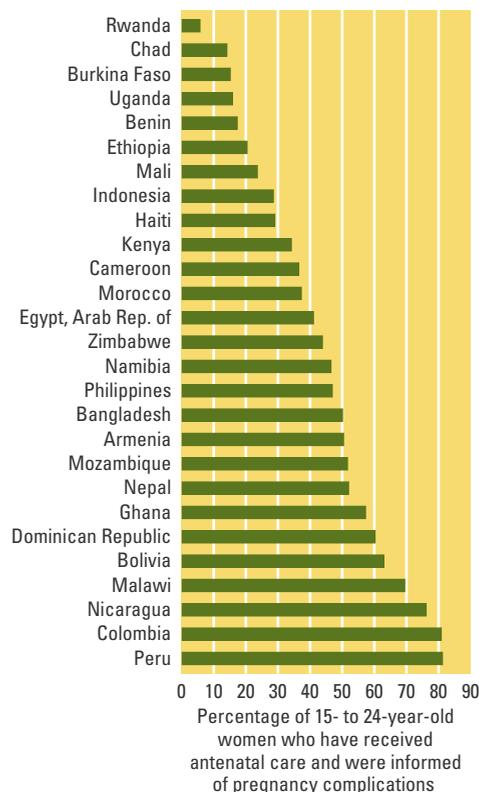
times the proportion for 15- to 19-year-olds, perhaps because young couples want to have children soon after marriage. Or it could be that family planning services emphasize methods that help women stop births (for example, sterilization) rather than space births, so older women ready to stop may be more likely to use these services than younger women just starting their families. Another constraint for unmarried women is the difficulty of obtaining contraceptives. In some countries, laws regulate young women’s access to contraceptives. Restrictions may include minimum age requirements and requirements that young women be married and have spousal approval.<sup>27</sup>

In Bangladesh, India, Mali, and Pakistan, the use of maternal health services, particularly antenatal care, is low among young women. Price, including travel and waiting time, determines health care use by all women.<sup>28</sup> For young women and first-time parents, a lack of knowledge about the need for preventive care during pregnancy could be an additional factor. Girls’ lower bargaining power also reduces their ability to negotiate with their husbands and in-laws about the need for care during pregnancy. In rural Pakistan, the mobility of adolescent girls is highly constrained, making it difficult for them to seek services.<sup>29</sup>

*“I don’t think information about bearing and fostering children I have obtained is enough, and we can’t obtain this information from school and family.”*

University student, China  
December 2005

**Figure 6.6 Young mothers do not get full care during antenatal visits**



Source: Demographic and Health Surveys conducted between 1998 and 2003.

Note: Data shown are restricted to women who used antenatal care for their latest infants during the three years prior to the survey.

In many countries in Latin America and Sub-Saharan Africa, commensurate with the general high use of antenatal care, the percentage of young women receiving such care is also high, ranging from 80 percent to 100 percent.<sup>30</sup> However, even where the use of antenatal care is high, young mothers who receive antenatal care do not receive full care. First pregnancies are at a higher risk of neonatal mortality, and informing women of potential complications is an important component of care for young mothers. In most countries for which data are available, young mothers who used antenatal care were more likely to get checkups, such as measurements of blood pressure, but unlikely to be told about pregnancy complications (figure 6.6). In many countries where anemia is prevalent, iron supplements are offered as part of antenatal care. But in Cambodia, where anemia

affects more than half of all young women, fewer than a quarter of mothers received iron supplements during antenatal care.<sup>31</sup>

Parenting skills help parents interpret infant and young child behaviors, as does knowledge about their health, nutrition, and developmental needs. Young mothers and fathers tend to be less aware of signs of childhood illnesses and of ways to treat them. Knowledge of oral rehydration therapy (ORT), a simple and effective response to a child's dehydration during episodes of diarrhea, remains low in many countries, particularly among young men and teenage mothers. In Peru, only about half of all teenage mothers were aware of ORT salts, compared with 80 percent of 25- to 29-year-old mothers. Even in Indonesia, where awareness is close to 100 percent among older mothers, only 85 percent of teenage mothers knew about ORT salts. In Kenya, only 40 percent of young men ages 15–24 had heard of ORT, compared with 60 percent of older men.<sup>32</sup>

### Providing opportunities for youth to prepare for parenthood

Opportunities for young men and women to become better prepared for family life can be broadened by improving their access to family planning, maternal, child health, and nutrition services. Financial incentives can also increase the opportunities for people, particularly the poor, to use health services. Most of the programs have not been specifically targeted to young people, but they offer promising approaches to preparing young people for parenthood. Efforts to prevent early marriage can broaden young girls' opportunities to avoid early motherhood and help them avoid all the associated adverse health consequences.

### Improving access to health services

Young men and women are less likely to use family planning, maternal, and child health services—access being a key issue. One way to improve access is to provide “youth-friendly” services where providers are trained in catering to young people's needs. Making antenatal and postnatal ser-

vices friendlier for young mothers has been tried in several countries, but no rigorous evaluations are available.<sup>33</sup> An example of a promising program is a hospital-based breastfeeding program for adolescent mothers in Mexico that was associated with increased antenatal visits by program recipients.<sup>34</sup>

Because mobility can be a constraint, outreach services (rather than fixed-site delivery) can also make a difference. In such settings, providing mass-media health information campaigns that reach all in the community can stimulate the demand for services. There are no health outreach programs that target youth, but the success of programs targeting all couples in their childbearing years suggests that outreach can be effective.<sup>35</sup> The doorstep delivery program in rural Bangladesh (Matlab district) significantly increased the uptake of antenatal and postnatal care services.<sup>36</sup> The Lady Health Worker Program in Pakistan has been effective for women of all reproductive age groups.<sup>37</sup>

Increasing men's uptake of reproductive health and family planning services improves their health and the likelihood that couples are protected from sexually transmitted infections (STIs) and unintended pregnancies (see the spotlight on Brazil). Men who need care for sexually transmitted diseases may not seek it from maternal and child health and family planning clinics, largely viewed as women's services. They may be more attracted to separate facilities that can provide them with STI and family planning services.

Engaging the private sector in public-private partnership can improve the availability of reproductive health services for women, with limited involvement and resources from the government. If governments find it controversial to deliver such services to young people, contracting them out can reach young women, as in Colombia.<sup>38</sup> The social marketing of condoms prevents STIs and HIV, but the few evaluations available do not provide evidence on preventing unintended pregnancies.<sup>39</sup> Promoting condoms as “dual protection” rather than only as “safe sex” may increase

*“If young people have free access to family planning methods, we could understand the consequences of our actions and could be more conscious about our behavior, and could be more careful.”*

Young person, Cuzco, Peru  
January 2006



*“I fear that now, especially living in rural communities, people do not have access to much information. They are less privileged and all the time it is only the urban communities that have the sensitization campaigns.”*

Jestina, rural youth activist, using a nontraditional music campaign,  
Sierra Leone  
February 2006

the uptake of condoms and protect both married and unmarried young people from sexually transmitted infections and unintended pregnancies.<sup>40</sup>

As discussed in chapter 5, integrating STI and HIV services with reproductive health services can encourage greater use of both. This is particularly important in Sub-Saharan Africa, where HIV prevalence is already high—and in India, where prevalence, though low, is increasing among young married women. Integration can ensure that young women receive counseling about HIV and mother-to-child transmission of the virus when they go for antenatal checkups. Few women, however, receive such counseling or even opportunities for testing. The feasibility and effectiveness of integration, given the resource constraints facing most developing countries, are debatable—and no evaluations are available.<sup>41</sup>

### ***Improving access to nutrition services***

The World Health Organization recommends that if an adolescent is still growing, adequate weight gain and nutrient intakes must be ensured to prevent poor pregnancy outcomes. Because iron deficiency is often accompanied by other micronutrient deficiencies (vitamin A, folate), food-based approaches are likely to improve young people’s diets. Fortifying foods and providing supplements are fairly inexpensive—and successful—ways of reducing micronutrient deficiencies. Where anemia is highly prevalent, food fortification may not be sufficient, and iron supplements may be necessary.<sup>42</sup> School-based iron supplementation programs can be effective in reaching adolescents in countries where enrollment rates are high. It has been estimated that the benefit-cost ratio of iron supplementation for secondary school students ranges between 26 and 45—that is, one dollar invested in iron supplementation will yield 26 to 45 dollars in return.<sup>43</sup>

Information on anemia in the population is often lacking, and surveys that measure anemia prevalence can help in developing health intervention programs to prevent it. Many countries provide iron and folic

acid as supplements to pregnant women to prevent anemia during pregnancy. Because pre-pregnancy nutritional status has a significant effect on the newborn’s health, nutritional measures should also target girls before they become mothers. Although providing supplements over a long period has proven difficult, because they have to be taken daily and they sometimes have side effects, school-based iron-supplementation programs have been found to be effective.<sup>44</sup> Results from a recent survey by the Partnership for Child Development of school health policies in selected countries shows that although a number of countries offer iron supplementation to school children, many countries such as Benin and Cameroon, where close to 50 percent or more of young girls are anemic (figure 6.4), do not offer such services in schools.<sup>45</sup>

Nutrition services must be an important dimension of antenatal and postnatal care services for teen mothers. Pregnant teenagers are at high obstetric risk, particularly if short or underweight before pregnancy. Close monitoring of teenage mothers’ nutritional status has been recommended, because adequate weight gain may even be more critical for them than for older mothers.<sup>46</sup> Nutrition and weight monitoring are not always easily implemented, and health providers must be able to give women context-specific dietary advice. In addition to iron supplementation, vitamin A, zinc, and calcium supplementation can also be particularly beneficial for teen mothers, because they are at a higher risk of pregnancy-induced hypertension and pre-eclampsia. Teen mothers might also need postpartum nutritional care, such as diet counseling and support for breastfeeding.

### ***Offering financial incentives***

Conditional cash transfers have been effective in increasing the use of preventive health care by poor households. Although these programs have not been targeted to young parents, they offer a promising approach to increasing the uptake of preventive health services by first-time parents. Mexico and Nicaragua have provided cash



transfers conditional on household members' participation in health and nutrition workshops and on visits to the health center. Mexico's Oportunidades increased nutrition monitoring, immunization rates, and antenatal care visits. Growth-monitoring visits increased by an estimated 30 to 60 percent, and children under 5 had fewer illnesses than children outside the program.<sup>47</sup> Nicaragua's Red de Protección Social also promotes children's participation in nutrition monitoring and the timely immunization of children.<sup>48</sup>

### *Preventing early marriage*

A delay in early marriage, one way to prevent teen pregnancies, is likely to yield benefits for child health as well. For example, in Guatemala delaying marriage for girls improves the chances of their children surviving past age 5.<sup>49</sup> Many countries have laws specifying the minimum age for girls and boys to marry, with or without parental consent. In 50 of 81 countries examined, the minimum age for marriage is at least 18 for both males and females,<sup>50</sup> and in 32 countries it is lower for girls than for boys. Over time the legal minimum age at marriage for girls has risen, but it is difficult to enforce where vital registration systems are weak. A minimum age is also more likely to be effective when young girls, particularly those from poorer households, have opportunities to attend school and improve their livelihoods.

Norms about marriage age are culturally sensitive issues, and where there are strong taboos against premarital sex, daughters' early marriage might appear to be a desirable option for parents. Efforts to prevent early marriage must therefore involve parents and the community as well as young people themselves. One such program is the Apni Beti, Apna Dhan ("our daughter, our wealth") scheme in the Indian state of Haryana, launched in October 1994 to raise awareness about the importance of the girl-child and to reverse gender discrimination. It honors mothers of girls with a small monetary award (Rs. 500, or \$16) to cover post-delivery needs of the mother for the birth of a daughter, paid within 15 days of birth. It also endows each girl with a longer-term

monetary investment of Rs. 2,500 (\$80) in government securities within three months of her birth, which she can claim when she turns 18, if still unmarried. In 1995, the Haryana government expanded the scheme by offering a higher maturity amount (from Rs. 25,000 [\$800] to Rs. 30,000 [\$960]) for girls who agree to defer cashing in their securities. The program has not been evaluated for short-term outcomes or long-term objectives.<sup>51</sup>

### **Strengthening young people's decision-making capabilities to prepare for parenthood**

Young people need good information to make better choices about the timing of births, the health services to use, and the right child care and feeding practices. Programs to strengthen their decision-making capabilities in reproductive health, nutrition, and the care of young children include health education, parenting and early child development services, and life skills education—for young men as well as young women.

### *Providing health information to young men and women*

Informing young people can be effective in preparing them for the transition to parenthood. Many governments offer such information as part of their school health program as well as under broader nutrition programs.

### *Sex education to prevent early childbearing.*

Sex education programs delivered to unmarried youth—whether school based or through mass media—can increase knowledge among young women and men. Knowledge, however, may not be sufficient to change behavior (chapter 5). As described in chapter 5, most evaluations of sex education programs have relied on self-reported behavior, which may not reveal the true program impact. However, evidence from impact evaluations suggests that sex education can be effective in changing behavior. In Kenya, an impact evaluation of an intervention that provided female primary students with sex education that included specific information about the risk of getting HIV from sex with older men



reduced teenage childbearing.<sup>52</sup> In Chile, the school-based sex education intervention Adolescence: Time of Choices increased the use of contraceptives and reduced the incidence of teen pregnancy.<sup>53</sup>

**Reproductive health education programs for couples.** Reproductive health programs provide health education to married couples, but few evaluations are available.<sup>54</sup>

- A program in Bangladesh provides newlyweds with reproductive health information and services before they have children. All newly married couples are registered by a family planning fieldworker during a home visit, establishing a relationship with the couple and providing the opportunity to deliver family planning information. The fieldworker also provides referrals to health clinics for maternal and child health care.
- The Population Council's First-Time Parents Project in two cities in India provides reproductive and sexual health knowledge targeted not only to married young girls but also to their husbands, mothers, mothers-in-law, health care providers, and the community.
- A community-based approach to married girls' reproductive health in the Indian state of Maharashtra tests the effectiveness of delivering information through community-based organizations along with improving the quality and content of public services by training health providers. It also targets girls' husbands and mothers-in-law.

**Information targeted to men.** Providing information to men about safe motherhood and child health services can increase the couples' uptake of maternal and child health services (box 6.5). The Suami Siaga ("alert husband") campaign in Indonesia shows that mass media campaigns can increase husbands' involvement in safe motherhood. Suami Siaga and Desa Siaga ("alert village") were part of public awareness campaigns implemented with the five-year safe motherhood program. Between 1998 and 2002, Suami Siaga targeted husbands ages 15 to 45

from low or middle socioeconomic status, and promoted their involvement in the pregnancy, preparation for the delivery, and any potential emergency through various mass media campaigns and training programs. Desa Siaga focused on getting the whole community involved in safe motherhood, arranging transport to hospitals, providing funds, donating blood, and being alert to emergencies during childbirth. Although not rigorously evaluated for impact, monitoring reports show that husbands and wives exposed to the Siaga programs were more likely to have more knowledge of signs of emergency than their unexposed counterparts and more likely to have delivered at health facilities or with midwives.<sup>55</sup>

**Nutrition education.** School-based health education programs can encourage healthy eating and physical activity. Such programs must include messages promoting the consumption of a variety of fruits and vegetables—and moderation in saturated fats.<sup>56</sup> Young people must also be encouraged to consume foods rich in iron. Educating mothers about rest during pregnancy and appropriate child feeding practices have been part of successful nutrition programs in India (Tamil Nadu), Indonesia, and Thailand.

Like all health education programs, bringing about change in diet habits through nutrition education is difficult (chapter 5). An evaluation of the Bangladesh Integrated Nutrition Program (BINP) raised knowledge about appropriate nutrition-related behaviors, but most mothers did not practice them.<sup>57</sup> Poverty and time constraints were a major reason. Nor did the program adequately involve husbands and mothers-in-law, perhaps preventing many young mothers from practicing new behavior. Some behavioral change efforts, such as hand washing to prevent diarrhea, were found to be effective.<sup>58</sup> This program also had innovative components, such as targeting adolescent girls through the creation of Adolescent Girls Forums. In one subdistrict covered by the BINP, newlyweds were targeted to test whether it is more cost-effective to address first pregnancies and work with couples until their child's 24th month, rather than aiming to cover all young children and

*"In order to help our students to gain better knowledge, we organize events at SOS village [space for free discussion on reproductive health issues]."*

Do, 22, male university student in Hanoi and chairperson of the Reproductive Health Club of his university  
March 2006



pregnant women in a community. Results from an evaluation of this newlyweds initiative is not yet available.<sup>59</sup>

### *Provide parenting skills and early childhood development services*

Parenting skills can improve child development. One such skill is knowledge of when an infant is ready for complementary feeding. In addition to this skill, parents must also follow practices such as active or interactive feeding, selecting foods suited to the child's emerging motor capacities and taste preferences, and talking and playing with the child during the meal. Early childhood development programs in Ecuador and Jamaica show that responsive and interactive parenting to support psychological development in children can offset many of the adverse consequences of childhood malnutrition on cognitive development.<sup>60</sup> In Jamaica, nutritional supplementation for undernourished children and psychosocial stimulation improved mental development.

Formal child care services can also support mothers who want to work. Extensive research from the United States suggests that the price of child care affects mothers' labor force participation.<sup>61</sup> In urban Guatemala, the higher price of formal child care facilities reduces hours worked by mothers. Children attending the *Hogares Comunitarios* child care facilities in urban Guatemala had better dietary and micronutrient intakes than their counterparts who did not.<sup>62</sup> In Vietnam, where average fertility and family size are low, 41 percent of urban mothers use formal sources of child care (schools and institutional care) while 46 percent of rural mothers rely on extended family members.<sup>63</sup> In Kenya, the high costs of early childhood development programs discourage households from using formal child care facilities and reduces mothers' participation in work. The school enrollment of older children, mainly girls, is also affected.<sup>64</sup>

### *Teaching young women life skills*

Most life skills programs for girls, married or unmarried, also provide health information, family life education, and livelihood training. Gaining such skills empowers

#### **BOX 6.5**

### *Grameen Bank's "Sixteen Decisions"—convincing men to have fewer children*

A study estimating the impact of male and female participation in microcredit programs in rural Bangladesh found that men's participation in the program reduced fertility. Among the four microcredit programs in the study, participation in Grameen Bank had the largest effect—surprising because men spend more time working and less time childrearing. So the effect for men could not be the result of greater livelihood opportunities from microcredit.

Authors attribute the finding to men's exposure to social development activities

that are part of the microcredit programs, activities that may have altered men's attitudes. Grameen Bank teaches its participants the value of small families (among other social issues, such as girls' education). Having a small family is one of the "sixteen decisions" that members must promise to obey. The effect of men's exposure to such messages highlights the importance of targeting men in information and education campaigns for family planning and reproductive health.

Source: Pitt and others (1999).

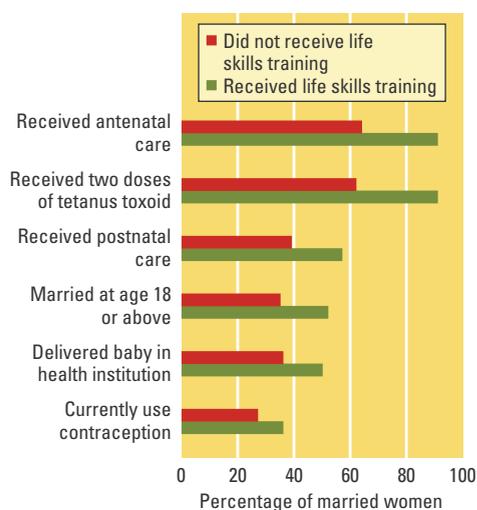
women. For example, participation in microcredit programs has increased the use of formal health care by women. In urban Malaysia, women's unearned income (a proxy for their bargaining power) increased the demand for maternal care.<sup>65</sup>

Evaluations based on randomized control experiments of youth-focused interventions in this area are rare, but impact assessments of a few programs provide some guidance for effective interventions. One is the Better Life Options program in India,<sup>66</sup> initiated by the Centre for Development and Population Activities in 1987. Targeting out-of-school young women ages 12–20, it offers various services in periurban slums and rural areas—offering knowledge of reproductive health and services, providing vocational training, and promoting women's empowerment through recreational events. Results from treatment and control group comparisons indicate that the program improved the welfare of young women—delaying marriage, increasing knowledge of reproductive health, strengthening decision-making skills, and increasing the use of health care services (figure 6.7).

A quasi-experimental study in Nepal reveals that an integrated reproductive health program targeted to youth ages 14–21 had a large significant impact on behavior, such as the use of reproductive health care services, teenage pregnancy, and marrying young. A distinctive feature of the intervention was that it also involved



**Figure 6.7** In India, acquiring life skills can stimulate young women's demand for health services



Source: Center for Development and Population Activities (CEDPA) (2001).

adults, teachers, and health care providers in assessing the needs of youth and designing delivery mechanisms. This may have contributed to the success of the program.<sup>67</sup>

Like the Better Life Options program, the life skills program of the Indian Institute for Health Management in Pachod in rural Maharashtra operates in rural areas and urban slums and targets out-of-school females ages 12–18. Offering a one-year course one hour each weekday evening, led by women trained in health and nutrition, literacy, and life skills, it had a significant impact on delaying marriage for the young women.<sup>68</sup>

### *Giving young women resources to delay marriage*

Interventions that encourage girls' schooling—scholarships, vouchers, free books, and uniforms—can also discourage early marriage and hence early pregnancy. The well-known secondary school stipend program in Bangladesh (box 6.6) is promising because girls' average age at marriage is so low there. But it is not clear, because of the lack of a comprehensive evaluation, whether it delayed marriage for girls—a study of two villages found that it did.<sup>69</sup> Better employment opportunities for young women, such as the increased job opportunities in garment factories in Bangladesh, can also delay marriage.<sup>70</sup>

## Supporting those who become mothers at an early age

Girls who become mothers at a very young age need to overcome consequences such as interrupted schooling. Young mothers may discontinue school because of lack of family or community support and the physical demands of pregnancy and childbirth. Others may drop out of school when they marry, then later face difficulties in finding paid work and earning a living. Because most teenage mothers are from poor households, second-chance programs must address their disadvantages.

### *Flexible school policies*

Flexible school and social policies can mitigate the adverse effects of teen pregnancy. In the United States, where teen pregnancy is among the highest in the developed world,<sup>71</sup> it is often regarded as a public health problem because teen mothers and their children are also more likely to have higher poverty rates and greater dependence on the welfare system.

Some U.S. studies find a significant causal impact of teenage childbearing on schooling and earnings, while others find that a good part of the consequences can be attributed to prior social and economic disadvantages and not to teenage childbearing. The results, rather than being contradictory, might reflect different periods of time.<sup>72</sup> In the 1960s and 1970s, when social conditions made it difficult for girls to cope with pregnancy, teen mothers faced irreversible consequences. Over time, better access to second-chance programs ensuring school continuation for teen mothers may have reduced the causal impact of teen pregnancy on a range of outcomes. High school equivalency programs and welfare programs help teen mothers make up for their low income and catch up with their schooling. School systems also adapted to the education of pregnant and parenting teenagers, and this might have kept them in school.

Evidence from South Africa suggests that such supportive schooling policies helped teen mothers catch up and complete their education.<sup>73</sup> More countries in Sub-Saharan Africa and Latin America allow for more

liberal reentry policies, and some even allow pregnant girls to remain in school during pregnancy (Burkina Faso, Cameroon, Chile, Peru). This is an improvement from the 1990s, when most countries in Sub-Saharan Africa required expulsion of pregnant girls. The implementation of these policies has not been documented, and their effects have not been evaluated.<sup>74</sup>

### *Integrated programs to meet the diverse needs of a teen mother*

Since 1977, the Women's Center of Jamaica Foundation has supported unmarried teen mothers in an integrated program that meets many needs of very young mothers.<sup>75</sup> Offering teen mothers a chance to complete their education, it encourages young girls to avoid repeating pregnancy during their teenage years. It also offers them vocational training and day care.

The program provides formal schooling for pregnant girls ages 12–16—and personal and group counseling about the challenges of teen pregnancy and motherhood. It makes referrals to local hospitals and clinics for health services, including family planning. It also offers practical services to support young mothers during and after their pregnancies, such as day care for infants, classes in parenting and child nutrition, and information about women's and children's legal rights. It also provides job skills training and vocational training and placement for women ages 18–24. No rigorous evaluations are available, but the program appears to have improved the lives of teen mothers in Jamaica. Program benefits were transmitted across generations: all children of program participants were enrolled in school, and none of the teenage daughters of participants had pregnancies. Most girls in the program had only one child.<sup>76</sup>

Many policies and programs for nutrition and reproductive health can prepare young people to form families (table 6.1). Countries with widespread anemia must give priority to nutritional interventions. This chapter has shown that anemia is highly prevalent among young women in a number

#### **BOX 6.6**

### *Cash transfers conditional on delaying marriage to promote school attendance for girls in Bangladesh*

In 1977 a local NGO in Bangladesh began a small project to provide secondary school stipends to girls who had completed primary school, on the condition that their parents agreed to delay their marriage. In 1994, with support from the International Development Association, the program evolved into the Female Secondary School Assistance Project (FSSAP), covering all 460 rural subdistricts in the country.

The conditions for continuing participation were that girls would agree to

- attend school for at least 75 percent of the school year,
- obtain at least 45 percent marks on average in final examinations, and
- remain unmarried until completing the secondary school certificate exam.

Each recipient was allowed to withdraw cash from the bank independently. An extensive information campaign was conducted to raise public awareness of the importance of female education. The project also took steps to enhance the school infrastructure, recruit female teachers, and

provide occupational training to girls leaving school.

According to an operational evaluation, the project increased girls' enrollments. There were serious concerns, however, about the impact on educational performance. In 1999, only a quarter of the girls who received stipends in grade 10 passed the secondary school certificate exam, less than the nationwide secondary school completion rate for girls. This could be because some schools may have inflated enrollment and attendance data to meet performance targets. The evaluation also found no evidence that the program led to a rise in girls' age at marriage.

The first phase of the FSSAP neither collected baseline data nor established an external control group, which made it impossible to carry out an impact evaluation. To remedy this, a rigorous evaluation component was added in the second phase of the FSSAP (initiated in March 2002).

Sources: Bhatnagar and others (2003); Khandker, Pitt, and Fuwa (2003); and World Bank (2003c).

of countries and that iron supplementation programs may not always reach them. Few countries where anemia is a problem have a national program of iron supplementation. Use of antenatal care, during which iron supplements are typically offered to anemic mothers, is far from universal in some regions, particularly South Asia. Even where most mothers use antenatal care (and where anemia is common), only a small percentage report receiving iron supplements. There is also scope to improve young girls' access to iron supplementation through school-based health programs.

This chapter has also identified countries that need to pay more attention to intervention in increasing knowledge on reproductive health. On average, a high percentage of young people use reproductive health services such as antenatal care in medical clinics. However, of those who used the service, the percentage with critical knowledge about topics such as pregnancy complications and



**Table 6.1 Programs and interventions that prepare youth for transition to family formation**

|  | Proven successful   | Promising but unproven   | Unlikely to be successful  |
|--|---|--|--|
| <b>Opportunities</b>   |   |  |  |
| <i>Improving access to services</i>                          | <p>Conditional cash transfers for use preventive health services (Mexico and Nicaragua) (<i>first-time parents were not the focus of program</i>)</p> <p>Micronutrient supplementation and food fortification for children and for young women before and during pregnancy</p> <p>Family planning and maternal and child health programs (<i>not targeted to young mothers</i>)</p> | <p>Reorienting reproductive health, family planning services, and safe motherhood services to youth needs</p> <ul style="list-style-type: none"> <li>• Training providers to deal with youth</li> <li>• Family planning outreach (doorstep delivery) to youth</li> </ul> <p>Engaging the private sector</p> <ul style="list-style-type: none"> <li>• Contracting out family planning services in some countries (Profamilia in Colombia)</li> <li>• Public-private partnerships</li> <li>• Social marketing of contraceptives</li> </ul> <p>Integrating STI and HIV services with family planning and maternal and child health (integrating condom distribution)</p> <p>Increasing men's uptake of reproductive health and contraceptive services</p> |  |
| <i>Preventing early marriage</i>                             |   | <p>Legislation setting a minimum age at marriage; banning child marriage</p> <p>Delaying girls' marriage by offering financial incentives to parents (for example, Our Daughter, Our Wealth program in Haryana, India)</p>   |  |
| <b>Capabilities</b>  |   |  |  |
| <i>Providing health and nutrition education</i>              | <p>School-based sex education to prevent teen pregnancy (Chile, Adolescence: Time of Choices)</p> <p>Nutrition education to mothers to improve child nutritional status through feeding practices (hand washing in rural Bangladesh) (<i>not necessarily targeted to young mothers</i>)</p>   | <p>Reproductive health education and education about safe motherhood and child health to</p> <ul style="list-style-type: none"> <li>• Young pregnant girls (Mexico, hospital-based programs)</li> <li>• Newlyweds (Bangladesh Integrated Nutrition Program, Bangladesh Newlyweds Program; India, First-time Parents Project, Community Based Approach to Married Girls' Reproductive Health Project)</li> <li>• Men (Suami Siaga in Indonesia)</li> </ul> <p>Nutrition education to improve young people's dietary intakes, especially those programs directed to teenage mothers</p>  | <p>Programs offering information that is a) general in content; b) not culturally relevant</p> |
| <i>Teaching parenting skills</i>                             | <p>Early child services and responsive parenting skills (Jamaica and Ecuador) (<i>not targeted to young or first-time parents</i>)</p>  |  |  |
| <i>Empowering young women</i>                                |   | <p>Conditional cash transfers to young women (Bangladesh Female Secondary School Stipend Program)</p> <p>Life skills plus livelihood training—(Better Life Options Program in India)</p>   |  |
| <b>Second chances</b>  |   |  |  |
| <i>Supporting teen mothers with flexible school policies</i> |   | <p>School policies allowing pregnant girls to continue in school or to return after delivery</p> <p>School equivalency programs</p>  |  |
| <i>Integrating programs</i>                                  |   | <p>Combining child care and the opportunity to learn livelihood skills (Women's Center of Jamaica Foundation)</p>  |  |



infant care is low in many African countries and some countries in Latin America and South Asia (see figure 6.6). These countries must invest further in quality and delivery mechanisms for reproductive health care services.

Most programs that have been shown to enhance reproductive health effectively do not explicitly focus on youth (table 6.1). This chapter has highlighted some of the interventions that can help to prepare youth for the transition to parenthood. Promising pro-

grams have three features in common (table 6.1). First, they target youth and have youth-friendly components. Second, they focus on more than the transition to parenthood because this transition is interlinked with other transitions such as school and work, both associated with socioeconomic background. Third, because transition to forming families involves multiple decision makers in various cultural settings, they involve not just the young couple, but also parents, teachers, caregivers, and the community.