

Doorstep service. A visit from a family planning worker in Matlab, Bangladesh.

NEWS

Does Family Planning Bring Down Fertility?

Experts have long debated how much access to modern contraceptives matters in places where couples want large families

IT'S A LONG-RUNNING DEBATE IN THE development field: whether family planning programs help reduce high fertility rates. Many demographers say that millions of women lack access to contraception, and if that gap is filled, they will have fewer children. But some economists argue that couples have large families because they want them, and until desired family size drops, family planning programs are a waste of money.

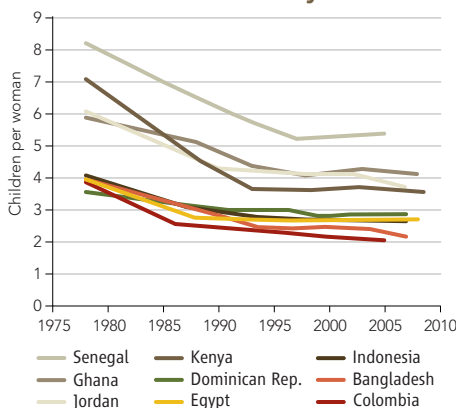
More data from countries with strong family planning programs and falling birth rates have brought the two sides closer together. Now some are urging policymakers to test new projects to make sure they work in target communities before they are widely deployed. "What we need is evidence of what brings fertility down," says Yale University economist T. Paul Schultz.

The demographers' argument is based on health surveys done in developing countries every few years. Women are asked whether they want to delay or stop having children and whether they are using modern contraceptives. By dividing this number by the total number of married women of childbearing age, researchers get an "unmet need"—for example, 18% for Latin America and 28% for sub-Saharan Africa, according to 2009

figures from the Guttmacher Institute. Overall, 215 million women, or 15%, in the less developed countries have an "unmet need" for family planning.

The problem with "unmet need" numbers is that "they don't tell us anything about causation," says social demographer Amy Tsui of John Hopkins University in Baltimore, Maryland. Just because women aren't using contraceptives doesn't mean that they would if they were available or that they

Trends in Desired Family Size



Fertility driver. Couples in some sub-Saharan countries still want large families.

would have fewer children overall.

Adding to these doubts is an influential 1994 study from former World Bank economist Lant Pritchett. When Pritchett, now at Harvard University, plotted survey data on desired fertility versus actual fertility for more than 50 developing countries, the data clustered along a straight line—desired family size explained 90% of the correlation. And places with greater access to birth control didn't necessarily have lower fertility, he found. Pritchett's conclusion: The sky-high fertility rates in some countries will drop only when couples decide they want fewer children. And the strongest predictors of a woman's desired family size are her income, her education level, and her infant's chances of surviving, many studies have found.

That suggests development dollars will be far more effective if they're spent on schooling girls, not on family planning, argues Pritchett, who says updated data show his study is still "fundamentally right."

Some blame the Pritchett study—along with a shift in health funding to the HIV/AIDS epidemic, conservative governments, and concerns about coercive programs such as

China's one-child rule—for a decline in donor and country spending on family planning after a 1994 United Nations meeting on population in Cairo.

Since then, the family planning camp has continued to make its case. One new argument is that focusing solely on education won't work in countries like Niger, where if average fertility rates remain at 7.4 births per woman, the population could soar from 16 million today to 58 million by 2050, says political scientist Martha Campbell, a lecturer at the University of California, Berkeley. "You can't expand [schools] fast enough," she says. Others argue that even if family planning programs only help women space births, the benefits far outweigh the costs because wider spacing cuts maternal deaths and improves child health.

Family planning advocates also say that looking only at access, as Pritchett did, leaves out many other factors that determine whether women will use birth control, such as cultural taboos and fears of side effects that can be addressed only with intense public education campaigns. "A strong government can overcome many of those barriers," says demographer John Cleland of the London School of Hygiene and Tropical Medicine, and also bring down desired family size

by convincing people that they're better off with fewer mouths to feed.

Cleland points to Kenya, where fertility rates dropped from 8 to 4.8 births per woman after the government launched aggressive family planning efforts in the early 1980s. In comparison, in culturally and economically similar Uganda, which has a weaker family planning program, fertility has remained high, notes demographer John Bongaarts of the Population Council in New York City. He says other country comparisons also bolster the case for family planning (see p. 574).

Still, those examples don't directly show that family planning programs lower fertility rates. One of the few studies that provides such evidence was conducted in Matlab, a region of Bangladesh where Muslim practices and frequent floods discourage women

from leaving home. Starting in 1977, family planning workers regularly visited homes in half of Matlab's 141 villages to offer married women birth control methods. By 1996, while fertility had dropped across Matlab, it was 16% lower in the study villages than in control villages (or at least one fewer birth per woman over 30), according to estimates by Schultz and Shareen Joshi. Elements of the program were extended to all of Bangladesh, and women now have on average just 2.7 children, "which is astonishing for a country that poor," Bongaarts says.

Although the debate isn't over, "there's been a little bit of convergence" about the role of family planning versus education, says economist David Lam of the University of Michigan, Ann Arbor. "It was either-or. I think most people agree now it's both."

S Video featuring author Jocelyn Kaiser.
www.scim.ag/pUaqth

Pritchett says he now believes that family planning can accelerate a drop in fertility rates in countries in a "sweet spot" where desired family size has begun to fall.

As family planning makes a comeback, some researchers are calling for policymakers to test projects with controlled experiments, such as the Matlab study. One recent example is a study in Zambia that gave about 1000 women vouchers for free contraceptives. While contraception use rose over the next year, fertility fell only among women who received the vouchers without their husbands present. In this group, births unwanted by the woman dropped 57%. This made sense because often the wives wanted fewer children than their husbands did, says study leader Nava Ashraf, an economist at Harvard.

Such studies show that "differences in design can make a huge difference in the impact," Ashraf says. **-JOCELYN KAISER**

NEWS

A Pitched Battle Over Life Span

Predicting whether life expectancies will keep rising is as much art as science. Two demographers disagree about what the coming years will bring

DEMOGRAPHERS MIGHT NOT SEEM THE SORT to engage in fiery debate—until you talk to James Vaupel and S. Jay Olshansky. The two sit at opposite poles of a dispute (although never in the same place at the same time) that has long fueled speculation: What will human life expectancy look like in the years to come? Will it continue with steady, almost linear upticks? Or will it veer in a different direction?

Vaupel, an American who works mainly at the Max Planck Institute for Demographic Research in Rostock, Germany, and Olshansky of the University of Illinois in Chicago, appear to have sourced their crystal balls from very different manufacturers. For 20 years they've been arguing, joined by demographers worldwide, trying to answer a question that is essentially unanswerable: whether the future will resemble the past. Vaupel says it will, with life expectancies at birth rising unabated by about 3 months a year in countries where residents live the longest. Olshansky counters that sober realities, such as widespread obesity, will cut life spans short.

This all might sound philosophical, with little practical value—but in fact, it has very real-world implications. For example, every

year of life expectancy costs the U.S. Social Security Administration \$50 billion. Knowing whether a 90-year-old who needs heart surgery is likely to live much longer helps determine whether she receives that care.

Meanwhile, the Vaupel-versus-Olshansky divide is so deep that it's pulled others into the fray. "I didn't really begin studying this until a decade ago," says John Bongaarts of the Population Council in New York City. "I was intrigued by the fierceness of the passions on both sides. I said, 'What the heck is going on here?'" He would quickly find out.



Caution ahead. S. Jay Olshansky says widespread obesity could boost death rates.

Lighting the fires

For Olshansky, the debate over limits to the human life span began in 1990, when he published a paper in *Science* (2 November 1990, p. 634). Called "In Search of Methuselah: Estimating the Upper Limits to Human Longevity," the paper postulated that "it seems highly unlikely that life expectancy at birth will exceed the age of 85."

At the time, the idea that life span couldn't keep on rising was popular. Life expectancy had nearly doubled in some countries in the previous 150 years. Many demographers concluded "that this is not going to last forever," says Juha Alho, a statistician at the University of Eastern Finland in Joensuu. But these were gut feelings, "a judgment call," he says, assumptions not grounded in data. Life-span limits had been postulated many times in the past. Meanwhile, people just kept on living beyond when they'd been predicted to expire.

Olshansky examined how much mortality from heart disease, cancer, and other killers would need to drop in order to boost life expectancy. "Most of the past increases in life expectancy occurred because we saved the young," he says. "That can only happen once." Even a cure for cancer, he calculated, would add only 4 or 5 years of life across a population. The 85-year limit is a "soft" one, he says, guided by aspects of human biology that appear fairly fixed, such as the timing of menopause.

The idea that a population's life expectancy would be grounded in evolution, as Olshansky postulates, makes sense. Salmon,