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Effects of Education on Reproductive Behavior: Lessons from Pakistan

DESPITE A national family planning program almost three decades old and longstanding government policies to reduce the birth rate, Pakistan has yet to experience sustained declines in fertility. Updated information published in the *Pakistan Demographic and Health Survey 1990/1991* confirms continued high fertility levels. Pakistan, which has a population of 112 million, is one of the 10 most populous nations in the world. If its current population growth rate of 3 percent a year is not reduced, the population will double in only 23 years.

At current fertility rates, Pakistani women will have an average of 5.4 children each by the end of their reproductive years. One reason is that only 12 percent of currently married Pakistani women use a contraceptive method. Even

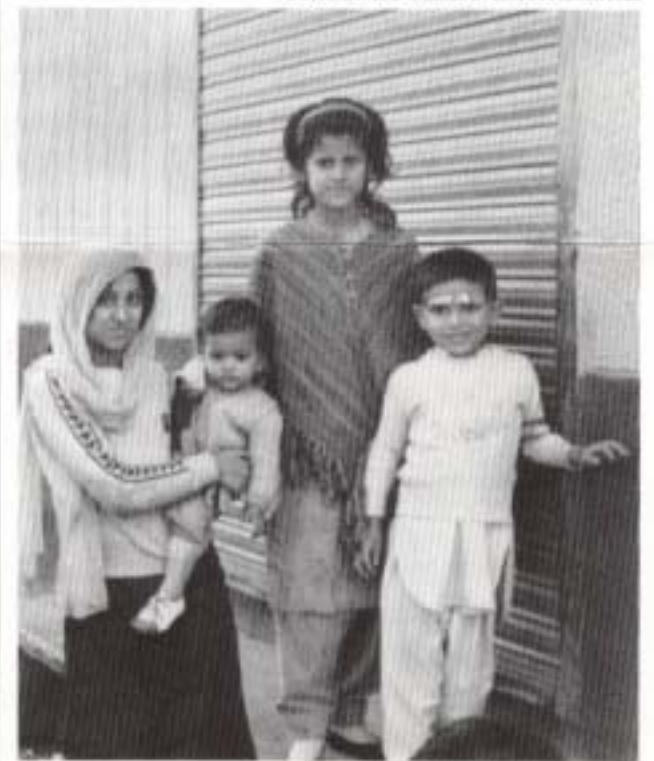
though this represents nearly a threefold increase over the 15 years preceding the survey, it is far lower than the rates for use of contraception achieved by other South Asian countries such as India (49 percent), Bangladesh (40 percent), and Sri Lanka (62 percent).

There is evidence in Pakistan, however, of lower fertility among some groups—most notably women with secondary levels of education, primarily those living in urban areas. Educated urban women, unlike their rural, unschooled counterparts, tend to have relatively high levels of contraceptive use and relatively low desired and achieved fertility.

A recent study of reproductive behavior in urban Pakistan explores the routes through which female education affects fertility among

urban Pakistani women and provides a basis for determining the potential demographic effects of educational interventions in Pakistan and in other South and West Asian settings.

Thanh Le/Macro International



At current fertility rates, Pakistani women will have an average of 5.4 children each. Women with no formal education will have two more children, on average, than women with at least some secondary education.

Background

THE SOCIAL environment in Pakistan presents a challenge to family planning efforts. Factors that are generally associated with high fertility rates worldwide are found in Pakistan: high illiteracy and low educational attainment (particularly among females); poverty; relatively high infant, child, and maternal mortality; a strong preference for sons; poor access to health facilities; and a low status for women in society. These factors have likely reinforced one another in maintaining high fertility in many parts of the country.

Numerous fertility surveys in Pakistan have found a wide disparity between the percentage of women who know about a modern contraceptive method and the percentage who are using contraception. Responses to the surveys, however, have also indicated the existence of a potential demand for family planning services. According to the *Pakistan Demographic and Health Survey*, more than one in four Pakistani women has an unmet need for family planning services, either to space the next birth or to stop childbearing.

Survey Results: The Effects of Education

THE PAKISTAN Demographic and Health Survey (PDHS) was a nationally representative survey of ever-married women of ages 15–49 and their husbands. Part of the worldwide Demographic and Health Surveys program, it was designed to collect data on fertility, family planning, and maternal and child health. The PDHS was conducted by the National Institute of Population Studies in Pakistan in collaboration with the Federal Bureau of Statistics. IRD/Macro International provided technical as-

sistance; funding was provided by the U.S. Agency for International Development and the government of Pakistan.

Among the key findings from the 1990–91 survey was the importance of women's education as a determinant of fertility levels. Fertility rates were shown to vary widely by education: women with no formal education (who comprise 79 percent of all women) can be expected to have, on average, two more children during their reproductive years than women with at least some secondary education. (See Figure 1.)

Educational attainment of mothers was also shown to have a significant effect on infant and child mortality and morbidity and issues related to family health. For example, women who had attended secondary school or who lived in major cities were shown to have received prenatal care for the large majority of their births. In contrast, rural and uneducated mothers received prenatal care for just one birth in five. Furthermore, children of mothers with no education were two and a half times more likely to die before age 5 than were children of women educated to the second-

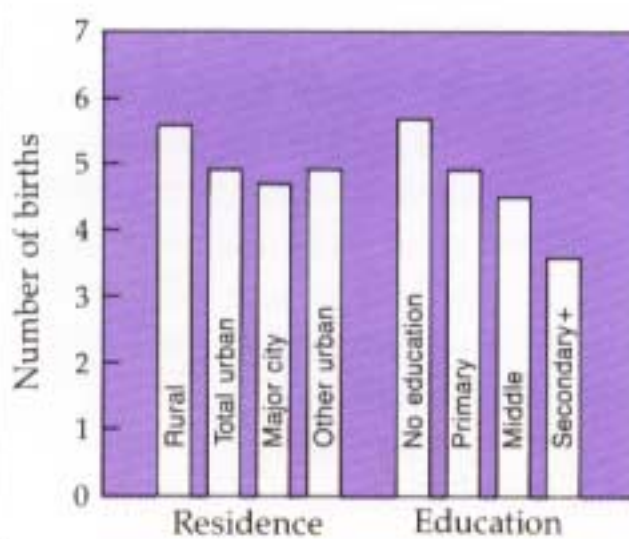
dary level or higher. Indeed, according to the survey report, "each incremental change in education is associated with significant gains in survival" (p. 115).

Pakistan has one of the lowest literacy rates in the world (31 percent), with a wide gap between rates for males (43 percent) and females (18 percent). Overall, 30 percent of males and 20 percent of females have attended only primary school, while 16 percent of males and 7 percent of females have reached secondary school or higher. On average, males have completed 3.2 years of schooling, whereas females have completed only 1.6 years. In rural areas, however, 51 percent of males and nearly 80 percent of females have received no schooling at all.

Use of contraception in Pakistan is also low. Only 12 percent of married women were using a contraceptive method in 1991. Most women know of at least one modern contraceptive method and approve of the use of family planning. Urban, educated women are, however, much more likely than other women to put that knowledge to use. Women living in major cities are twice as likely as rural women to know of a source of supply for modern contraceptives and five times as likely to be current users. Differences of a similar magnitude exist between women who have attended secondary school and women with no formal education (Figure 2).

Thus, educated urban women tend to have higher levels of contraceptive use and lower desired and achieved fertility than their rural, unschooled counterparts. Indeed, the recent increase in contraceptive use has occurred almost entirely in urban areas, where better-educated women are concentrated and where contraceptive prevalence rates are now around 26 percent. Thus, according to the

Figure 1.
Total fertility rates by selected characteristics



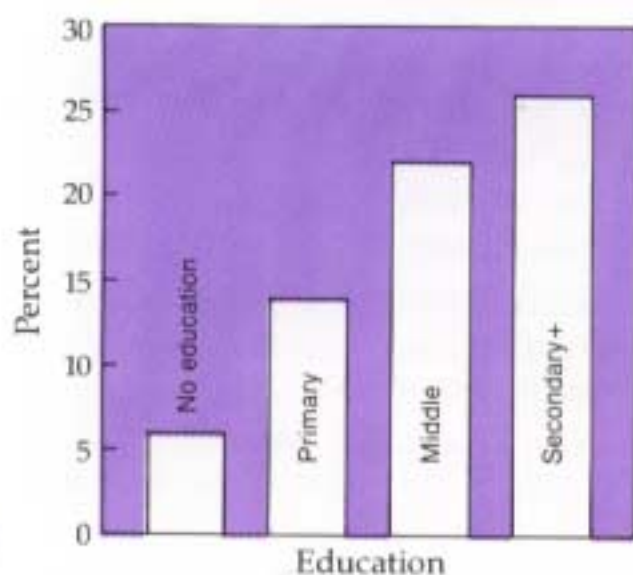
Source: PDHS (1992:41); PDHS Summary Report (1992:4).

PDHS report, "women in these areas appear to be leading the way in the early stages of fertility decline" in Pakistan.

A Study of Urban Women

ZEBA A. SATHAR, chief of research at the Pakistan Institute of Development Economics (PIDE), and Karen Oppenheim Mason, a research associate at the East-West Center, have studied a group of women in the largest urban center of Pakistan—Karachi—to investigate the reasons why better-educated women in urban Pakistan have relatively few children. The data they analyzed were collected in 1987 by Sathar and Shahnaz Kazi, also a researcher at PIDE. Sathar and Mason have tried to determine if the educational differentials that exist in Karachi are a product of couples' attempts to limit family size or instead arise as an unintended consequence of women's schooling. They addressed two specific questions: Do better-educated women have lower fertility only because

Figure 2.
Use of modern contraceptive methods by education
(Currently married women 15–49)



Source: PDHS Summary Report (1992:9).

they marry at a more advanced age or breastfeed their children for a long time—thus reducing the amount of time they are sexually active or physiologically able to become pregnant? Or, are better-educated women and their husbands trying to limit the number of children they have, and, if so, for what reasons?

The analysis considered three types of factors that could affect the relationship between female education and cumulative fertility:

- Consequences of education that could affect the length of time women are at risk of becoming pregnant, such as how long they have been married and sexually active

- Consequences of education that influence whether women or their husbands, or both, are motivated to limit family size, such as whether the wife works in the formal sector of the economy

- Consequences of education that influence women's knowledge of or ability to obtain effective birth control methods, such as their income levels or their acceptance of the idea of family planning

Whether the first set of factors could completely explain the relationship between women's schooling and fertility was of particular interest because of the evidence from other populations that fertility will normally fall to the long-term population replacement level only when married couples deliberately limit family size.

According to the researchers, although better-educated urban women do, on average, marry later than their less-educated counterparts, educational differentials in fertility in urban Pakistan cannot be explained entirely by this factor. Even when differences in exposure time are taken into account, better-educated urban women were shown to bear markedly fewer children than do less-educated women. For

example, at a given marriage duration, urban women with 10 years of schooling were shown to have nearly one less child than women with no schooling.

Thus, although some of the educational difference in fertility is an unintended consequence of women's schooling, some also results from the deliberate effort of well-educated women and their husbands to limit the number of children they have. The study found that two consequences of women's education appear to motivate fertility limitation:

- The tendency of well-educated women to work in the formal sector of the economy, where wages, job security, and conflicts between work and child care are usually greater than in the informal sector of the economy

- Higher incomes
Women's education therefore encourages fertility decline for more than one reason.

Policy Implications

THE AUTHORS conclude that the education of women appears to be a "potentially powerful force for fertility change in urban Pakistan." Greater investments in female schooling in urban Pakistan would seem likely to facilitate fertility decline not only because they will lead to an older average age at first marriage but also because they will encourage the limitation of childbearing within marriage.

Seen against the recent data from the Pakistan Demographic and Health Survey, the findings from the Sathar and Mason study suggest that education is a good investment in lowering fertility, particularly as it also encourages women to work in the formal sector. Because such work has a significant effect on the fertility of urban women, the government should also

look beyond growth in schooling to broader improvements in economic opportunities for women. Finally, increased accessibility to family planning services in Pakistan—both in terms of availability of services and knowledge of contraception—is critical.

Conclusion

THE LEVEL of educational attainment in a society is an important indicator of social development. Education is considered to be a major factor underlying social status. It often is also an important determinant of fertility, family-size preferences, contracep-

tive knowledge and use, age at marriage, infant and child mortality, and infant and child health care.

The evidence from Pakistan corroborates the frequently shown correlation between the improved education of women and fertility decline. An upgrading of female schooling throughout Pakistan and perhaps in other South and West Asian countries as well would therefore appear to be a wise investment from a demographic as well as a development point of view. Efforts to accelerate progress in the area of education in Pakistan are an important adjunct to efforts to improve child survival, strengthen family planning services, and encourage fertility decline.

Thanh Le/Macro International



Education is a good investment in lowering fertility, particularly as it also encourages women to work. Employment in the formal sector has a significant effect on the fertility of urban women.

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Writer: Allison Greenspan

Managing Editor: Anne Stewart

Production Editor: Corinne Holland

Editorial Committee: John Bauer, Philip Estermann, Andrew Kantner, James Palmore, Robert D. Retherford, Sandra E. Ward

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Correspondence Address:

East-West Center

Program on Population

1777 East-West Road

Honolulu, Hawaii 96848 USA

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Pakistan Demographic and Health Survey 1990/1991 (summary and full report), by National Institute of Population Studies (Pakistan) and Demographic and Health Surveys, IRD/Macro International Inc., 1992.

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"1992 World Population Data Sheet." Washington, D.C.: Population Reference Bureau.

Previous issues of *Asia-Pacific Population & Policy* are available upon request:

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