

POPULATION NOTES

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FERTILITY RATES RISE FOR OLDER WOMEN IN 1980s

Martha McMurry

Sharp changes in the childbearing patterns of Minnesota women occurred between 1980 and 1990. Women are having their children at older ages and are more likely to have them when they are not married. Women in the Twin Cities are having more children than they had 10 years ago, while women in other areas of the state are having fewer.

Despite these changes, the average number of children a Minnesota woman has during her lifetime was almost identical in 1980 and 1990, standing at 1.9 or slightly under 1.9 in both years.

More births were recorded in Minnesota in the 1980s (669,858) than in the 1970s (597,527). This rise in births has led some observers to talk about a "new baby boom." The trend is more accurately described as a "mother boom." Women are not having larger families, but many baby-boom women passed through their prime childbearing years in the 1980s. The large number of women of childbearing age was the major factor behind the growth in the number of births.

Average family size and the number of women in the prime childbearing age groups are the major factors determining the number of births, but other factors also have an impact. Decisions on the timing of births, particularly the shift to a later age of childbearing, have affected year-to-year birth figures. Economic factors also play a role. The number of births tends to go down during recessions, when many people choose to postpone having a child until they feel more financially secure.

How Fertility Is Measured

The focus in this report is on fertility rates rather than the number of births. Using rates controls for population size and gives a better idea of whether women are having large or small families. Two of the most commonly used fertility measures are the

Fertility At A Glance...

- Major changes in childbearing patterns by age, marital status and residence occurred between 1980 and 1990.
- Fertility rates rose for women over 30 and decreased sharply for women in their early 20s. There was little change in the total number of children a woman has during her lifetime.
- Differences in fertility rates between the Twin Cities region and the rest of the state disappeared during the 1980s.
- Fertility rates rose for unmarried women and declined for married women.
- Nonwhite and Hispanic origin women had above average fertility rates.

General Fertility Rate and the Total Fertility Rate. Both measures are based on the population of women of childbearing age. The GFR is the annual number of births per 1,000 women ages 15 to 44. The TFR is the number of children a woman would have on the average if birth rates by age do not change over time. For example, a TFR of 1.89 means that if current age-specific fertility rates remain constant and all women live to the end of their childbearing years, they will have an average of 1.89 children each. Generally the trends in the GFR and the TFR are similar, but the TFR is sensitive to the relative size of the age groups within the broad 15- to 44- year-old category.

In demographic usage, fertility refers to actual live births. This differs somewhat from popular usage, where the term fertility is often used to describe a woman's or a couple's physical ability or potential to have children.

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Fertility Rates Stable Between 1980 and 1990

Both the General Fertility Rate and the Total Fertility Rate showed only small changes in Minnesota between 1980 and 1990 (Table 1). The state GFR declined slightly from 70.0 to 66.3, while the TFR rose very slightly from 1.87 to 1.90. The difference in the direction of the trends in the two rates is probably attributable to a change in the size of the 20- to 29 year-old age group relative to the entire population of childbearing age. Women are most likely to give birth when they are in their 20s. In 1980, about 40 percent of all women ages 15 to 44 were in their 20s. This declined to 34 percent in 1990. The GFR declined because a greater proportion of women were beyond the peak birth years by 1990.

Fertility Rates Rise in Twin Cities Area

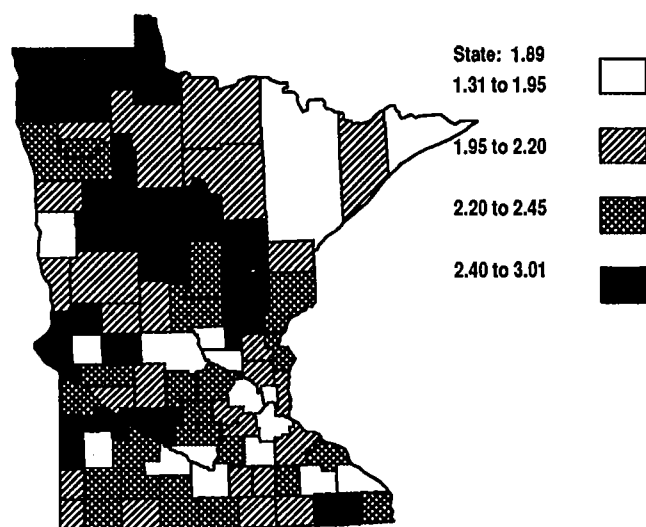
The fertility differential between the seven-county Twin Cities area and the rest of the state largely disappeared in the 1980s. In 1980, the Twin Cities General Fertility Rate was 62.8, well below the 78.0 average for the other 80 counties. By 1990 the rate for these 80 counties had fallen to 65.2, while the rate for the Twin Cities region went up to 66.8. The convergence in fertility rates between the Twin Cities and the other regions of the state was reported in an earlier issue of **Population Notes** (May, 1990.)

Fertility rates fell in most counties outside the Twin Cities, but these declines were offset by the gains in the Twin Cities region, which contains 52 percent of the state's population. Fertility rose noticeably in Hennepin and Ramsey counties, the state's two largest counties. The TFR in Hennepin County went up from 1.49 in 1980 to 1.79 in 1990, a rise of over 20 percent. Increases occurred in most other Twin Cities counties also, but were less dramatic.

Fertility rates increased in four of the state's five largest cities, with Duluth the only exception. Fertility rates in Minneapolis and St. Paul now are at or above the state average. One reason for the rise in fertility in the two central cities may be the increase in their nonwhite and Hispanic origin populations. As will be noted below, minority women

Figure 1. Total Fertility Rate 1990

(Lifetime Births per Woman at Current Rates)



have higher fertility rates than white and non-Hispanic women.

Though fertility levels in the Twin Cities region and the rest of the state as a whole are now about the same, there are still substantial differences among individual counties (Figure 1). Areas with college or university campuses have very low fertility rates. These areas contain large numbers of women in their late teens and early 20s, few of whom have children. Blue Earth (Mankato State University) and Winona (Winona State University) counties had the lowest TFRs in 1990. North-central, northwestern, and parts of western Minnesota generally had fertility levels above the state average. The highest TFR was 3.01 in Mahnomon County.

Minnesota Fertility Slightly Below National Average

Minnesota's fertility rate is slightly lower than the national average. National data are not available for 1990, but the 1989 figures show a General Fertility Rate of 69.2 in the U.S. and 65.9 in Minnesota (Figure 2). Southwestern states tend to have high fertility rates, but the highest individual rates were recorded

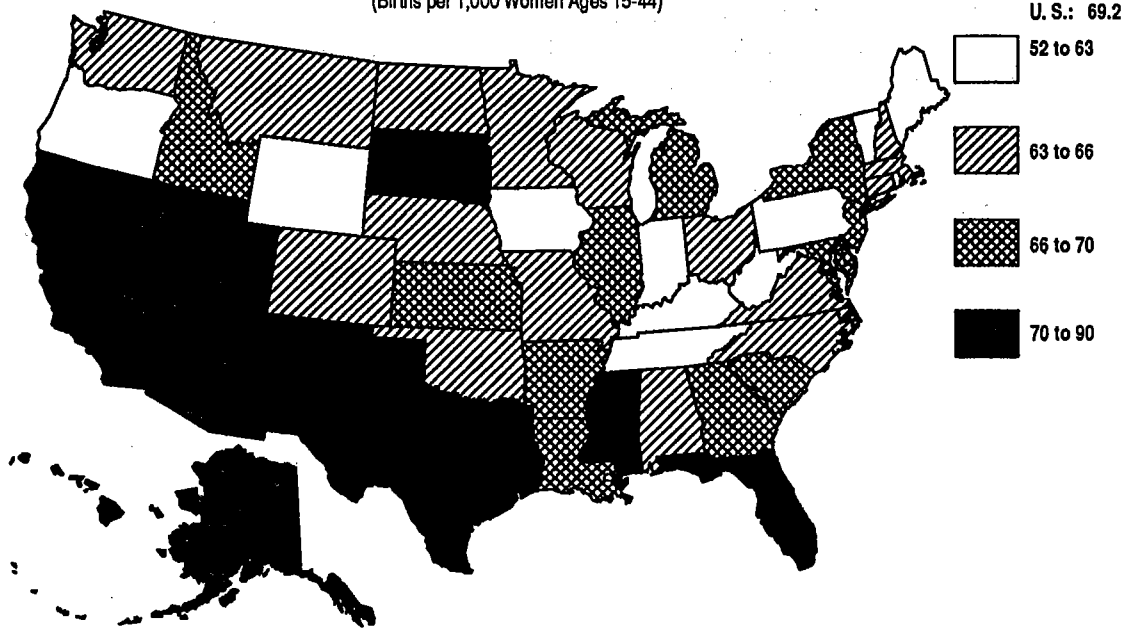
Table 1. Fertility Rates for Minnesota Counties and Largest Cities: 1980 and 1990

	1990 General Fertility Rate	1990 Total Fertility Rate	1980 General Fertility Rate	1980 Total Fertility Rate	Change in GFR 1980- 1990	Change in TFR 1980- 1990		1990 General Fertility Rate	1990 Total Fertility Rate	1980 General Fertility Rate	1980 Total Fertility Rate	Change in GFR 1980- 1990	Change in TFR 1980- 1990
Minneapolis	67.1	1.91	60.8	1.48	10.4%	28.7%	Duluth	60.0	1.77	72.2	1.85	-16.9%	-4.4%
St. Paul	76.1	2.12	71.4	1.78	6.6	19.3	Rochester	77.3	2.03	67.6	1.76	14.3	15.6
Bloomington	54.0	1.50	45.1	1.32	19.7	13.8							

Table 1. Fertility Rates for Minnesota Counties and Largest Cities: 1980 and 1990 (continued)

	1990 General Fertility Rate	1990 Total Fertility Rate	1980 General Fertility Rate	1980 Total Fertility Rate	Change in GFR 1980- 1990	Change in TFR 1980- 1990		1990 General Fertility Rate	1990 Total Fertility Rate	1980 General Fertility Rate	1980 Total Fertility Rate	Change in GFR 1980- 1990	Change in TFR 1980- 1990
Minnesota	66.3	1.90	70.0	1.87	-5.3%	1.6%	Mahnomen	89.4	3.01	103.9	3.05	-13.9%	-1.2%
Aitkin	67.7	2.43	79.2	2.37	-14.4	2.4	Marshall	1.3	2.46	82.8	2.40	-13.9	2.4
Anoka	67.3	1.96	68.9	1.93	-2.3	1.4	Martin	7.8	2.26	78.7	2.14	-13.8	5.6
Becker	76.4	2.48	86.4	2.39	-11.6	3.9	Meeker	71.9	2.29	88.6	2.51	-18.9	-8.9
Beltrami	74.3	2.15	78.2	2.05	-5.0	4.8	Mille Lacs	75.5	2.42	88.0	2.49	-14.1	-2.7
Benton	69.7	1.85	98.3	2.54	-29.1	-27.2	Morrison	75.5	2.33	95.9	2.77	-21.2	-16.0
Big Stone	73.5	2.45	89.0	2.58	-17.4	-4.9	Mower	68.7	2.12	76.1	2.20	-9.7	-3.6
Blue Earth	48.2	1.50	67.1	1.81	-28.1	-17.1	Murray	71.9	2.37	86.5	2.50	-16.9	-5.4
Brown	65.6	1.93	79.1	2.21	-17.0	-12.8	Nicollet	55.9	1.67	68.7	1.95	-18.6	-14.6
Carlton	64.2	2.06	74.7	2.09	-14.0	-1.6	Nobles	71.9	2.25	81.4	2.22	-11.7	1.2
Carver	78.8	2.19	73.5	2.03	7.2	7.7	Norman	64.4	2.12	99.1	2.87	-35.0	-26.2
Cass	82.0	2.75	82.4	2.55	-0.4	7.7	Olmsted	69.2	1.89	66.8	1.80	3.7	4.9
Chippewa	64.7	2.02	88.3	2.41	-26.7	-16.3	Otter Tail	66.7	2.19	78.1	2.22	-14.6	-1.2
Chisago	70.1	2.22	80.5	2.30	-12.9	-3.6	Pennington	63.4	1.98	80.2	2.13	-20.9	-7.0
Clay	51.2	1.61	55.3	1.59	-7.5	1.5	Pine	74.6	2.40	94.3	2.65	20.9	-9.5
Clearwater	72.8	2.47	92.2	2.69	-21.0	-8.3	Pipestone	68.7	2.18	82.6	2.36	-16.8	-7.4
Cook	57.6	1.93	71.0	1.97	-18.8	-2.1	Polk	78.1	2.39	83.2	2.33	-6.2	2.6
Cottonwood	71.7	2.38	80.4	2.26	-10.8	5.1	Pope	80.2	2.69	93.9	2.79	-14.6	-3.5
Crow Wing	76.4	2.40	76.9	2.18	-0.6	10.0	Ramsey	68.7	1.92	65.3	1.68	5.3	14.5
Dakota	69.9	1.93	68.5	1.92	2.0	0.7	Red Lake	72.5	2.29	109.0	3.20	33.5	-28.5
Dodge	77.2	2.36	95.6	2.67	-19.2	-11.6	Redwood	70.3	2.31	86.0	2.47	-18.2	-6.5
Douglas	66.5	2.09	79.3	2.21	-16.1	-5.5	Renville	81.5	2.55	87.1	2.44	-6.4	4.7
Faribault	65.5	2.21	85.8	2.45	-23.6	-10.0	Rice	55.5	1.66	64.5	1.83	-14.0	-9.5
Fillmore	77.1	2.44	86.9	2.54	-11.3	-3.9	Rock	68.1	2.18	90.4	2.54	-24.6	-14.3
Freeborn	68.5	2.15	75.3	2.13	-9.1	1.0	Roseau	89.9	2.59	89.2	2.48	1.0	4.4
Goodhue	64.3	1.98	82.4	2.35	-21.9	-15.8	St. Louis	54.0	1.66	69.4	1.80	-22.3	-7.9
Grant	78.7	2.65	91.5	2.75	-14.0	-3.8	Scott	76.7	2.17	74.0	2.13	3.6	1.9
Hennepin	64.1	1.79	57.6	1.49	11.3	20.2	Sherburne	67.3	1.95	87.2	2.39	-22.9	-18.6
Houston	72.8	2.21	84.1	2.37	-13.4	-6.7	Sibley	74.3	2.25	86.9	2.61	-14.5	-13.6
Hubbard	71.3	2.53	82.9	2.46	-14.0	2.9	Stearns	58.6	1.69	72.7	2.09	-19.5	-18.9
Isanti	64.9	2.09	71.3	2.05	-9.0	2.0	Steele	70.2	2.11	79.0	2.12	-11.1	-0.4
Itasca	59.8	2.05	86.4	2.36	-30.8	-12.9	Stevens	35.8	1.32	68.8	1.92	-48.0	-31.4
Jackson	65.4	2.18	78.0	2.12	-16.1	2.9	Swift	69.0	2.22	89.4	2.60	-22.8	-14.4
Kanabec	74.0	2.41	89.8	2.58	-17.7	-6.4	Todd	65.7	2.19	94.2	2.81	-30.2	-21.9
Kandiyohi	70.5	2.14	75.1	2.00	-6.1	6.9	Traverse	80.4	2.68	83.7	2.66	-3.9	0.8
Kittson	71.9	2.45	101.9	2.81	-29.5	-12.7	Wabasha	73.3	2.32	85.1	2.40	-13.9	-3.4
Koochiching	61.6	1.99	76.6	2.12	-19.5	-6.1	Wadena	79.3	2.54	91.7	2.67	-13.5	-4.8
Lac Qui Parle	65.5	2.32	83.5	2.33	-21.6	-0.3	Waseca	65.3	2.01	88.7	2.34	-26.4	-14.3
Lake	58.5	1.99	79.2	2.24	-26.1	-11.0	Washington	64.9	1.97	67.4	2.00	-3.7	-1.7
Lake of the Woods	77.2	2.48	83.7	2.41	-7.8	2.9	Watsonwan	79.0	2.39	95.4	2.63	-17.3	-9.2
LeSueur	77.3	2.35	85.7	2.47	-9.8	-5.0	Wilkin	68.6	2.11	84.5	2.43	-18.9	-13.3
Lincoln	70.4	2.49	92.0	2.88	-23.5	-13.5	Winona	48.9	1.52	61.2	1.76	-20.1	-13.6
Lyon	61.0	1.78	78.7	2.11	-22.5	-15.8	Wright	77.8	2.30	88.1	2.46	-11.7	-6.7
McLeod	73.1	2.21	79.5	2.18	-8.0	1.2	Yellow Medicine	75.9	2.42	86.8	2.57	-12.5	-5.8

Figure 2. Fertility Rates 1989
(Births per 1,000 Women Ages 15-44)



in Utah (89.8) and Alaska (89.7). West Virginia had the lowest GFR, 51.5.

Are Fertility Levels Heading Up or Down?

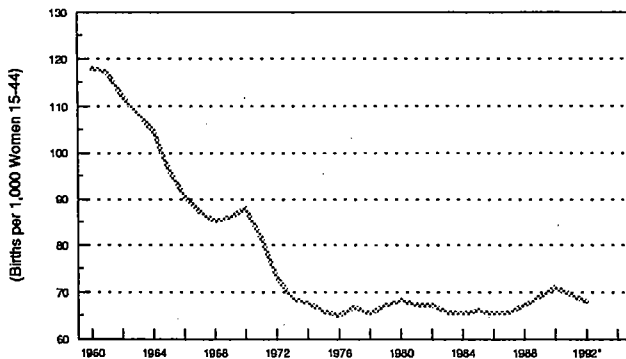
The national General Fertility Rate declined sharply between 1960 and the early 1970s (Figure 3). Since the early 1970s the GFR has fluctuated within a narrow range. Based on a slight rise in the rate in the late 1980s, some have speculated that women will begin to have larger families again. Others think that high rates of women's labor force participation, increasing educational attainment by women, and high divorce rates will militate against any meaningful increase in lifetime fertility. Recent figures give a mixed message. In 1990 the GFR went

above 70.0 per 1,000 for the first time since 1972, providing some support for the rising fertility theory, but since then the rate has begun to decline again. Even at their 1990 peak, recent fertility levels are dramatically lower than the levels of the 1960s.

Fertility Rates Rise for Women Over 30

The delayed fertility pattern that became evident in the 1970s was even more pronounced in the 1980s. Fertility rates rose for women over 30 while declining for women in their 20s (Table 2). The most dramatic decline was for women ages 20-24. A similar pattern occurred in the rates for first births: a sharp drop for women in their early 20s and an increase in the rate for women over 30 (Table 3).

Figure 3. U.S. Fertility Rates: 1960-1991



*Partial year data.

Table 2. Fertility Rates by Age of Mother

Minnesota: 1980 and 1990

Age of Mother:	1980 Fertility Rate	1990 Fertility Rate	Change in Rate 1980-1990
15-19	35.1	36.5	4.0%
20-24	111.9	93.5	-16.4%
25-29	131.5	127.3	-3.2%
30-34	71.4	86.0	20.4%
35-39	20.4	31.4	53.9%
40-44	4.4	5.3	20.5%
All Ages	70.0	66.3	-5.3%

Rates are per 1,000 women in the age group.

**Table 3. Rate of First Births by Age of Mother
Minnesota: 1980 and 1990**

Age of Mother:	1980 First Birth Rate	1990 First Birth Rate	Change in Rate 1980-1990
15-19	29.5	29.9	1.3%
20-24	59.6	46.1	-22.6%
25-29	45.4	46.7	2.8%
30-34	13.6	21.4	57.1%
35-39	2.3	6.3	175.8%
40-44	0.3	0.9	196.2%
All Ages	29.5	25.5	-13.6%

Rates are per 1,000 women in the age group.

The shift to a later age for motherhood has resulted in a striking increase in the proportion of births occurring to women age 30 or older. More than one-third of all births and one-fifth of first births are now to women who have passed their 30th birthday.

The probability of a woman becoming a mother while in her teens did not change during the decade. The fertility rate for Minnesota teenagers remained about the same in 1990 as in 1980. This stability was in sharp contrast to the fertility decline for women in their early 20s. Apparently women who do not become teenage mothers are increasingly likely to wait until their late 20s or their 30s before having children.

More Children Born to Unmarried Women

More than one-fifth of Minnesota births in 1990 (20.9 percent) were to unmarried women, up from 13 percent in 1983. Rates of births to unmarried women increased in every age group during the 1980s and are highest for unmarried women in their 20s. Overall the rate of births to unmarried women grew from 17.5 per 1,000 single women in 1980 to 29.9 per 1,000 in 1990.

In contrast to unmarried women, married women were less likely to bear children in 1990 than in 1980. The fertility rate for married women declined from 112.1 per 1,000 in 1980 to 97.0 per 1,000 in 1990.

The proportion of unmarried births is lower in Minnesota than in the nation. In 1989, the latest year for which both Minnesota and national data are available, 27.1 percent of U.S. births were to unmarried women, compared to 19.5 percent in Minnesota.

Minority Fertility Is Higher

Fertility rates are considerably higher for Minnesota nonwhite and Hispanic origin women than for white women (Table 4). Asian women have the most children, averaging slightly more than three per woman. Rates for African American and American Indian women are very similar. Hispanic origin women have more children than white women, but fewer than the other minority groups.

Most of the racial and ethnic differences in fertility occur under age 30. For all groups except Asians or Pacific Islanders, fertility rates for women over age 30 are nearly identical. Asian women older than 30 continue to have higher fertility rates.

During the 1980s, the General Fertility Rate dropped substantially for Minnesota American Indian women and dropped slightly for white and black women. Fertility rates for Hispanic origin and Asian women are not available for 1980, so no comparisons are possible.

Nonwhite and Hispanic origin mothers are more likely to be to unmarried than are white and non-Hispanic mothers. Though same-year data are not available, evidence suggests minority births in Minnesota are more likely to be to unmarried women than are minority births nationally. The proportion of births to unmarried women among white women is about the same for Minnesota women as in the nation.

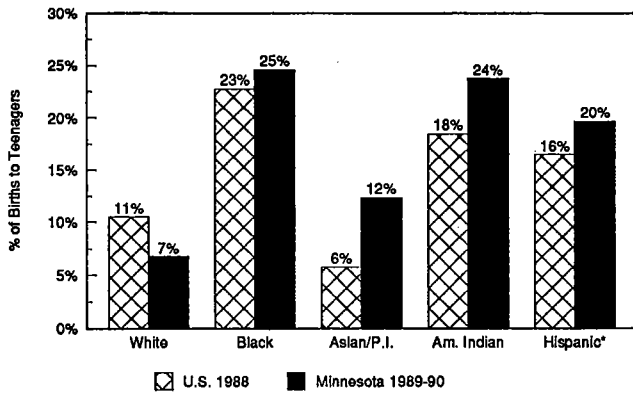
Minnesota's below-average rate of births to unmarried women is largely attributable to the state's population composition. If Minnesota had the same racial and ethnic composition as the nation, the percent of births to unwed mothers would be the same or higher than the national average.

**Table 4. Fertility Rates by Race and Hispanic
Minnesota: 1990**

	General Fertility Rate	Total Fertility Rate
Total	66.3	1.90
White	64.2	1.84
Black	110.3	2.99
Asian/Pacific Islander	110.7	3.23
American Indian, Eskimo, and Aleut	107.5	2.97
Hispanic*	86.2	2.33

*Hispanic origin persons may be of any race.

Figure 4. Teenage Births by Race/Ethnicity



*Hispanic origin persons may be of any race.

One reason that minority births in Minnesota are more likely to be to unmarried women is that Minnesota minority mothers are younger. Few teenagers are married, so births to teenagers usually are births to unmarried mothers also. For every minority group, the percent of births occurring to teenage mothers is higher in Minnesota than nationally (Figure 4). For white women, on the other hand, the proportion of births to teenagers is lower in Minnesota.

Note on Data Sources

The 1990 Minnesota fertility rates reported here are based on birth data for an 18-month period surrounding the 1990 census. The birth data come from the Minnesota Center for Health Statistics. Births for which race of mother was unknown were assigned according to the proportional frequency of known cases. The small number of births to women under age 15 and over age 44 were assigned to the 15- to 19- and 40- to 44- year-old age groups respectively. Data on population by age and marital status used as a base to compute the rates come from the 1990 census. National birth statistics are from the National Center for Health Statistics. Data for 1980 come from *Population Notes*, December, 1985.

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