

CHAPTER 4

FERTILITY AND FERTILITY PREFERENCES

A major objective of NFHS-2 is to provide detailed information on fertility levels, differentials, and trends. This chapter presents a description of current and past fertility, cumulative fertility and family size, birth intervals, age at first cohabitation with husband, age at first and last birth, age at menopause, and durations of postpartum amenorrhoea, abstinence, and insusceptibility to pregnancy. Also discussed are fertility preferences, ideal and actual number of children, preference for sons or daughters, planning status of pregnancies, and wanted and actual total fertility rates.

Most of the fertility measures presented in this chapter are based on the complete birth histories collected from ever-married women age 15–49 years. Several measures and procedures were used to obtain complete and accurate reporting of births, deaths, and the timing of these events. First, women were asked a series of questions aimed at recording all the live births that had occurred in their lifetime. Second, for each live birth, the survey collected information on the age, sex, and survival status of the child. For dead children, age at death was recorded. Interviewers were given extensive training in probing techniques designed to help respondents report this information accurately. For example, interviewers were instructed to check any documents (such as horoscopes, school certificates, or vaccination cards) that might provide additional information on dates of birth and to probe for the reason for each birth interval of four or more years in order to prevent omission of births, especially of children who died soon after birth. Birth intervals of four or more years were also probed for stillbirths, miscarriages, and induced abortions.

Despite these measures to improve data quality, NFHS-2 is subject to the same types of errors that are inherent in all retrospective sample surveys—namely, the omission of some births (especially births of children who died at a very young age) and the difficulty of determining the date of birth of each child accurately. These problems can bias estimates of fertility levels and trends.

4.1 Age at First Cohabitation

The number of children that a woman will have in her lifetime is strongly influenced by the age at which she marries. Formal marriage is not always immediately followed by cohabitation. A marriage may not be consummated immediately if it occurs at a very young age or for some other reason. In such instances, there is a difference between age at marriage and age at consummation of marriage. Age at consummation of marriage is, of course, what is relevant for fertility. NFHS-2 measured age at first cohabitation as a proxy for age at consummation of marriage. The practice of marriage at very young ages is not common in Goa. In Table 4.1, the median age at first cohabitation for a group of women is defined as the age by which half of the entire group began to cohabit, rather than the age by which half of all ever-cohabiting women in the group began to cohabit.

Table 4.1 shows that in Goa, the median age at first cohabitation with the husband is 23.2 years for women age 25–49, which is more than six years higher than the median age at first

Table 4.1 Age at first cohabitation with husband

Median age at first cohabitation with husband among women age 25–49 years by current age and selected background characteristics, Goa, 1999

Background characteristic	Current age				
	25–29	30–34	35–39	40–49	25–49
Residence					
Urban	NC	24.0	22.4	22.1	23.3
Rural	NC	24.0	22.6	20.6	23.1
Education					
Illiterate	19.0	20.3	18.9	18.8	18.9
Literate, < middle school complete	23.6	22.6	21.5	21.0	21.9
Middle school complete	NC	(24.9)	(24.7)	(21.4)	24.9
High school complete and above	NC	25.8	25.7	24.7	NC
Religion					
Hindu	24.7	23.4	21.9	20.5	22.4
Muslim	*	*	*	*	(18.3)
Christian	NC	25.4	24.2	23.3	NC
Caste/tribe					
Scheduled caste	(20.5)	(19.6)	*	*	18.9
Other backward class	*	*	*	(20.2)	21.6
Other ¹	NC	24.4	22.8	21.5	23.5
Standard of living index					
Low	(20.4)	(21.7)	(19.4)	(18.6)	19.8
Medium	24.5	22.8	21.7	20.1	22.1
High	NC	25.7	23.8	22.8	24.5
Total	NC	24.1	22.5	21.2	23.2

Note: Total includes small numbers of women belonging to other religions, scheduled-tribe women, and women with missing information on caste/tribe and the standard of living index, who are not shown separately.
 NC: Not calculated because less than 50 percent of the women have started living with their husband by age 25
 () Based on 25–49 unweighted cases
 *Median not shown; based on fewer than 25 unweighted cases
¹Not belonging to a scheduled caste, a scheduled tribe, or an other backward class

cohabitation for India as a whole (17.0 years). As noted earlier, there is virtually no lag between marriage and cohabitation in Goa so that the median age at marriage and the median age at cohabitation are the same (see Table 3.3). The median age at first cohabitation increases steadily from 21.2 for women age 40–49 to 24.1 for women age 30–34, suggesting a notable increase in the median age at first cohabitation in a relatively short period of time.

The median age at first cohabitation is almost identical for urban and rural women age 25–49. The median age at first cohabitation rises sharply with women’s level of education, from 18.9 for illiterate women to at least 24.9 for women who have completed at least a middle school education. Hindus have a much higher median age at first cohabitation than Muslims. There is also wide variation by caste/tribe, with women from the scheduled castes having a lower median age at first cohabitation (18.9 years) than women belonging to other backward classes (21.6 years) or women not belonging to the scheduled castes, scheduled tribes, and other backward classes (23.5 years). The median age at first cohabitation is almost five years higher for women living in households with a high standard of living (24.5 years) than for women living in households with a low standard of living (19.8 years).

4.2 Current Fertility Levels

NFHS-2 provides estimates of age-specific fertility rates (ASFR), total fertility rates (TFR), and crude birth rates (CBR) for the three-year period preceding the survey, which, in Goa, corresponds roughly to the period 1996–98. This three-year period was chosen as a compromise between the need to obtain recent information (suggesting the use of a short period close to the survey date) and the need to reduce sampling variation and minimize problems related to displacement of births from recent years to earlier years (suggesting the use of a longer period). The ASFR for any specific age group is calculated by dividing the number of births to women in the age group during the period 1–36 months preceding the survey by the number of woman-years lived by women in the age group during the same three-year time period. The TFR is a summary measure, based on the ASFRs, that gives the number of children a woman would bear during her reproductive years if she were to experience the ASFRs prevailing at the time of the survey. Mathematically, the TFR is calculated as five times the sum of all the ASFRs for the five-year age groups. The CBR is defined as the annual number of births per 1,000 population.

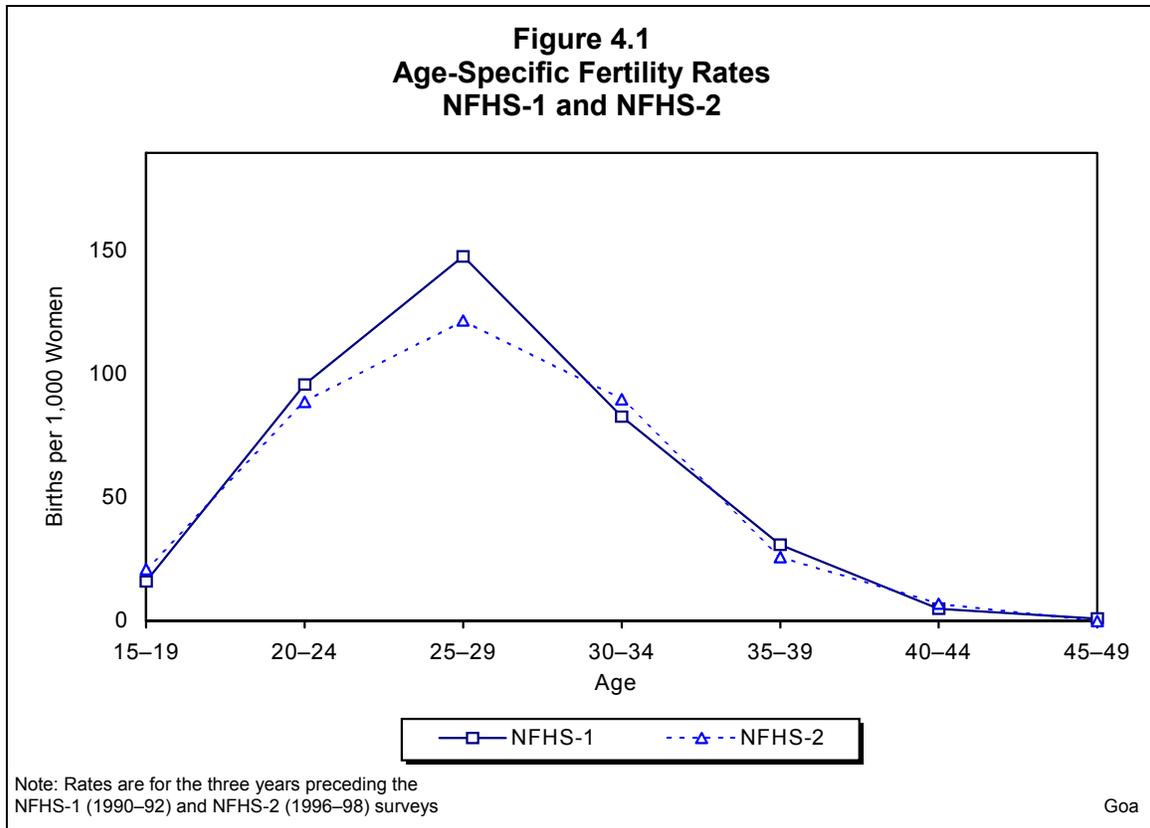
Based on data for the three-year period before NFHS-2, the CBR for Goa is estimated at 16.6 live births per 1,000 population, and the TFR is estimated at 1.77 births per woman, as shown in Table 4.2. The TFR of 1.77 births indicates below-replacement fertility and is much lower than the all-India TFR of 2.85 births.

As shown in Table 4.2, fertility rises with age, peaking at age 25–29, and declining thereafter. Eighty-five percent of total fertility is concentrated in the age group 20–34, with the age group 25–29 alone accounting for 34 percent of fertility. Fertility at age 35 and older accounts for only 9 percent of total fertility in Goa.

Based on data for the three-year periods preceding NFHS-1 and NFHS-2, the CBR fell marginally from 17.2 to 16.6 between the two surveys, a decline of 3 percent. Over the same period, the TFR fell from 1.90 to 1.77, a decline of 7 percent. Table 4.2 and Figure 4.1 show that

Table 4.2 Current fertility			
Age-specific and total fertility rates and crude birth rates from NFHS-1, NFHS-2, and the SRS, Goa			
Age	NFHS-1 (1990–92)	NFHS-2 (1996–98)	SRS (1997)
15–19	0.016	0.021	0.005
20–24	0.096	0.089	0.059
25–29	0.148	0.122	0.110
30–34	0.083	0.090	0.074
35–39	0.031	0.026	0.028
40–44	0.005	0.007	0.007
45–49	0.001	0.000	0.001
TFR 15–44	1.89	1.77	1.40
TFR 15–49	1.90	1.77	1.40
CBR	17.2	16.6	14.2

Note: Rates from NFHS-1 and NFHS-2 are for the period 1–36 months preceding the survey. Rates for the age group 45–49 might be slightly biased due to truncation. Rates from the SRS are for one calendar year. Age-specific and total fertility rates are expressed per woman.
TFR: Total fertility rate
CBR: Crude birth rate, expressed per 1,000 population
Source for SRS: Office of the Registrar General, 1999



fertility declined in most age groups and the largest fertility decline occurred in the age group 25-29.

NFHS-2 fertility estimates can be compared with estimates from the Sample Registration System (SRS), which is maintained by the Office of the Registrar General, India. Since the NFHS-2 rates refer to 1996-98, it is appropriate to compare them with the SRS estimates for 1997, which are also shown in Table 4.2. The NFHS-2 estimates of the CBR (16.6) and TFR (1.77) are higher than the corresponding 1997 SRS estimates of 14.2 for the CBR and 1.4 for the TFR. The NFHS-2 age-specific fertility rates are, in general, also higher than the corresponding SRS age-specific fertility rates, with differences being especially marked at the younger ages.

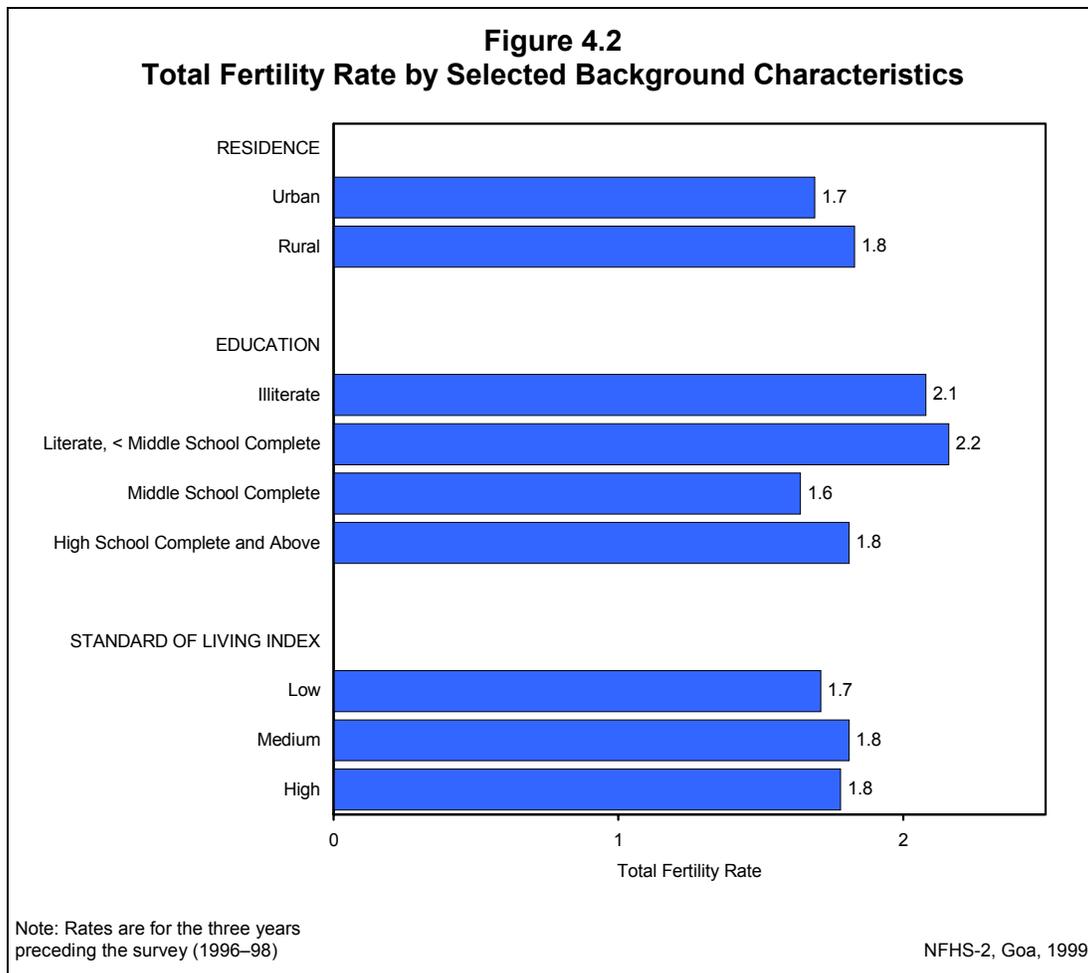
4.3 Fertility Differentials and Trends

Table 4.3 shows how three different measures of fertility—the TFR, the percentage currently pregnant, and the mean number of children ever born to women age 40-49—vary by selected background characteristics. Fertility transitions in other countries have shown that fertility differentials typically diverge early in the transition and reconverge (though rarely completely) towards the end of the transition as fertility approaches the replacement level. This expectation is only partially true for Goa where fertility is already well below replacement level. Although differentials tend to be small for most population groups, some population groups continue to have much higher than average fertility.

Table 4.3 Fertility by background characteristics			
Total fertility rate for the three years preceding the survey, percentage of all women age 15–49 currently pregnant, and mean number of children ever born to all women age 40–49 by selected background characteristics, Goa, 1999			
Background characteristic	Total fertility rate ¹	Percentage currently pregnant ²	Mean number of children ever born to all women age 40–49 years
Residence			
Urban	1.69	3.8	2.94
Rural	1.83	3.6	3.40
Education			
Illiterate	2.08	4.8	3.84
Literate, < middle school complete	2.16	2.2	3.32
Middle school complete	1.64	3.5	(3.59)
High school complete and above	1.81	4.2	2.11
Religion			
Hindu	1.68	3.5	3.31
Muslim	(2.80)	7.0	*
Christian	1.76	4.3	2.81
Caste/tribe			
Scheduled caste	2.31	4.0	*
Other backward class	2.40	5.8	(3.60)
Other ³	1.72	3.7	3.14
Standard of living index			
Low	1.71	4.5	(3.74)
Medium	1.81	3.2	3.68
High	1.78	3.9	2.77
Total	1.77	3.7	3.19
Note: Total includes small numbers of women belonging to other religions, scheduled-tribe women, and women with missing information on caste/tribe and the standard of living index, who are not shown separately. () Based on 125–249 women-years of exposure for the total fertility rate and 25–49 unweighted cases for the mean number of children ever born *Mean not shown; based on fewer than 25 unweighted cases ¹ Rate for women age 15–49 years ² For this calculation, it is assumed that women who are never married, widowed, divorced, separated, or deserted are not currently pregnant. ³ Not belonging to a scheduled caste, a scheduled tribe, or an other backward class			

Table 4.3 and Figure 4.2 show that the TFR varies little by residence and by the household standard of living. Although the TFR does not vary consistently with mother's education, less-educated women generally have higher fertility rates than other women. The TFR is higher among Muslims, by about one child, than among Hindus and Christians. Women belonging to the scheduled castes (2.3) and other backward classes (2.4) have higher fertility levels than women not belonging to the scheduled castes, scheduled tribes, or other backward classes (1.7).

The second column of Table 4.3 shows the percentage of women currently pregnant. Overall, 4 percent of women in Goa report that they are currently pregnant (lower than the national average of 6 percent). Differentials in the percentage currently pregnant do not show the same pattern as differentials in the TFR, with the exception of differences by religion and



caste/tribe. This may be due partly to the fact that the TFR is not affected by the age structure, whereas the percentage currently pregnant is affected by the age structure.

The last column of Table 4.3 shows the mean number of children ever born to all women age 40–49 at the time of the survey. The average number of children ever born for these women, who are at the end of their childbearing years is 3.2, down by half a child from 3.7 at the time of NFHS-1. The substantial decline in fertility in Goa over time is evident from the difference of 1.4 children between the mean number of children for women who are currently in their forties and the number of children women would have in their lifetime if they were subject to the current age-specific fertility rates (the last column and first column of Table 4.3). Notably, the mean number of children ever born to women in their forties is almost half a child higher in rural than urban areas and among Hindu than among Christian women. Also, it is much lower for women who have completed high school education than women with less or no education and for women living in households with a high standard of living than women living in households with a low or medium standard of living.

The preceding section already discussed fertility trends based on estimates from NFHS-1 and NFHS-2 for the three-year periods preceding each survey. Table 4.4 shows fertility trends for five-year time periods preceding NFHS-2, estimated solely from NFHS-2 birth histories. It is not possible to show TFRs in this table because of progressively greater age truncation as one

Table 4.4 Fertility trends				
Age-specific fertility rates for five-year periods preceding the survey, Goa				
Age	Years preceding survey			
	0–4	5–9	10–14	15–19
15–19	0.026	0.033	0.039	0.049
20–24	0.087	0.110	0.130	0.177
25–29	0.123	0.149	0.181	0.197
30–34	0.093	0.091	0.098	[0.140]
35–39	0.028	0.030	[0.040]	U
40–44	0.005	[0.008]	U	U
45–49	[0.000]	U	U	U

Note: Age-specific fertility rates are expressed per woman.
U: Not available
[] Truncated, censored

goes back in time. For example, for the period 5–9 years preceding the survey, it is not possible to compute an ASFR for age 45–49 because the women in question would be 50–54 at the time of the survey, whereas NFHS-2 only collected birth histories for women up to age 49. Similarly, for the period 10–14 years preceding the survey, it is not possible to compute ASFRs for women age 40–49, and for the period 15–19 years preceding the survey, it is not possible to compute ASFRs for women age 35–49. Thus, Table 4.4 shows only the truncated trends in ASFRs. These results show substantial fertility declines in all age groups.

For the periods 0–4 years and 5–9 years before the survey, it is possible to calculate truncated TFRs (more appropriately called cumulative fertility rates, or CFRs) for the age range 15–39, based on the ASFRs shown in Table 4.4. This is done by summing ASFRs for the age groups 15–19 through 35–39 and multiplying the sum by five. For the state as a whole, CFR(15–39) declined from 2.1 to 1.8 between these two five-year periods, a decline of 0.3 children.

Another way of looking at fertility is to calculate fertility rates by the number of years since first cohabitation with the husband. These rates are measures of marital fertility, i.e., fertility within marriage. Table 4.5 shows fertility rates by duration since first cohabitation for ever-married women over the entire 20-year period preceding the survey.¹ Fertility has declined sharply at all durations, particularly for durations above five years since first cohabitation.

¹Since NFHS-2 collected information only on a woman's age at the time of first cohabitation and not on the year and month when she first began cohabiting with her husband, the exact number of months since first cohabitation cannot be calculated. For this reason, the first year since cohabitation contains only six months, on average, and the first five years since cohabitation contain only 4.5 years, on average.

Table 4.5 Fertility by marital duration				
Fertility rates for ever-married women by duration since first cohabitation with husband (in years) for five-year periods preceding the survey, Goa, 1999				
Duration since first cohabitation (in years)	Years preceding survey			
	0–4	5–9	10–14	15–19
< 5	0.265	0.291	0.318	0.328
5–9	0.133	0.185	0.181	0.239
10–14	0.047	0.065	0.081	0.141
15–19	0.015	0.018	0.047	*
20–24	0.003	0.009	*	*
25–29	0.000	*	*	U

Note: Duration-specific fertility rates are expressed per woman. The duration since first cohabitation with husband is defined as the difference between the woman's age at the specific time period and her age when she began living with her husband.
U: Not available
*Rate not shown; based on fewer than 125 woman-years of exposure

4.4 Children Ever Born and Living

The number of children a woman has ever borne is a cohort measure of fertility. Because it reflects fertility in the past, it provides a somewhat different picture of fertility levels, trends, and differentials than do period measures of fertility such as the CBR and the TFR. Table 4.6 shows the percent distribution of all women and currently married women by the number of children ever born (CEB). The table shows these distributions by the age of the woman at the time of the survey and also shows the mean number of children ever born and the mean number of living children by age.

Among women age 15–49, the mean number of children ever born is 1.4 for all women and 2.3 for currently married women. The mean number of children ever born increases steadily with women's age, reaching a high of 3.4 children among all women age 45–49 and 3.5 among currently married women in this age group. The table also shows that early childbearing is not common in Goa. Only 2 percent of all women age 15–19 have already had a child.

For women age 45–49, the number of children ever born is of particular interest because these women have virtually completed their childbearing. For all women in this age group, irrespective of marital status, the modal number of children ever born is four. Twenty-two percent of all women age 45–49 and 26 percent of currently married women in this age group have given birth to four children. Five percent of currently married women age 45–49 have never given birth, suggesting that primary infertility (which is the proportion of couples who are unable to have any children) is slightly higher in Goa than in India as a whole (2 percent).

For all women age 15–49, the average number of children who died is 0.1 per woman. For currently married women, the average number of dead children is 0.2 per woman, indicating that 7 percent of children ever born to currently married women have died. For currently married women, the proportion of children ever born who have died is highest, at 10 percent, among women age 40–44.

Table 4.6 Children ever born and living

Percent distribution of all women and currently married women by number of children ever born (CEB) and mean number of children ever born and living, according to age, Goa, 1999

Age	Children ever born											Total percent	Number of women	Mean number of CEB	Mean number of living children
	0	1	2	3	4	5	6	7	8	9	10+				
ALL WOMEN															
15-19	97.6	1.8	0.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	100.0	336	0.03	0.03
20-24	78.1	12.5	4.7	3.2	1.5	0.0	0.0	0.0	0.0	0.0	0.0	100.0	340	0.38	0.35
25-29	50.0	24.5	14.8	6.9	2.2	1.1	0.5	0.0	0.0	0.0	0.0	100.0	366	0.92	0.87
30-34	22.5	25.7	25.7	15.7	7.9	2.2	0.4	0.0	0.0	0.0	0.0	100.0	277	1.69	1.59
35-39	12.3	15.2	32.3	21.2	12.3	4.5	1.1	0.4	0.4	0.4	0.0	100.0	268	2.31	2.20
40-44	7.5	6.7	24.6	29.7	16.0	6.2	6.3	1.4	0.0	0.5	1.0	100.0	206	3.03	2.72
45-49	8.6	8.6	15.1	19.8	22.2	14.9	5.6	2.9	1.5	0.9	0.0	100.0	207	3.36	3.05
Total	45.3	14.1	15.6	11.9	7.3	3.3	1.5	0.5	0.2	0.2	0.1	100.0	2,000	1.44	1.33
CURRENTLY MARRIED WOMEN															
15-19	*	*	*	*	*	*	*	*	*	*	*	100.0	19	*	*
20-24	30.4	40.7	15.4	9.7	3.9	0.0	0.0	0.0	0.0	0.0	0.0	100.0	104	1.16	1.10
25-29	22.0	38.9	23.0	10.5	3.5	1.8	0.4	0.0	0.0	0.0	0.0	100.0	231	1.42	1.35
30-34	10.3	29.7	29.8	18.6	9.0	2.1	0.5	0.0	0.0	0.0	0.0	100.0	233	1.95	1.83
35-39	5.9	17.0	35.5	22.8	12.8	3.9	1.3	0.0	0.4	0.4	0.0	100.0	234	2.42	2.31
40-44	3.5	6.2	26.9	32.3	16.5	6.1	5.1	1.7	0.0	0.5	1.2	100.0	177	3.13	2.83
45-49	4.6	9.0	15.8	18.4	25.9	16.6	5.6	2.9	0.6	0.5	0.0	100.0	173	3.46	3.20
Total	12.4	23.4	25.5	18.8	11.7	4.9	2.0	0.7	0.2	0.2	0.2	100.0	1,171	2.25	2.10

*Percentage not shown; based on fewer than 25 unweighted cases

4.5 Birth Order

The distribution of births by birth order is yet another way to view fertility. Table 4.7 shows the distribution of births during the three-year period preceding the survey by birth order for selected background characteristics. As expected, the proportion of births at each order is larger than the proportion of births at the next higher order: 46 percent of all births are first-order births, 29 percent are second-order births, 17 percent are third-order births, and 8 percent are fourth- or higher-order births. Three-fourths of all births in Goa are first- or second-order births, compared with 55 percent for India as a whole. This is consistent with the lower level of fertility in Goa than in the country as a whole, as is the much lower proportion of births of order four or higher in Goa (8 percent) compared with the country as a whole (28 percent).

Table 4.7 Birth order						
Percent distribution of births during the three years preceding the survey by birth order, according to selected background characteristics, Goa, 1999						
Background characteristic	Birth order				Total percent	Number of births
	1	2	3	4+		
Mother's current age						
20–29	55.2	26.5	12.6	5.7	100.0	192
30–39	30.7	35.5	23.7	10.1	100.0	116
Residence						
Urban	45.5	30.8	17.2	6.5	100.0	127
Rural	46.1	28.3	16.9	8.7	100.0	202
Mother's education						
Illiterate	27.6	14.8	28.2	29.4	100.0	61
Literate, < middle school complete	38.3	32.5	21.7	7.5	100.0	91
Middle school complete	52.4	31.8	13.9	1.9	100.0	51
High school complete and above	57.6	32.9	9.4	0.0	100.0	126
Religion						
Hindu	45.5	28.0	17.7	8.7	100.0	207
Christian	47.4	32.3	13.4	6.8	100.0	97
Caste/tribe						
Scheduled caste	(46.5)	(26.6)	(13.7)	(13.2)	100.0	30
Other ¹	46.1	29.7	17.5	6.6	100.0	274
Mother's work status						
Working in family farm/business	(35.2)	(16.5)	(29.2)	(19.1)	100.0	30
Employed by someone else	31.7	32.5	20.9	14.8	100.0	61
Not worked in past 12 months	50.3	31.6	14.2	4.0	100.0	226
Standard of living index						
Low	(33.2)	(20.1)	(25.7)	(21.0)	100.0	38
Medium	40.4	27.7	21.6	10.3	100.0	142
High	54.5	33.1	10.3	2.0	100.0	148
Total	45.9	29.3	17.0	7.8	100.0	329
Note: Total includes 10 births to women age 15–19, 10 births to women age 40–49, 24 births to Muslim women, 1 birth to a woman belonging to an other religion, 23 births to women belonging to other backward classes, 11 births to self-employed women, and 2 births with missing information on caste/tribe, which are not shown separately. () Based on 25–49 unweighted cases ¹ Not belonging to a scheduled caste, a scheduled tribe, or an other backward class						

Fifty-five percent of births to women age 20–29 are first-order births. By contrast, 31 percent of births to women age 30–39 are first-order births. The proportion of births that are of order three or higher is relatively large for births to illiterate women, women living in households with a low standard of living, and women working on a family farm or in a family business. The variation in the proportion of births that are of order three or higher by mother's education is particularly striking: 58 percent of births to illiterate women are of order three or higher, compared with only 9 percent of births to women who have completed at least high school. The variation by household standard of living and mother's employment status, though not as large as by mother's education, is also substantial.

4.6 Birth Intervals

A birth interval, defined as the length of time between two successive live births, indicates the pace of childbearing. Short birth intervals may adversely affect a mother's health and her children's chances of survival. Past research has shown that children born too close to a previous birth are at increased risk of dying, especially if the interval between the births is less than 24 months (Pandey et al., 1998; Govindasamy et al., 1993; Hobcraft, 1994).

Table 4.8 shows the percent distribution of births during the five years preceding the survey by birth interval, according to selected demographic and socioeconomic background characteristics. In Goa, 9 percent of births occur within 18 months of a previous birth and 23 percent occur within 24 months. Forty-six percent of births occur after an interval of three years or more.

The median birth interval in Goa is 35 months. The median birth interval ranges from 26 months for women age 20–29 to 40 months for women age 30–39. Given the finding that the median birth interval increases with mother's age, it is surprising that it does not also increase substantially with the order of the previous birth. This may in part be due to a selection effect: mothers of higher-order births may be more fecund, on average, than mothers of lower-order births.

The median birth interval is four months longer for births to women in rural areas than births to women in urban areas. Birth intervals increase with mother's education, from 26 months for births to illiterate women to 45 months for births to women who have completed at least high school. The median birth interval is two months shorter for births to Hindu women than for births to Christian women. It is also much shorter for births to women from the scheduled castes than for births to 'other' women. The median birth interval increases substantially with the household standard of living. It is 16 months longer for births to women in households with a high standard of living than births to women in households with a low standard of living.

Notably, the median birth interval is two and a half months longer if the previous birth was a boy than if it was a girl. This pattern may result partly from the shorter duration of breastfeeding for girls, which may be indicative of son preference (Table 7.8).

Table 4.8 Birth interval

Percent distribution of births during the five years preceding the survey by interval since previous birth and median number of months since previous birth, according to selected background characteristics, Goa, 1999

Background characteristic	Months since previous birth						Total percent	Median months since previous birth	Number of births
	< 12	12–17	18–23	24–35	36–47	48+			
Mother's current age									
20–29	0.7	11.7	21.0	40.1	14.3	12.2	100.0	26.4	134
30–39	0.6	6.4	8.5	25.9	17.8	40.7	100.0	39.9	154
Residence									
Urban	0.0	6.6	13.3	36.9	12.5	30.6	100.0	31.9	127
Rural	1.1	10.1	14.0	26.5	19.4	28.9	100.0	35.5	179
Mother's education									
Illiterate	1.0	4.9	25.7	39.7	12.9	15.8	100.0	26.2	99
Literate, < middle school complete	0.0	15.3	7.6	30.1	20.7	26.3	100.0	35.3	88
Middle school complete	(2.5)	(13.1)	(7.4)	(21.1)	(20.2)	(35.8)	100.0	(39.2)	38
High school complete and above	0.0	4.0	8.8	25.4	14.7	47.3	100.0	45.4	81
Religion									
Hindu	0.5	6.3	13.5	32.8	20.6	26.4	100.0	35.2	203
Christian	1.2	12.3	10.6	24.6	9.7	41.6	100.0	37.0	81
Caste/tribe									
Scheduled caste	(0.0)	(0.0)	(27.5)	(45.1)	(14.1)	(13.3)	100.0	(26.1)	30
Other ¹	0.7	9.3	12.5	29.4	16.5	31.6	100.0	35.5	257
Standard of living index									
Low	0.0	6.3	23.4	39.8	17.6	12.9	100.0	28.6	60
Medium	0.7	10.9	13.3	30.2	20.7	24.1	100.0	32.9	135
High	0.9	7.3	8.1	26.9	10.8	45.9	100.0	44.5	110
Order of previous birth									
1	0.6	11.7	12.8	27.9	16.3	30.7	100.0	35.1	170
2	1.1	4.3	15.7	32.3	13.4	33.3	100.0	34.1	90
3	(0.0)	(6.8)	(11.1)	(39.6)	(21.3)	(21.3)	100.0	(35.0)	28
Sex of previous birth									
Male	0.0	10.3	13.0	28.0	14.6	34.1	100.0	35.7	162
Female	1.3	6.8	14.6	34.0	18.6	24.6	100.0	33.2	144
Total	0.6	8.7	13.7	30.8	16.5	29.6	100.0	34.8	306

Note: Table includes only second and higher-order births. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth. Total includes 2 births to women age 15–19, 17 births to women age 40–49, 22 births to Muslim women, 1 birth to a woman belonging to an other religion, 16 births to women belonging to other backward classes, 19 births for which the order of the previous birth was four or higher, and 4 and 1 births with missing information on caste/tribe and the standard of living index, respectively, which are not shown separately

() Based on 25–49 unweighted cases

¹Not belonging to a scheduled caste, a scheduled tribe, or an other backward class

4.7 Age at First and Last Birth

The ages at which women start and stop childbearing are important demographic determinants of fertility. A higher median age at first birth and a lower median age at last birth are indicators of lower fertility. Table 4.9 shows the median age at first birth for various age groups by selected background characteristics. In this table, the median age at first birth for any group of women is defined as the age by which half of all women in the group have had a first birth, rather than the age by which half of all mothers in the group have had a first birth.

Table 4.9 Median age at first birth					
Median age at first birth among women age 30–49 years by current age and selected background characteristics, Goa, 1999					
Background characteristic	Current age				
	30–34	35–39	40–44	45–49	30–49
Residence					
Urban	26.3	24.8	25.0	22.7	24.7
Rural	26.2	25.1	23.2	22.5	24.5
Education					
Illiterate	22.5	21.6	20.4	20.9	21.2
Literate, < middle school complete	24.6	23.7	23.0	22.5	23.4
Middle school complete	(26.3)	(27.7)	*	*	25.8
High school complete and above	27.9	27.8	27.1	(26.6)	27.5
Religion					
Hindu	25.9	24.4	23.2	22.0	23.7
Muslim	*	*	*	*	(20.3)
Christian	27.5	26.3	26.1	24.9	26.4
Caste/tribe					
Scheduled caste	*	*	*	*	20.5
Other backward class	*	*	*	*	22.6
Other ¹	26.7	25.2	24.4	22.8	25.0
Standard of living index					
Low	(23.5)	(21.6)	(20.1)	*	21.7
Medium	24.8	23.7	22.9	21.6	23.3
High	27.7	26.3	25.3	23.9	26.0
Total	26.3	25.0	24.0	22.6	24.6

Note: Total includes small numbers of women belonging to other religions, scheduled-tribe women, and women with missing information on caste/tribe and the standard of living index, who are not shown separately.
 () Based on 25–49 unweighted cases
 *Median not shown; based on fewer than 25 unweighted cases
¹Not belonging to a scheduled caste, a scheduled tribe, or an other backward class

The median age at first birth for Goa is 24.6 years for women age 30–49. As shown in the last row of the table, the median age at first birth has increased from 22.6 years for women age 45–49 to 26.3 years for women age 30–34, a substantial increase in a time span of approximately 15 years.

The median age at first birth is relatively low among Muslim women, scheduled-caste women, illiterate women, and women living in households with a low standard of living. The median age at first birth is almost the same in urban (24.7) and in rural areas (24.5). It is nearly six years lower for illiterate women (21.2) than for women who have completed at least high school (27.5). The median is four years lower for women in households with a low standard of living (21.7) than for women in households with a high standard of living (26.0). Muslim women have a median age at first birth that is three years lower than that for Hindu women and six years lower than that for Christian women. The median age at first birth is approximately 2–5 years lower for scheduled-caste women than for other women.

For older women, the age at last childbirth is an indicator of cessation of childbearing. Table 4.10 presents the distribution of ever-married women age 40–49 by age at last birth, as well as the median age at last birth. Although a few of these women may have another birth later

Table 4.10 Age at last birth

Percent distribution of ever-married women age 40–49 years by age at last birth and median age at last birth, according to current age, Goa, 1999

Current age	No birth	Age at last birth							Total percent	Median age at last birth	Number of women
		< 20	20–24	25–29	30–34	35–39	40–44	45–49			
40–44	4.1	1.5	12.6	31.6	34.1	14.6	1.6	NA	100.0	30.5	198
45–49	4.0	1.0	15.9	29.0	33.9	13.6	2.5	0.0	100.0	30.3	197
40–49	4.1	1.2	14.3	30.3	34.0	14.1	2.0	0.0	100.0	30.4	396

NA: Not applicable

on, the very low fertility rates for women in this age group suggest that childbearing is virtually complete by these ages. In Goa, nearly half of women (46 percent) in this age group had their last birth before age 30, compared with 54 percent for India as a whole. The median age at last birth is almost the same for women in the age groups 40–44 and 45–49. The typical reproductive age span (which is the difference between the median age at last birth and the median age at first birth for women who have ever had a birth) is shorter in Goa (7.5 years) than in the country as a whole (9.9 years), a finding consistent with the much lower level of fertility in Goa (see International Institute for Population Sciences and ORC Macro, 2000: Table 4.15).

4.8 Postpartum Amenorrhoea, Abstinence, Insusceptibility, and Menopause

Among the factors that influence the risk of pregnancy following a birth are breastfeeding and sexual abstinence. Breastfeeding prolongs postpartum protection from conception through its effect on the period of amenorrhoea (the period prior to the return of menses) following a birth. Delaying the resumption of sexual relations following a birth also prolongs the period of postpartum protection. Women are defined as insusceptible to pregnancy following a birth if they are not at risk of conception because they are amenorrhoeic, abstaining from sexual relations, or both.

Table 4.11 shows the percentage of births occurring during the three years preceding the survey whose mothers are postpartum amenorrhoeic, abstaining, or insusceptible, by the number of months since the birth. These distributions are based on current status information, that is, on the proportions of births occurring within the 36 months before the survey whose mothers were amenorrhoeic, abstaining, or insusceptible at the time of the survey. In other words, the table is based on cross-sectional data and does not represent the experience of a real cohort of births over time. The data are grouped in six-month intervals to minimize fluctuations. The table also shows median and mean durations of amenorrhoea, abstinence, and insusceptibility. The prevalence/incidence mean is obtained by dividing the number of mothers who are amenorrhoeic, abstaining, or insusceptible by the average number of births per month over the 36-month period.

Given the very low fertility in Goa, the total number of births in the three years preceding the survey is small; nonetheless, the NFHS-2 data suggest that among women who had a birth less than six months before the survey, a majority were amenorrhoeic and a majority were abstaining. The percentage amenorrhoeic drops considerably 6–11 months after birth and continues to decline thereafter. The proportion of women abstaining from sexual intercourse

Table 4.11 Postpartum amenorrhoea, abstinence, and insusceptibility

Percentage of births during the three years preceding the survey whose mothers are postpartum amenorrhoeic, abstaining, or insusceptible by number of months since birth and median and mean durations, Goa, 1999

Months since birth	Percentage of births whose mothers are:			Number of births
	Amenorrhoeic	Abstaining	Insusceptible	
< 6	(62.9)	(59.9)	(80.3)	40
6–11	25.5	24.2	42.7	58
12–17	10.7	12.4	19.4	58
18–23	2.9	7.0	8.5	66
24–29	(2.2)	(8.3)	(10.4)	50
30–35	0.0	7.5	7.5	53
Median ¹	4.5	4.0	7.4	NA
Mean	6.8	7.8	10.6	NA
Prevalence/incidence mean	5.3	6.3	9.0	NA

Note: Median and mean durations are based on current status. Insusceptible is defined as amenorrhoeic, abstaining, or both.

NA: Not applicable

() Based on 25–49 unweighted cases

¹Based on a three-period moving average of percentages

within six months after a birth and 6–11 months after a birth are both slightly lower than the proportion amenorrhoeic. Like the proportion amenorrhoeic, the proportion abstaining also declines rapidly after the first six months. Overall, when amenorrhoea and abstinence are considered together, more than half (57 percent) of women are susceptible to pregnancy 6–11 months after giving birth, and 81 percent are susceptible 12–17 months after giving birth.

The median and mean durations of insusceptibility are 7 and 11 months, respectively. Because the mean is affected by extreme values and the median is not, and because the distribution is skewed towards the higher durations, the mean is higher than the median. The median durations of amenorrhoea and abstinence are almost the same (4.5 months and 4.0 months, respectively). These results indicate that women in Goa remain insusceptible to pregnancy for over 7 months, due to the effects of both postpartum amenorrhoea and abstinence.

Menopause is a primary limiting factor of fertility. It is the culmination of a gradual decline in fecundity with increasing age. After age 30, the risk of pregnancy declines with age as an increasing proportion of women become infecund. In NFHS-2, menopause is defined as the absence of menstruation for six or more months preceding the survey among currently married women. Women who report that they are menopausal or that they have had a hysterectomy are also included in this category. Women who are pregnant or postpartum amenorrhoeic are assumed not to be menopausal. Table 4.12 presents data on menopause among women age 30–49 years. As expected, menopause is not common among women in their thirties, but its incidence increases rapidly after age 40. By age 42–43, 17 percent of women in Goa are menopausal. The proportion menopausal rises to 41 percent for women age 46–47 and to 66 percent for women age 48–49.

Table 4.12 Menopause		
Percentage of currently married women age 30–49 years who are in menopause by age, Goa, 1999		
Age	Percentage	Number
30–34	1.7	233
35–39	4.7	234
40–41	15.0	66
42–43	17.0	70
44–45	27.6	74
46–47	40.9	71
48–49	66.1	69
30–49	16.1	817

Note: Percentage menopausal is defined as the percentage of currently married women who are not pregnant and not postpartum amenorrhoeic and who reported that their last menstrual period occurred six or more months preceding the survey or that they are menopausal or have had a hysterectomy.

4.9 Desire for More Children

In order to obtain information on fertility preferences, NFHS-2 asked non-sterilized, currently married, non-pregnant women: ‘Would you like to have (a/another) child or would you prefer not to have any (more) children?’ Pregnant women were asked, ‘After the child you are expecting, would you like to have another child or would you prefer not to have any more children?’ Women who expressed a desire for additional children were asked how long they would like to wait before the birth of their next child. The survey also collected information on the preferred sex of the next child and the ideal number of children by sex.

Table 4.13 and Figure 4.3 show future fertility preferences of currently married women. Thirty-three percent of currently married women say that they do not want any more children, 28 percent cannot have another child because either the wife or the husband has been sterilized, and another 7 percent of women say that they cannot get pregnant (that is, they are ‘declared infecund’). Thirty percent say that they would like to have another child (17 percent within two years, 12 percent after waiting at least two years, and 1 percent are undecided when they want the next child). Overall, 73 percent of women either want to space their next birth or do not want any more children, including women who are sterilized or whose husbands are sterilized.

The desire to have a child within two years drops rapidly with the number of living children, from 78 percent of women with no living children to 27 percent of women with one child and 7 percent or less for women with two or more living children. Notably, among women with one living child, 34 percent want to wait at least two years before having the next child and 30 percent want no more children including 2 percent who are sterilized or whose husbands are sterilized.

Fifty-seven percent of women who want another child say that the sex of the next child does not matter, 24 percent say that they want the next child to be a boy, 17 percent say that they want the next child to be a girl, and the rest say that the sex of the child is ‘up to God’ (2 percent). This suggests some, albeit a relatively low, preference for sons in Goa. Notably, however, both the proportion of women expressing a desire for a child of a particular sex and the

Table 4.13 Fertility preferences

Percent distribution of currently married women by desire for children and preferred sex of additional child, according to number of living children, Goa, 1999

Desire for children	Number of living children ¹					Total
	0	1	2	3	4+	
Desire for additional child						
Wants another soon ²	77.8	26.9	6.8	2.8	1.0	17.4
Wants another later ³	7.0	33.6	7.6	2.9	0.5	12.0
Wants another, undecided when	0.0	3.3	1.2	0.4	0.5	1.3
Undecided	0.9	1.3	0.9	0.4	0.0	0.8
Up to God	0.0	0.3	1.2	0.8	0.0	0.6
Wants no more	2.6	27.9	51.5	32.2	28.5	32.8
Sterilized	0.0	1.7	23.8	53.7	62.2	28.2
Declared infecund	11.7	5.0	6.9	6.7	7.3	6.9
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	119	298	322	244	188	1,171
Preferred sex of additional child⁴						
Boy	10.0	20.0	(57.3)	*	*	24.2
Girl	4.1	24.2	(23.2)	*	*	17.0
Doesn't matter	84.9	53.4	(17.1)	*	*	57.0
Up to God	0.9	2.4	(2.4)	*	*	1.8
Total percent	100.0	100.0	100.0	*	*	100.0
Number of women wanting more ⁴	101	165	46	13	4	329

() Based on 25–49 unweighted cases

*Percentage not shown; based on fewer than 25 unweighted cases

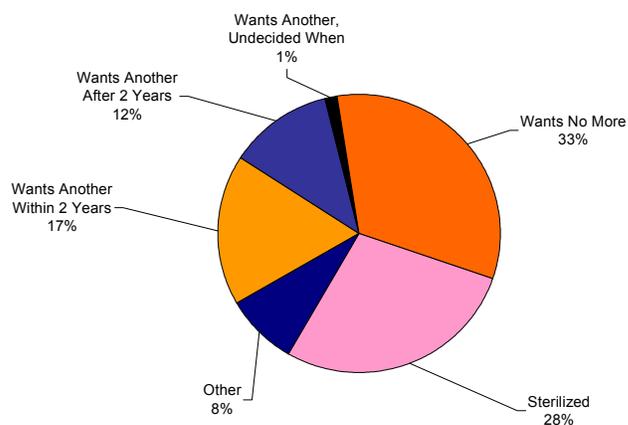
¹Includes current pregnancy, if any

²Wants next birth within 2 years

³Wants to delay next birth for 2 or more years

⁴Excludes currently pregnant women

**Figure 4.3
Fertility Preferences Among Currently Married Women**



Note: Percents add to less than 100.0 due to rounding

NFHS-2, Goa, 1999

proportion expressing a desire for a son generally increase with the number of living children. Among women with no living children, only 10 percent (compared with 35 percent for India as a whole) want their first child to be a son, 4 percent want a daughter, and 86 percent say that the sex of the child does not matter or is up to God. Even among women with one living child more than half do not specify the desired sex of their next child, and among those who do, more than half express a desire for a girl. However, among women with two living children, 57 percent want their next child to be a son, 23 percent want a daughter, and 20 percent say that the sex of the child does not matter or is up to God.

Table 4.14 provides information about differentials in the desire to limit family size by selected background characteristics. In this table, women who are sterilized (or whose husbands are sterilized) are included among those who say that they want no more children. It is striking that 75 percent of women with two living children want no more children. As expected, older women are much more likely than younger women to want no more children: 77 percent of women age 35 and above want no more children, compared with 51 percent of women age 25–34 and 23 percent of women age 15–24. The proportion who want no more children is higher among urban women (64 percent) than among rural women (59 percent). Overall, the proportion wanting no more children declines with education of women, from 67 percent among illiterate women and women who have not completed middle school to 48–56 percent among those who have completed at least middle school. However, these differences by education are partly due to the fact that less-educated women already have more children on average than their better-educated counterparts. When the number of living children is controlled, the relationship between education and the desire for no more children is either inconsistent or is reversed; for example, among women with 1–3 living children, those who have completed high school are more likely to want no more children than illiterate women. The proportion of women who want no more children is similar for Hindu and Muslim women (63 percent each), but lower for Christian women (56 percent). The proportion of women who want no more children is higher for scheduled-caste women (64 percent) than for women belonging to other backward classes and ‘other’ women (58–61 percent).

The background characteristic with the strongest effect on women’s desire to limit family size, however, is the sex composition of living children. Twenty-nine percent of women with no living sons want no more children, compared with 86 percent of women with three or more living sons. Differences associated with the number of living daughters are almost as large as for number of living sons, however. Forty percent of women with no living daughters want no more children, compared with 86 percent of women with three or more living daughters. These data suggest not only a preference for sons, but also a preference for having one daughter along with sons. A preference for sons is indicated by the fact that among women with 1–3 living children, women with no sons are less likely than women with one or more sons to want no more children. A preference for one daughter along with a son is most evident among women with two children: women with one daughter and one son are the ones most likely to want no more children.

Table 4.14 Desire to have no more children by background characteristics

Percentage of currently married women who want no more children by number of living children and selected background characteristics, Goa, 1999

Background characteristic	Number of living children ¹					Total
	0	1	2	3	4+	
Age						
15–24	(0.0)	8.3	*	*	*	22.8
25–34	1.8	28.3	71.8	86.3	(96.9)	51.2
35–49	(6.8)	50.0	80.1	86.6	89.2	76.8
Residence						
Urban	(2.3)	33.7	79.5	85.6	93.5	64.3
Rural	2.8	27.0	72.1	86.3	89.2	58.6
Education						
Illiterate	*	(16.8)	62.8	83.3	89.0	67.4
Literate, < middle school complete	(0.0)	34.4	76.1	87.0	90.6	67.1
Middle school complete	*	(24.7)	(61.9)	(88.8)	*	48.0
High school complete and above	(4.7)	32.7	83.6	87.7	*	55.9
Religion						
Hindu	3.5	31.1	76.2	88.0	94.3	63.1
Muslim	*	*	*	*	*	62.6
Christian	(0.0)	27.6	74.9	82.0	(78.6)	55.6
Caste/tribe						
Scheduled caste	*	*	*	*	*	63.7
Other backward class	*	*	*	*	(91.9)	58.2
Other ²	2.9	32.6	75.5	85.7	89.2	60.9
Standard of living index						
Low	*	(19.3)	(62.6)	(81.6)	(91.5)	58.6
Medium	(2.1)	25.2	70.6	89.0	89.6	61.5
High	3.8	33.9	80.0	84.6	92.1	61.1
Number of living sons³						
0	2.6	27.8	52.1	(68.9)	*	(28.6)
1	NA	33.1	86.4	83.0	92.3	66.7
2	NA	NA	77.3	91.5	94.5	87.6
3+	NA	NA	NA	(91.2)	83.0	86.3
Number of living daughters³						
0	2.6	33.1	77.3	(91.2)	*	(39.5)
1	NA	27.8	86.4	91.5	(81.4)	71.5
2	NA	NA	52.1	83.0	92.4	76.1
3+	NA	NA	NA	(68.9)	90.7	85.5
Total	2.6	29.6	75.3	86.0	90.7	61.0

Note: Women who have been sterilized or whose husbands have been sterilized are considered to want no more children. Total includes small numbers of women belonging to other religions, scheduled-tribe women, and women with missing information on caste/tribe and the standard of living index, who are not shown separately.

NA: Not applicable

() Based on 25–49 unweighted cases

*Percentage not shown; based on fewer than 25 unweighted cases

¹Includes current pregnancy, if any

²Not belonging to a scheduled caste, a scheduled tribe, or an other backward class

³Excludes pregnant women

4.10 Ideal Number of Children

To assess women's ideal number of children, NFHS-2 asked each woman the number of children she would like to have if she could start over again. Women with no children were asked, 'If you could choose exactly the number of children to have in your whole life, how many would that be?' Women who already had children were asked, 'If you could go back to the time you did not have any children and could choose exactly the number of children to have in your whole life, how many would that be?' Some women found it difficult to answer these hypothetical questions, and hence the question sometimes had to be repeated to ensure that the meaning was understood. Despite this, 98 percent of women in Goa were able to give a numerical response.

Table 4.15 shows that 59 percent of ever-married women in Goa consider two to be the ideal number of children. Twenty-nine percent have an ideal that is more than two children, and 10 percent consider one child to be ideal. Among women who gave a numeric response, the average number of children considered ideal is 2.3, higher than the current total fertility rate of 1.8. The average number of children considered ideal ranges from 2.0–2.1 for women with 0–2 children to 3.0 for women who have four or more children.

Table 4.15 Ideal and actual number of children						
Percent distribution of ever-married women by ideal number of children, and mean ideal number of children, by number of living children, Goa, 1999						
Ideal number of children	Number of living children ¹					Total
	0	1	2	3	4+	
0	0.0	0.3	0.0	0.0	0.0	0.1
1	16.4	18.8	6.8	4.2	2.4	9.5
2	65.1	66.5	72.4	50.1	35.9	59.4
3	10.0	8.7	16.7	35.4	24.2	19.2
4	5.2	3.2	1.8	6.1	29.1	8.0
5	0.8	0.3	0.3	1.6	2.8	1.0
6+	0.0	0.0	0.0	0.4	1.9	0.4
Non-numeric response	2.5	2.0	2.1	2.3	3.7	2.4
Total percent	100.0	100.0	100.0	100.0	100.0	100.0
Number of women	128	306	341	260	211	1,246
Mean ideal number ²	2.1	2.0	2.1	2.5	3.0	2.3
Number of women giving numeric response	125	300	334	254	203	1,216

¹Includes current pregnancy, if any
²Means are calculated excluding women who gave non-numeric responses.

Asking a question on ideal family size is sometimes criticized on the grounds that women tend to adjust their ideal family size upward as their number of living children increases, in a process of rationalizing previously unwanted children as wanted. It is argued that the question on ideal family size prompts many women to state the actual number of children they already have as their ideal. It is evident from Table 4.15, however, that this is not so for many women in Goa. Among women with four or more living children, for example, 63 percent state that fewer than four children would be ideal. Similarly, among women with three living children, 54 percent state that their ideal family size is smaller than three children. It is evident from these results that

Table 4.16 Ideal number of children by background characteristics

Mean ideal number of children reported by ever-married women, according to current age and selected background characteristics, Goa, 1999

Background characteristic	Current age						Total
	20–24	25–29	30–34	35–39	40–44	45–49	
Residence							
Urban	(2.4)	2.1	2.2	2.2	2.4	2.4	2.3
Rural	2.3	2.1	2.1	2.4	2.6	2.9	2.4
Education							
Illiterate	(2.8)	2.6	2.5	2.8	3.1	3.0	2.8
Literate, < middle school complete	(2.3)	2.1	2.1	2.4	2.4	2.6	2.3
Middle school complete	*	(2.1)	(2.0)	(1.8)	*	*	2.1
High school complete and above	(2.1)	1.8	2.0	1.9	2.2	(2.2)	2.0
Religion							
Hindu	2.3	2.1	2.1	2.2	2.5	2.5	2.3
Muslim	*	*	*	*	*	*	2.7
Christian	*	2.1	2.1	2.3	2.7	2.8	2.4
Caste/tribe							
Scheduled caste	*	*	*	*	*	*	2.6
Other backward class	*	*	*	*	*	*	2.6
Other ¹	2.3	2.1	2.1	2.3	2.5	2.6	2.3
Work status							
Working in family farm/business	*	*	(2.3)	(2.4)	(2.5)	(3.0)	2.5
Employed by someone else	*	2.1	2.1	2.5	2.7	2.6	2.4
Self-employed	*	*	*	(2.4)	*	*	2.3
Not worked in past 12 months	2.3	2.1	2.1	2.1	2.5	2.6	2.2
Standard of living index							
Low	*	(2.5)	(2.5)	(2.7)	(3.2)	*	2.6
Medium	2.3	2.2	2.1	2.5	2.6	2.8	2.4
High	(2.2)	1.9	2.0	2.0	2.4	2.6	2.2
Husband's education							
Illiterate	*	(2.5)	(2.5)	(2.8)	(3.2)	(3.0)	2.8
Literate, < primary school complete	*	*	(2.4)	(2.6)	(2.6)	(2.7)	2.6
Primary school complete	*	(2.2)	(2.2)	(2.3)	(2.7)	(2.5)	2.4
Middle school complete	*	(2.1)	(2.0)	(2.2)	*	*	2.2
High school complete	(2.3)	2.0	2.1	(2.0)	(2.3)	(2.5)	2.1
Higher secondary complete and above	*	1.9	1.9	(1.8)	(2.2)	(2.0)	2.0
Total	2.3	2.1	2.1	2.3	2.6	2.6	2.3

Note: Means are calculated excluding women who gave non-numeric responses. Total includes small numbers of women belonging to other religions, scheduled-tribe women, and women with missing information on caste/tribe, work status, the standard of living index, and husband's education, who are not shown separately.

() Based on 25–49 unweighted cases

*Mean not shown; based on fewer than 25 unweighted cases

¹Not belonging to a scheduled caste, a scheduled tribe, or an other backward class

a substantial proportion of women already have more children than they now consider ideal. This proportion may be taken as another indicator of surplus or unwanted fertility.

Table 4.16 shows the mean ideal number of children for ever-married women by age, according to selected background characteristics. The mean ideal number of children is 2.1–2.3 for all age groups of women under age 40 and increases only slightly to 2.6 for women age 40–49. The mean ideal number does not vary much by the background characteristics shown in the table, providing additional evidence that the two-child norm has taken widespread hold in Goa.

4.11 Sex Preference for Children

A strong preference for sons has been found to be pervasive in Indian society particularly in the northern states, affecting both attitudes and behaviour with respect to children (Arnold et al., 1998; Arnold, 1996; Basu, 1989; Das Gupta, 1987; Kishor, 1995; Koenig and Foo, 1992; Kulkarni et al., 1996; Murthi et al., 1995; Nag, 1991; Parasuraman et al., 1994). In NFHS-2, women who gave a numerical response to the question on the ideal number of children were asked how many of these children they would like to be boys, how many they would like to be girls, and for how many the sex would not matter. Table 4.17 shows women's mean ideal number of sons and daughters, the percentages who want more children of a particular sex, the percentage who want at least one son, and the percentage who want at least one daughter, according to selected background characteristics. Overall, the average ideal family size consists of 0.9 sons, 0.8 daughters, and 0.7 children of either sex. Seventeen percent of women want more sons than daughters, compared with 33 percent in India as a whole. Five percent of women want more daughters than sons.

The indicator that shows the percentage of women who want at least one son and the percentage who want at least one daughter exhibits the weakest son preference. In Goa, there is not much difference between the proportion of women who want at least one son (68 percent) and those who want at least one daughter (65 percent).

Son preference is particularly weak among women who have completed at least high school, Christian women, self-employed women, women living in households with a high standard of living, and women whose husbands have at least completed high school.

4.12 Fertility Planning

For each child born in the three years before the survey and for each current pregnancy, NFHS-2 asked women whether the pregnancy was wanted at that time (planned), wanted at a later time (mistimed), or not wanted at all. Because a woman may retrospectively describe an unplanned pregnancy as one that was wanted at that time, responses to these questions may lead to an underestimation of unplanned childbearing. Nevertheless, this information provides a potentially powerful indicator of the degree to which couples successfully control childbearing. It should be noted that the proportion of births that are unplanned is influenced not only by whether, and how effectively, couples use contraception, but also by the couple's ideal family size.

Table 4.18 shows the percent distribution of births during the three years preceding the survey and current pregnancies according to fertility planning status. Twenty-nine percent of all pregnancies that resulted in live births in the three years preceding the survey (including current pregnancies) were unplanned (that is, unwanted at the time the woman became pregnant), with 23 percent wanted later and 6 percent not wanted at all. Within the unplanned category, the proportion of births that were wanted later falls, and the proportion that were not wanted at all rises, as mother's age at birth increases. The percentage of unplanned births in Goa (29 percent) is higher than at the national level (21 percent).

The proportion of births that were unplanned is higher in rural areas than urban areas. Births to literate women who have not completed high school are much more likely to be unplanned than births to illiterate women and women who have completed high school (37–46 percent compared with 20–21 percent). Births to women living in households with a low

Table 4.17 Indicators of sex preference

Mean ideal number of sons, daughters, and children of either sex for ever-married women, percentage who want more sons than daughters, percentage who want more daughters than sons, percentage who want at least one son, and percentage who want at least one daughter by selected background characteristics, Goa, 1999

Background characteristic	Mean ideal number of:			Percentage who want more sons than daughters	Percentage who want more daughters than sons	Percentage who want at least one son	Percentage who want at least one daughter	Number of women
	Sons	Daughters	Either sex					
Residence								
Urban	0.9	0.7	0.6	17.5	4.4	67.2	63.0	508
Rural	0.9	0.8	0.7	16.6	5.6	68.3	66.3	706
Education								
Illiterate	1.2	1.0	0.6	24.1	7.3	78.2	75.3	343
Literate, < middle school complete	1.0	0.8	0.5	18.9	4.6	73.0	70.2	329
Middle school complete	0.8	0.6	0.7	16.9	2.6	63.2	55.6	156
High school complete and above	0.6	0.6	0.8	9.0	4.7	56.2	55.0	387
Religion								
Hindu	1.0	0.8	0.5	19.3	4.6	73.0	69.1	809
Muslim	1.0	0.8	0.8	19.9	3.6	70.4	65.0	55
Christian	0.7	0.7	1.0	11.1	6.6	55.2	54.9	346
Caste/tribe								
Scheduled caste	1.1	0.8	0.7	23.5	2.3	72.8	66.1	90
Other backward class	0.9	0.8	0.8	15.5	2.8	62.4	62.6	76
Other ¹	0.9	0.8	0.6	16.6	5.5	67.8	64.9	1,043
Work status								
Working in family farm/business	1.0	0.9	0.6	17.1	8.2	73.4	72.8	146
Employed by someone else	0.9	0.8	0.7	18.5	4.7	66.9	64.8	341
Self-employed	0.8	0.8	0.7	9.3	6.9	69.0	69.1	88
Not worked in past 12 months	0.9	0.7	0.7	17.1	4.4	66.9	62.6	639
Standard of living index								
Low	1.1	0.9	0.6	24.2	8.6	78.7	75.4	175
Medium	1.0	0.8	0.6	19.7	4.2	71.9	66.8	481
High	0.8	0.7	0.7	12.5	4.9	61.1	60.0	554
Husband's education								
Illiterate	1.1	1.0	0.7	20.6	7.2	74.0	73.0	194
Literate, < primary school complete	1.2	0.9	0.5	27.9	8.0	77.5	73.4	176
Primary school complete	1.0	0.8	0.6	19.7	5.7	73.0	67.9	176
Middle school complete	0.9	0.7	0.6	18.0	2.0	67.5	59.8	157
High school complete	0.8	0.7	0.6	14.5	4.3	66.4	64.9	275
Higher secondary complete and above	0.6	0.6	0.8	6.1	3.9	53.5	52.9	233
Total	0.9	0.8	0.7	17.0	5.1	67.9	64.9	1,214

Note: Table excludes women who gave non-numeric responses to the questions on ideal number of children or ideal number of sons and daughters. Total includes 4 women belonging to other religions, 3 women belonging to the scheduled tribes, and 2, 1, 4, and 3 women with missing information on caste/tribe, work status, the standard of living index, and husband's education, respectively, who are not shown separately.

¹Not belonging to a scheduled caste, a scheduled tribe, or an other backward class

standard of living are much more likely to be unplanned than births to women living in households with a medium or high standard of living. Unplanned births are less common among Christian women than among Hindu or Muslim women. Not surprisingly, higher-order births are more likely than first- or second-order births to be unplanned. The proportion unplanned ranges from 20 percent for first-order births to 41–42 percent for births of order three or higher. The substantial proportion of women at all parities who would have liked to have their births later

Table 4.18 Fertility planning

Percent distribution of births during the three years preceding the survey and current pregnancies by fertility planning status, according to selected background characteristics, Goa, 1999

Background characteristic	Planning status of pregnancy				Total percent	Number of births and current pregnancies
	Wanted then	Wanted later	Not wanted at all	Missing		
Mother's age at birth¹						
< 20	(74.2)	(25.8)	(0.0)	(0.0)	100.0	27
20–24	65.0	32.1	1.9	1.0	100.0	110
25–29	72.8	22.0	5.2	0.0	100.0	152
30–34	75.8	14.1	10.2	0.0	100.0	84
Residence						
Urban	72.8	20.6	5.9	0.7	100.0	159
Rural	69.5	23.9	6.6	0.0	100.0	243
Education						
Illiterate	80.1	9.8	10.0	0.0	100.0	81
Literate, < middle school complete	63.3	29.9	6.8	0.0	100.0	101
Middle school complete	53.8	36.0	10.2	0.0	100.0	66
High school complete and above	78.1	18.7	2.5	0.7	100.0	154
Religion						
Hindu	69.2	22.9	7.4	0.4	100.0	253
Muslim	(68.8)	(27.7)	(3.5)	(0.0)	100.0	29
Christian	74.5	20.7	4.8	0.0	100.0	118
Caste/tribe						
Scheduled caste	(77.4)	(16.7)	(5.9)	(0.0)	100.0	36
Other backward class	(74.6)	(19.2)	(6.2)	(0.0)	100.0	29
Other ²	69.9	23.3	6.4	0.3	100.0	335
Standard of living index						
Low	63.9	21.9	14.2	0.0	100.0	49
Medium	71.4	22.3	6.3	0.0	100.0	168
High	71.9	23.1	4.3	0.6	100.0	183
Birth order³						
1	79.7	19.5	0.9	0.0	100.0	211
2	62.9	29.5	6.5	1.1	100.0	103
3	59.0	25.2	15.8	0.0	100.0	56
4+	(58.3)	(15.7)	(26.0)	(0.0)	100.0	31
Total	70.8	22.6	6.3	0.3	100.0	402

Note: Table includes the two most recent births in the three years preceding the survey and current pregnancies. Total includes 24 and 4 births to women age 35–39 and age 40–44 at the time of birth, respectively, 1 birth to a woman belonging to an other religion, and 2 and 1 births with missing information on caste/tribe and the standard of living index, respectively, who are not shown separately.

() Based on 25–49 unweighted cases

¹For current pregnancy, estimated maternal age at birth

²Not belonging to a scheduled caste, a scheduled tribe, or an other backward class

³Includes current pregnancy, if any

suggests that attention needs to be given to the promotion of spacing methods of contraception among these women. In addition, the fact that 26 percent of births of order four or higher were not wanted at all indicates that the family welfare programme has not met the needs of women who already have at least three children to control their fertility.

The impact of unwanted fertility can be measured by comparing the total wanted fertility rate with the total fertility rate (TFR). The total wanted fertility rate represents the level of fertility that theoretically would result if all unwanted births were prevented. A comparison of

Table 4.19 Wanted fertility rates		
Total wanted fertility rate and total fertility rate for the three years preceding the survey by selected background characteristics, Goa, 1999		
Background characteristic	Total wanted fertility rate	Total fertility rate
Residence		
Urban	1.45	1.69
Rural	1.50	1.83
Education		
Illiterate	1.53	2.08
Literate, < middle school complete	1.79	2.16
Middle school complete	1.17	1.64
High school complete and above	1.66	1.81
Religion		
Hindu	1.32	1.68
Muslim	(2.63)	(2.80)
Christian	1.59	1.76
Caste/tribe		
Scheduled caste	1.72	2.31
Other backward class	2.11	2.40
Other ¹	1.45	1.72
Standard of living index		
Low	1.14	1.71
Medium	1.47	1.81
High	1.58	1.78
Total	1.47	1.77
<p>Note: Rates are based on births in the period 1–36 months preceding the survey to women age 15–49. The total fertility rates are the same as those presented in Table 4.3. Total includes small numbers of women belonging to other religions, scheduled-tribe women, and women with missing information on caste/tribe and the standard of living index, who are not shown separately.</p> <p>() Based on 125–249 women-years of exposure</p> <p>¹Not belonging to a scheduled caste, a scheduled tribe, or an other backward class</p>		

the TFR with the total wanted fertility rate indicates the potential demographic impact of the elimination of all unwanted births. The total wanted fertility rates presented in Table 4.19 are calculated in the same way as the TFR except that unwanted births are excluded from the numerator. In this case, a birth is considered unwanted if the number of living children at the time of conception was greater than or equal to the ideal number of children reported by the respondent at the time of the survey. Women who did not give a numeric response to the question on ideal number of children are assumed to have wanted all the births they had.

Overall, the total wanted fertility rate of 1.47 in Goa is lower by 0.3 children (i.e., by 17 percent) than the total fertility rate of 1.77. This means that if unwanted births could be eliminated, the TFR would drop even further below replacement. Although total wanted fertility is lower than total fertility for every population group, the absolute difference between the wanted fertility rate and the TFR is more than 0.5 children only for scheduled-caste women, women living in households with a low standard of living, and illiterate women.