

December 2001

This study is part of a broader project at the Population and Ecology Research Laboratory (PERL) in Nepal that examines the influence of changing social contexts on the timing of marriage, childbearing, and contraceptive use.

PERL was established in 1995 to conduct research on population, social change and the environment; to train scholars in social science research methods; and to create institutional and technical capacity for conducting social science and demographic research in Nepal. PERL works with the Institute for Agriculture and Animal Science at Tribhuvan University, Kathmandu University, the Institute for Social and Environmental Research, and the University of Michigan.

## *Mass Education and Childbearing*

### *What is the relationship between mass education and childbearing?*

In this study we examine educational opportunities and participation in school, and their effects on childbearing decisions. We consider couples' (both husbands' and wives'), their parents', and their children's education as mechanisms linking changes in educational opportunities to childbearing behavior.

Education is likely to influence childbearing behavior for a number of reasons. First, education gives women new opportunities for status attainment other than childbearing, thus reducing their desire for children. Second, schooling decreases interaction with family members, weakening historical family values, and—to the extent that historical family values emphasize large families—this change reduces men's and women's demand for children. Third, schooling increases consumption aspirations, increasing the relative costs of childbearing and thus reducing the demand for children. Lastly, education spreads knowledge about contraceptive methods, reducing fertility regulation

costs and increasing contraceptive use to limit fertility. We would expect husbands' education to be as important as wives' education, particularly when the contraceptive methods most commonly available are male methods, such as vasectomy.

The education of children is also likely to have an impact on their parents' childbearing behavior. The spread of mass education creates an expectation within the family and in society in general that youth is a period of investment. Parents are likely to limit the number of children they have in order to increase the quality (educational attainment) of each child. Education also increases the costs of children by creating new expenses and reduces the benefits of childrearing by removing children from the family's productive system.

#### **Data**

We use data from the Chitwan Valley Family Study (CVFS) to examine the effect of education and educational

opportunities on permanent contraceptive use. In 1996, the CVFS collected information on residents of a representative sample of 171 neighborhoods in Western Chitwan Valley. Neighborhoods were defined as clusters of approximately 5 to 15 households. Information about changes in the location of nearby schools was collected using the Neighborhood History Calendar technique – a combination of archival, ethnographic, and structured interview methods. The CVFS then interviewed every resident between the ages of 15 and 59 in those 171 neighborhoods, and their spouses, with an overall response rate of 97% and 5,271 completed interviews. Our analyses of education and childbearing are based on responses from ever-married women 25 to 54 years of age with at least one child.

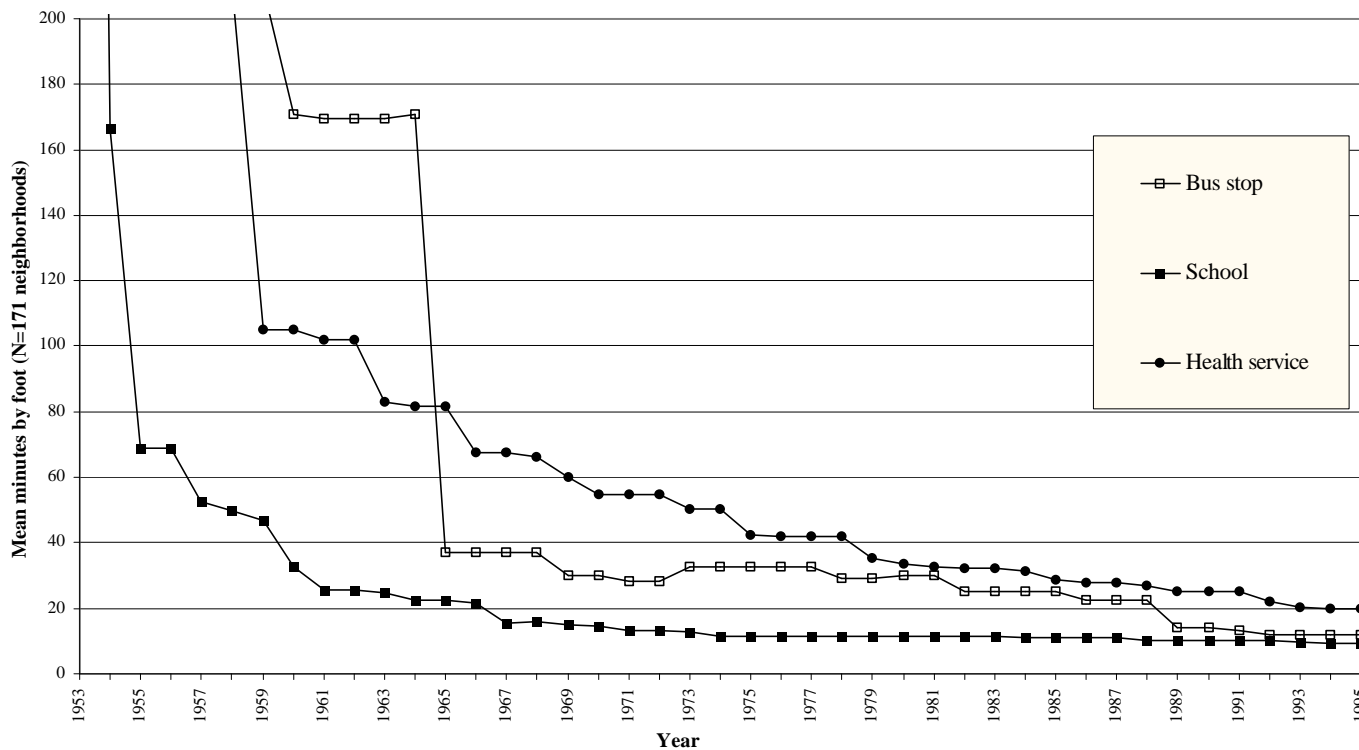
We analyze three community infrastructure characteristics for women during childhood and adulthood. Childhood educational opportunities were assessed by asking respondents: “Was there a school within a one-hour walk

***“Living near a school during childhood dramatically increases a couple’s contraceptive use in adulthood, regardless of the educational attainment of the woman, her husband, or her children.”***

from your home at any time until you were 12 years old?” Similar questions were asked about the presence of a health post and a bus stop during childhood. Measures for current community characteristics were constructed from Neighborhood History Calendars, and include the presence of a school, health post, or bus stop within a five-minute walk.

We analyze contraceptive use aimed at stopping childbearing – measured as the first time a woman uses

**Figure 1: Change over Time in Average Minutes by Foot to the Nearest Nonfamily Service or Organization**



sterilization, Norplant, an IUD, or Depo-Provera. Although a variety of contraceptive methods have been available in Nepal for the past 20 years, sterilization accounts for the vast majority of averted births. Even methods that could be used to merely delay childbearing, such as Norplant, Depo-Provera, or the IUD, are often used to stop childbearing in Chitwan. Data from the CVFS indicate that the vast majority of women who had ever used these methods said that they wanted no more children.

## Findings

- The proportion of women who have ever used *any* contraception has increased dramatically in the Chitwan Valley over the past three decades. Less than 5% of the cohort born in 1942-51 (ages 45 - 54 in 1996) used contraception by age 25. Yet more than 35% of the cohort born in 1962-71 (ages 25 - 34) had used contraception by age 25.
  - The community infrastructure of Chitwan Valley changed significantly from 1953 to 1995, as shown in Figure 1. The average number of minutes (means for all 171 neighborhoods) to reach the nearest school, health service outlet, or bus stop declined dramatically during the 1950s and 60s, with change slowing in more recent decades. The graphs also indicate that schools spread through the Valley before health or bus services.
  - In all, 79% of the women reported living within a one-hour walk of a school some time before age 12, 45% reported living within a one-hour walk of a health post, and 38% reported living within a one-hour walk of a bus stop.
  - Multivariate analyses indicate that access to schools in childhood, a husband who attended school, access to schools in adulthood, and children's school attendance substantially increase couples' permanent contraceptive use.
  - Living near a school during childhood dramatically increases a couple's contraceptive use in adulthood, regardless of the educational attainment of the woman, her husband, or her children.
- Couples in which the husband attended school reported 41% higher rates of permanent contraceptive use.
  - Couples that live near a school after the birth of their first child have about 20% higher rates of contraceptive use than couples that do not.
  - Couples that have sent a child to school have approximately 40% higher rates of contraceptive use than couples that have not.

Study results support the argument that educational opportunities affect women's fertility by increasing their propensity to send their children to school rather than by exposing them to new knowledge in school.

## Program Implications

Our results indicate that the spread of schools throughout the communities under study has had a tremendous impact on couples' childbearing behavior and thus on family size. Specifically, we found that living near a school as a child or as an adult, having an educated husband, and sending children to school all had strong positive effects on women's permanent contraceptive use.

The strong effects of education and educational opportunity on childbearing behavior have important implications for policies aimed at reducing population growth, particularly in contexts where fertility remains high and educational opportunities are still limited for the general public.

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Our results suggest that, in addition to increasing access to family planning programs and developing policies aimed at reducing couples' demand for children, government officials should increase educational opportunities by building neighborhood schools.

However, our results also indicate that the largest education-related decreases in family size are realized when parents actually send their children to these schools. Thus, mandatory schooling policies also may play a significant role in reducing fertility.



## References

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For further information on this project, contact the Population and Ecology Research Laboratory, Institute of Agriculture and Animal Science, Rampur, Chitwan, Nepal.  
E-mail: [iaas@perl.wlink.com.np](mailto:iaas@perl.wlink.com.np).

*Research Brief* is a research newsletter of the Population and Ecology Research Laboratory (PERL). Research and training activities of PERL are funded by awards from the National Institute for Child Health and Human Development (NICHD) in the United States, Mellon Foundation, Hewlett Foundation, and the Fogarty International Center of the National Institutes of Health.

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