

April 1987 No. 2

Population Institute 卐 East-West Center

Honolulu, Hawaii

Sex Preference and Fertility: What Is the Link?

In many nations, couples often prefer to have sons rather than daughters. Couples may also want to have at least one child of each sex. Researchers have argued that the existence of such sex preferences increases fertility rates and adds to population growth. But it has been difficult to measure the extent of sex preference and its effect on birth rates.

A new method now makes it possible to measure the impact of sex preference on fertility. A study based on the new method demonstrates that sex preference does not have as much influence on a nation's fertility levels as had previously been

thought. This is the case because most couples achieve their minimum desired number of sons and daughters early in their childbearing careers, by sheer biological chance.

These new findings have important policy implications. Officials in many countries are conducting educational campaigns to encourage couples to be satisfied with children of either sex. But in most countries efforts to change family beliefs that favor having sons are not likely to have a major impact on reducing fertility levels—although other social goals may be achieved by campaigns that change such attitudes.



A new study demonstrates that couples' preference for sons or daughters does not have as much influence on a nation's fertility levels as had previously been thought.

Wayne Levin

Son Preference and Fertility

In many less developed countries—particularly in rural areas—sons are seen as more productive workers than daughters, as providers of old-age security for their parents, and as carriers of the family name. Since couples who would like to have a surviving son may go on reproducing until they get one boy or even two boys, people have argued that son preference is one cause of high fertility. But in some countries, South Korea for example, fertility has fallen rapidly despite a strong preference for sons. Is son preference as much of an obstacle to effective family planning programs as is sometimes thought?

To measure the effect of sex preference on such practices as the use of modern contraception and the desire for additional children, East-West Center Research Associate Fred Arnold developed a new method of statistical analysis. When Arnold applied his new method to data from Egypt, he was able to learn the extent to which couples there prefer sons over daughters. A 1977 survey of 36,000 households in Menoufia Governate, covering 38 villages in rural areas of the Nile delta in Lower Egypt, showed that couples increased their use of modern contraceptives in direct proportion to an increase in the number of sons. For example, couples with all boys were from two to six times more likely to use modern

contraception as were couples with all girls. (See chart.)

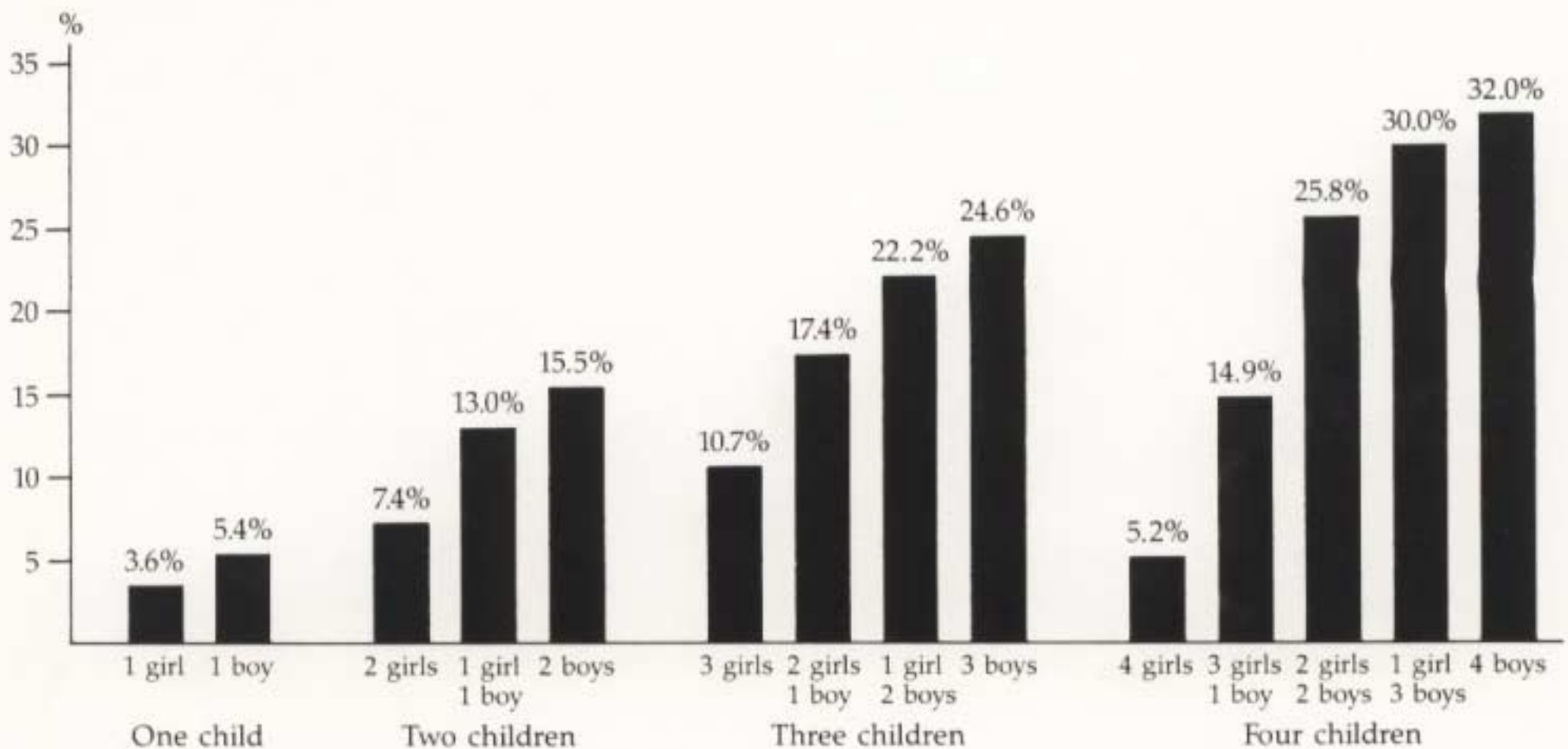
There were also many fewer all-girl families in the survey than would be expected from random biological processes—for example, 38 percent more couples had two boys

“Only a small proportion of couples find themselves faced with a decision to have another child just because they have not yet had a boy.”

than had two girls. This suggests that couples with all boys were more likely to stop bearing children, while couples with all girls were

Sex Preference in Egypt

Women in Menoufia Governate, Egypt, are more likely to use modern contraceptives as their family size increases—and they are more likely to use contraceptives if their families contain at least one boy. The effect on fertility is small, however, because the proportion of couples who have all boys or all girls drops rapidly as family size increases.



% of currently married women aged 15-44 using contraceptives by the number and sex composition of their living children: Menoufia Governate, Egypt, 1977.

more likely to continue having children in the hope of having a boy.

However, such sex preference is unlikely to affect Egypt's fertility as much as might be expected. Only a small proportion of couples find themselves faced with a decision to have another child just because they have not yet had a boy. By biological chance, more than one couple in two will have a male first child, and more than 50 percent a male second child, and so on.

Therefore, the large majority of all couples will have at least one boy early in their childbearing careers.

Sex preference, of course, has no effect at all on the family planning behavior of couples with no children. It has only a small effect on couples with one child, because most couples desire at least two children, regardless of the sex of these children. For couples with many children, too, sex preference has little impact because most of these couples have given birth to at least one or two boys by that time.

In most developing nations, the impact of sex preference on such family planning behavior as contraceptive use generally is small, Arnold found. Studying data from 27 countries, he found that if there were no sex preference at all contraceptive use would increase by an average of fewer than 3.7 percentage points.

The effect of sex preference on contraceptive use is strongest in Asia, but only because of above-average son preference in South Korea and Taiwan, where fertility has fallen rapidly anyway. In Africa, the continent with the highest fertility in the world, the total elimination of sex preference would make only an estimated 2.9-percentage-point difference in contraceptive use. (For more on the impact of sex preference on family planning, see the table.)

The Effect of Sex Preference on Family Planning

In most countries, sex preference has a relatively small effect on such measures as: (1) the percent of women who practice contraception; (2) the percent who desire no more children; or (3) the average number of additional children wanted.

If there were no sex preference, the difference in behavior would be as follows:

Country	(1) % of women practicing contraception	(2) % of women who desire no more children	(3) the average number of additional children wanted
<i>Asia</i>			
Bangladesh	1.6 ^a	4.7 ^b	-0.1 ^c
India	3.7	8.9	-0.2
Indonesia	2.8	3.5	*
Nepal	1.1	6.5	-0.2
Philippines	1.9	3.9	-0.1
Thailand	4.7	4.1	*
<i>Africa</i>			
Ghana	1.3	1.8	-0.2
Kenya	2.1	1.5	-0.2
<i>Latin America</i>			
Costa Rica	3.7	2.9	*
Haiti	4.1	3.2	-0.1
Paraguay	3.8	1.5	-0.1
Peru	4.4	2.9	-0.1

^ai.e. If couples did not care about the sex of their children, the number of women practicing contraception would increase by 1.6 percentage points.

^bi.e. If couples did not care about the sex of their children, the number of women who would want to stop childbearing at their present number of children would increase by 4.7 percentage points.

^ci.e. If couples did not care about the sex of their children, the average mother would want 0.1 child less.

* data not available.

Measuring Sex Preference

Arnold's new method of analysis can help family planning officials in any country measure the strength of sex preference and its effect on fertility, as long as there is a recent survey that includes data on the current number of living daughters and sons, plus any fertility-related variable, such as contraceptive use.

The method is simple and inexpensive to apply. By examining sex composition at each family-size level, researchers can estimate the effect of sex preference if they assume that those couples who are most satisfied with the sex of their children are most likely to be limiting their family size, as measured by contraceptive use, expressed desire for further children, etc.

Summary

A reliable new method of measuring sex preference shows that sex preference does not have as much of an effect on overall fertility levels as has been assumed. To achieve other social goals, it may be desirable for governments to try to change deeply held attitudes about sex preference. However, such efforts may not have the favorable impact on fertility and family planning that government agencies have anticipated.

Asia-Pacific

POPULATION & POLICY

Asia-Pacific Population & Policy reports research of likely interest to policymakers and other professionals concerned with population trends, family planning, and development.

Support for this publication was provided by the Office of Population, U.S. Agency for International Development, under a cooperative agreement with the Population Institute, East-West Center.

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ISSN 0891-6683

Further information about the findings discussed here is contained in the following publications:

Fred Arnold (1986), "The Effect of Sex Preference on Fertility and Family Planning: Empirical Evidence," *Population Bulletin of the United Nations*, No. 19.

Fred Arnold (1985), "Measuring the Effect of Sex Preference on Fertility: The Case of Korea," *Demography* 22(2):280-288. Also available as East-West Population Institute Reprint number 187.



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