

CHAPTER 5

FERTILITY

A major objective of the National Family Health Survey is to estimate fertility levels, differentials and trends in India and in individual states. This chapter presents a description of current and past fertility levels, cumulative fertility and family size, fertility levels by sociodemographic characteristics, pregnancy outcomes, birth intervals and durations of postpartum amenorrhoea, abstinence and nonsusceptibility. Age at first birth and age at last birth, teenage childbearing and age at menopause are also discussed.

Most of the fertility measures presented in this chapter are based on the complete birth histories of ever-married women age 15-49. Several procedures were established to facilitate the complete and accurate reporting of births. First, women were asked separately about the number of their sons and daughters presently living at home, those living elsewhere and those who had died. Then, more complete details were collected for each live birth, including information on the sex, year and month of birth, age and survival status of the child. Interviewers received extensive training in probing techniques to help respondents recall the details of all births. In addition, interviewers were instructed to check any documents (such as horoscopes, school certificates or vaccination cards) that might provide information on the child's date of birth. Finally, for any interval of four or more years between births, interviewers were required to record the reason for the long interval to help in identifying any live births that might have been omitted during the time period. This additional probe also helped to obtain more accurate information on stillbirths and abortions.

Despite all the measures taken to improve data quality, the NFHS is subject, to some degree, to the same kinds 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 displacement of births due to the difficulty of determining dates of birth accurately. These problems may be particularly common in states where the level of female literacy is relatively low.

5.1 Current Fertility Levels, Differentials and Trends

The discussion of fertility levels, differentials and trends is based on both summary and age-specific measures of fertility. Summary measures include the crude birth rate (CBR), the general fertility rate (GFR), and the total fertility rate (TFR). Alternative measures of the crude birth rate are calculated from births recorded in the Household Questionnaire and from births recorded in the birth history in the Woman's Questionnaire. The crude birth rate calculated from births recorded in the Household Questionnaire pertains to the two-year period immediately preceding the survey. All other measures are calculated for the three-year period preceding the survey. Because the fieldwork for the NFHS was conducted at different times in each state, the three-year fertility rates do not correspond exactly to any particular calendar years, but they are centred roughly on 1990-1992. A three-year period was chosen for the NFHS rates as a compromise among three objectives: to obtain the most current information, to reduce the effects of sampling variation, and to minimize problems with the displacement of births from recent years to earlier years.

The NFHS fertility estimates can be compared with estimates from the Sample Registration System (SRS) for 1990-92 (Office of the Registrar General, 1994). Estimates of various fertility measures from the NFHS and SRS are shown by place of residence in Table 5.1 and discussed in the following sections.

Crude Birth Rate

The two sets of crude birth rates discussed above are shown in Table 5.1. The CBR from the household birth record is calculated as the annual number of births in the two-year period before the date of interview per 1,000 usual residents. The denominator for this CBR estimate is adjusted by projecting the population at the time of the survey backward to the mid-point of the time period using the intercensal population growth rate in India, for urban and rural areas separately. The CBR estimate based on the birth history in the Woman's Questionnaire is calculated as a sum of products, where each product is an age-specific fertility rate multiplied by the proportion of women in the specified age group, out of the total *de facto* population, both male and female.

Although the NFHS estimates of the CBR are based on information from two different parts of the interview (often with different respondents), the two estimates agree quite closely. The three-year CBR of 28.7 is slightly higher than the two-year (household-based) rate of 28.0,

Age	NFHS (1990-92) ¹			SRS (1990-92)		
	Urban	Rural	Total	Urban	Rural	Total
15-19	0.075	0.131	0.116	0.046	0.087	0.078
20-24	0.203	0.243	0.231	0.196	0.248	0.235
25-29	0.154	0.177	0.170	0.160	0.204	0.193
30-34	0.071	0.108	0.097	0.080	0.130	0.117
35-39	0.027	0.051	0.044	0.038	0.078	0.068
40-44	0.006	0.019	0.015	0.016	0.036	0.031
45-49	0.004	0.006	0.005	0.006	0.014	0.012
TFR 15-44	2.68	3.64	3.36	2.68	3.92	3.61
TFR 15-49	2.70	3.67	3.39	2.71	3.99	3.67
GFR	98	133	123	93	129	121
NFHS CBR based on						
Household birth record	23.6	29.6	28.0	NA	NA	NA
Woman's birth history	24.1	30.4	28.7	NA	NA	NA
SRS CBR	NA	NA	NA	24.0	32.2	29.6

Note: Rates from the NFHS are for the period 1-36 months before the interview except for the CBR from the household birth record which is based on the period 1-24 months before the interview. Rates for the age group 45-49 might be slightly biased due to truncation.
TFR: Total Fertility Rate for ages 15-44 and 15-49, expressed per woman.
GFR: General Fertility Rate (births to women age 13-49 divided by woman-years lived between age 15 and 49, expressed per 1,000 women.
CBR: Crude Birth Rate, expressed per 1,000 population.
NA: Not applicable
¹Three years preceding the survey
Source of SRS data: Office of the Registrar General (1994)

as would be expected when fertility is declining. The SRS national crude birth rate for 1990-92 excluding Jammu and Kashmir (29.6) is very close to the NFHS crude birth rate for 1990-92 (28.7). The urban CBR is 21 percent lower than the rural CBR in the NFHS and 25 percent lower in the SRS.

General Fertility Rate

The general fertility rate (GFR) in the NFHS is calculated by dividing the total number of births to women age 13-49 occurring during the three years preceding the survey by the number of woman-years lived between the ages of 15 and 49 during the same period, and multiplying the result by 1,000. The estimated GFR for 1990-92 is 123 births per 1,000 women for India as a whole, almost the same as the SRS GFR for 1990-92 (121). The observed GFR in the NFHS is 26 percent lower in urban areas (98) than in rural areas (133). The 1990-92 SRS estimate for urban areas (93) is 28 percent lower than the estimate for rural areas (129).

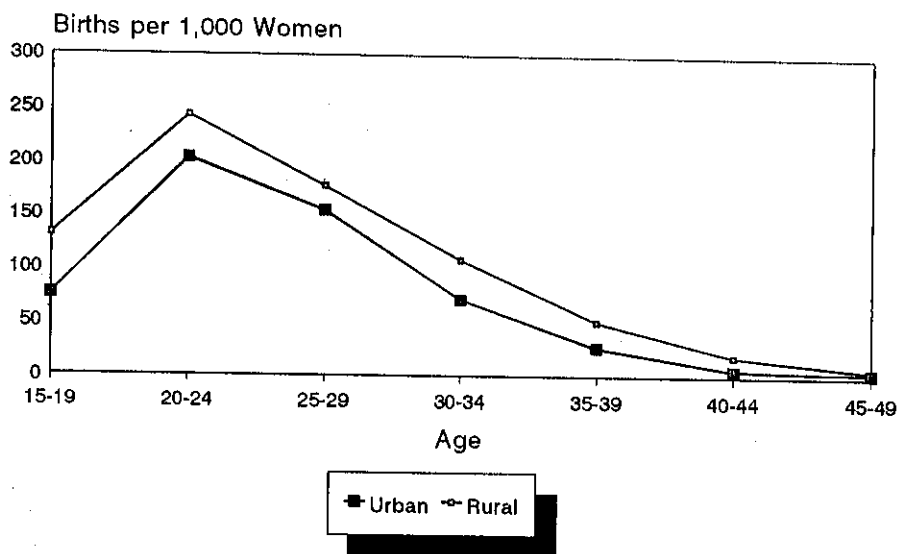
Age-Specific and Total Fertility Rates

Both the GFR and the CBR are crude summary measures of the rate at which the population is replacing itself. A more precise picture of fertility can be obtained by examining the age-specific fertility rates (ASFRs) and the total fertility rate (TFR), because they are not affected by the age structure of the population. Both the ASFRs and the TFR from the NFHS, as shown in Table 5.1, are based on births during the three-year period preceding the survey. The numerator of each age-specific fertility rate is live births in a five-year age group, and the denominator is the number of woman-years lived in the same five-year age interval during the three-year time period. The TFR is a summary measure that is calculated as five times the sum (over five-year age groups) of the age-specific fertility rates. The TFR is interpreted as the number of children a woman would bear during her reproductive years (alternatively, 15-44 or 15-49) if she were to experience the age-specific fertility rates prevailing during the three-year period preceding the survey.

A TFR of 3.4 children per woman is observed for the period 1990-92 for both the 15-44 age range and the 15-49 age range, because there were very few births to women age 45-49 during the three years preceding the survey. The urban TFR (2.7 children per woman) is considerably lower than the rural TFR (3.7 children per woman). Under the present age schedule of fertility, a woman in the urban areas would have, on average, one child less (or 26 percent fewer children) during her childbearing years than a woman in the rural areas.

The age-specific fertility rates follow the expected pattern. Fertility peaks in the 20-24 age group, reflecting a pattern of early marriage and childbearing. This is true for both the urban and rural areas (see Figure 5.1). Fertility rates decline steadily after age 25, reaching very low levels for women in their forties. Fertility is highly concentrated in the 15-29 age group. Eighty percent of urban fertility and 75 percent of rural fertility is concentrated in this age group. Current fertility in India is characterized by a substantial amount of early childbearing; 17 percent of total fertility is accounted for by births to women in the age group 15-19. Births to women age 35 years and above account for only 9 percent of the TFR. Births to women age 40-49 account for even less of the TFR: 2 percent in urban areas and 3 percent in rural areas. The age-specific fertility rates are considerably higher in rural than in urban

Figure 5.1
Age-Specific Fertility Rates
by Residence



Note: Rates are for the three years before the survey (1990-92)

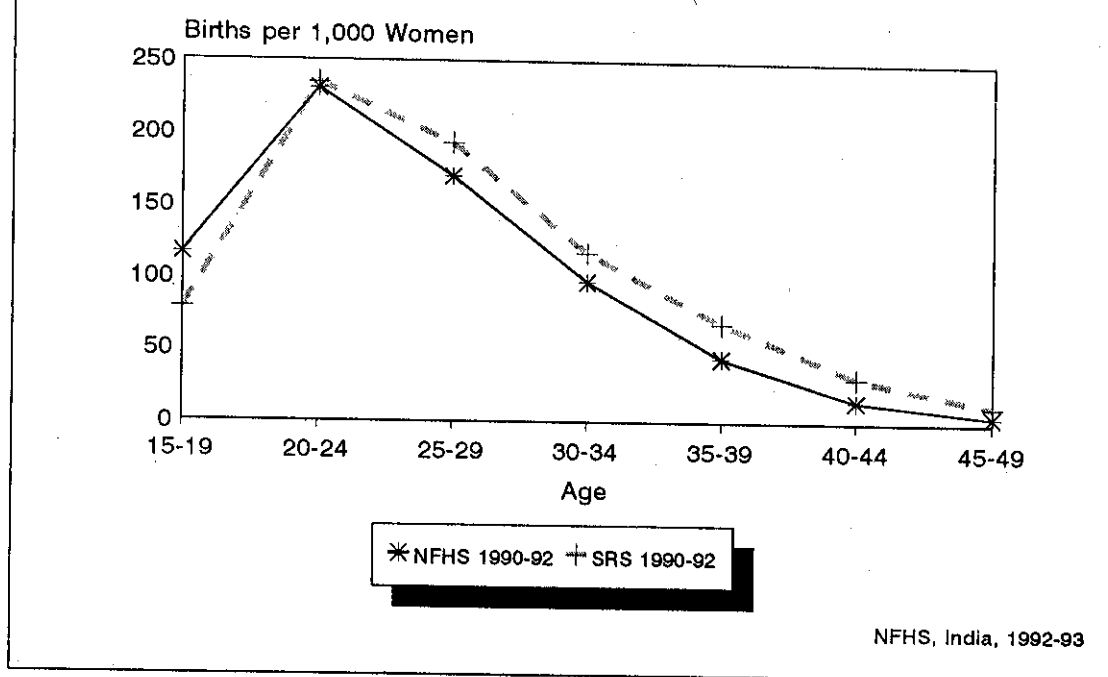
NFHS, India, 1992-93

areas in every age group, although the relative differentials are smaller in the prime childbearing years (age 20-29) than at either younger or older ages.

The TFR from the NFHS for 1990-92 in Table 5.1 is identical to the 1990-92 SRS estimate in urban areas (2.7) and 8 percent lower than the SRS estimate in rural areas. For the country as a whole, the NFHS TFR is also 8 percent lower than the SRS TFR. Given the sampling variability in both surveys and the differences in methodology, the correspondence between the SRS and NFHS estimates should be considered to be reasonable.

It is instructive to extend the comparison of NFHS and SRS results from total fertility rates to the corresponding age-specific fertility rates, as shown in Table 5.1 and Figure 5.2. The estimates are nearly identical in the highest fertility age group (age 20-24), but the NFHS estimate is considerably higher than the SRS estimate at age 15-19 and considerably lower than the SRS estimates for women age 25-49. The difference for the 15-19 age group may be due to the fact that the SRS rates are *de jure* while the NFHS rates are *de facto*. Thus, in calculating fertility estimates, the SRS excludes births occurring within the sample unit to visitors, but includes births to usual residents outside the sample unit. Because young women typically return to their parental household to have their first baby, the SRS may not be able to obtain complete information on recent births to usual residents who are temporarily absent. Thus, it is not surprising that the NFHS fertility estimate for the 15-19 age group is somewhat higher than the SRS estimate. More difficult to explain are the differences in the older age groups. The very low fertility rates for women in the highest age groups in India are reasonable, because many

Figure 5.2
Age-Specific Fertility Rates
NFHS and SRS



women at these ages have been sterilized or are menopausal. Moreover, terminal abstinence from sexual intercourse is commonly practised by couples once their daughter attains menarche or once any of their children gets married or has a child. A complete explanation of the differences in fertility estimates at older ages from the two data sets must await further analysis.

Fertility Differentials and Trends

There are wide variations in fertility levels among the states (Table 5.2 and Figure 5.3). Fertility is considerably below the national average in South India and West India, where two states (Kerala and Goa) have achieved below-replacement fertility¹. Goa has a unique pattern of childbearing, with very low fertility before age 25 as a result of the high average age at marriage and the late initiation of childbearing. At the other end of the spectrum, fertility is four children per woman or higher in Uttar Pradesh, Bihar, Haryana and Arunachal Pradesh, and the TFR also exceeds the national average in Madhya Pradesh, Meghalaya, Rajasthan and Assam. With a TFR of 4.8, Uttar Pradesh stands out as having especially high fertility (more than 40 percent higher than the national average). Early childbearing (fertility at age 15-19) is particularly high in Madhya Pradesh, Andhra Pradesh, Haryana and Maharashtra. The highest rates of childbearing for women in their forties are found in Uttar Pradesh, Bihar, Madhya

¹ A replacement level fertility is the level at which each woman, on average, is replaced by one daughter, which occurs at approximately a TFR of 2.1 children per woman.

Table 5.2 Fertility by state

Age-specific and total fertility rates (TFR), average number of children ever born (CEB) for women age 40-49, and crude birth rate for the three-year period prior to the survey, according to residence and state, India, 1992-93

State	Age-specific fertility rates							TFR 15-49	Mean CEB for women age 40-49	Crude birth rate
	15-19	20-24	25-29	30-34	35-39	40-44	45-49			
URBAN										
India	0.075	0.203	0.154	0.071	0.027	0.006	0.004	2.70	4.16	24.1
North										
Delhi	0.061	0.223	0.186	0.085	0.041	0.005	0.000	3.00	4.15	26.2
Haryana	0.075	0.274	0.181	0.063	0.019	0.015	*	3.14	4.35	26.7
Himachal Pradesh	0.023	0.184	0.124	0.059	0.015	0.000	(0.000)	2.03	3.41	20.2
Jammu Region of J & K	0.026	0.144	0.165	0.081	0.010	0.000	(0.000)	2.13	3.89	21.2
Punjab	0.041	0.224	0.147	0.059	0.021	0.003	*	2.48	3.92	21.0
Rajasthan	0.063	0.184	0.181	0.087	0.031	0.000	(0.007)	2.77	4.14	22.3
Central										
Madhya Pradesh	0.092	0.239	0.188	0.077	0.037	0.012	(0.009)	3.27	4.58	27.1
Uttar Pradesh	0.062	0.240	0.204	0.125	0.057	0.014	0.013	3.58	5.18	28.5
East										
Bihar	0.089	0.224	0.182	0.090	0.053	0.012	0.000	3.25	4.59	27.5
Orissa	0.070	0.182	0.147	0.084	0.012	0.011	(0.000)	2.53	4.64	23.9
West Bengal	0.083	0.158	0.107	0.058	0.016	0.000	(0.007)	2.14	3.64	18.5
Northeast										
Arunachal Pradesh	*	*	*	*	*	*	*	NC	*	NC
Assam	0.070	0.167	0.159	0.054	0.046	0.011	(0.000)	2.53	4.16	23.2
Manipur	0.030	0.122	0.121	(0.133)	(0.035)	(0.000)	*	NC	(4.51)	NC
Meghalaya	0.046	(0.207)	(0.194)	*	*	*	*	NC	(4.55)	NC
Mizoram	0.053	0.125	0.154	0.089	(0.029)	(0.006)	(0.000)	NC	4.06	NC
Nagaland	0.026	(0.145)	(0.126)	*	(0.035)	*	*	NC	(3.71)	NC
Tripura	(0.057)	(0.089)	(0.121)	(0.062)	*	*	*	NC	*	NC
West										
Goa	0.019	0.092	0.124	0.083	0.032	0.008	0.002	1.80	3.56	16.4
Gujarat	0.063	0.227	0.154	0.065	0.011	0.006	(0.004)	2.65	4.01	24.6
Maharashtra	0.088	0.196	0.151	0.054	0.014	0.003	0.000	2.54	3.94	24.2
South										
Andhra Pradesh	0.085	0.210	0.104	0.049	0.019	0.003	(0.000)	2.35	3.88	22.3
Karnataka	0.094	0.169	0.127	0.057	0.020	0.002	0.009	2.38	4.04	22.7
Kerala	0.033	0.149	0.121	0.036	0.013	0.003	0.000	1.78	3.31	18.0
Tamil Nadu	0.063	0.188	0.149	0.051	0.017	0.004	0.000	2.36	4.10	23.4

Pradesh and some of the small northeastern states. Childbearing at age 40 and above is rare in Tamil Nadu, Andhra Pradesh, Delhi, Maharashtra, Goa, Himachal Pradesh, Punjab, and Kerala, all of which have age-specific fertility rates of 7 or fewer children per 1,000 women at these ages. In Maharashtra, fertility begins early and ends early. In fact, Maharashtra has lower fertility rates than any other state for women age 35-49. For most states, the NFHS fertility estimates are slightly lower than the estimates from the Sample Registration System for approximately corresponding years (see individual NFHS state reports for comparative statistics). In half of the major states, the two sets of estimates are quite close (within 0.2 children). The two sets of estimates differ by more than half a child in only two states (Rajasthan and Madhya Pradesh). Given other available information, it is likely that the current fertility estimates in the NFHS are too low in both of these states (see individual state reports).

Table 5.2 Fertility by state (Contd.)

Age-specific and total fertility rates (TFR), average number of children ever born (CEB) for women age 40-49, and crude birth rate for the three-year period prior to the survey, according to residence and state, India, 1992-93

State	Age-specific fertility rates							TFR 15-49	Mean CEB for women age 40-49	Crude birth rate
	15-19	20-24	25-29	30-34	35-39	40-44	45-49			
RURAL										
India	0.131	0.243	0.177	0.108	0.051	0.019	0.006	3.67	5.13	30.4
North										
Delhi	(0.131)	(0.231)	(0.160)	*	*	*	*	NC	4.91	NC
Haryana	0.166	0.331	0.202	0.100	0.043	0.015	(0.004)	4.32	5.51	35.1
Himachal Pradesh	0.080	0.267	0.179	0.044	0.036	0.008	0.000	3.07	4.54	29.0
Jammu Region of J & K	0.058	0.243	0.216	0.093	0.045	0.011	0.007	3.36	5.37	29.3
Punjab	0.074	0.242	0.194	0.078	0.021	0.005	0.003	3.09	4.29	26.5
Rajasthan	0.124	0.264	0.181	0.113	0.063	0.017	0.011	3.87	5.22	28.1
Central										
Madhya Pradesh	0.173	0.260	0.192	0.115	0.051	0.020	0.011	4.11	5.42	32.9
Uttar Pradesh	0.128	0.289	0.264	0.195	0.105	0.044	0.014	5.19	6.19	37.9
East										
Bihar	0.127	0.244	0.191	0.150	0.083	0.029	0.005	4.14	5.36	32.9
Orissa	0.089	0.209	0.166	0.089	0.036	0.010	0.000	3.00	4.93	27.0
West Bengal	0.140	0.219	0.152	0.084	0.039	0.012	0.005	3.25	5.28	28.4
Northeast										
Arunachal Pradesh	0.118	0.246	0.194	0.150	0.086	(0.045)	*	4.38	4.88	34.6
Assam	0.122	0.205	0.200	0.128	0.057	0.023	(0.000)	3.68	6.01	31.4
Manipur	0.033	0.170	0.195	0.124	0.067	(0.016)	*	3.03	4.97	25.5
Meghalaya	0.086	0.176	0.176	0.125	0.116	0.053	(0.029)	3.80	5.03	31.9
Mizoram	0.039	0.157	0.129	(0.082)	(0.033)	(0.020)	(0.000)	(2.30)	4.43	(19.6)
Nagaland	0.064	0.199	0.212	0.150	0.067	0.019	0.008	3.60	4.28	34.2
Tripura	0.091	0.185	0.126	0.090	0.058	0.031	(0.000)	2.91	5.70	24.5
West										
Goa	0.011	0.099	0.172	0.084	0.030	0.001	0.000	1.99	3.94	17.8
Gujarat	0.096	0.264	0.158	0.080	0.027	0.005	0.004	3.17	4.64	28.4
Maharashtra	0.183	0.252	0.118	0.052	0.010	0.009	0.000	3.12	4.53	27.9
South										
Andhra Pradesh	0.164	0.198	0.101	0.046	0.020	0.005	0.000	2.67	4.12	24.7
Karnataka	0.147	0.226	0.138	0.069	0.026	0.009	0.002	3.08	4.99	27.5
Kerala	0.040	0.164	0.123	0.063	0.019	0.008	0.001	2.09	3.82	20.3
Tamil Nadu	0.099	0.212	0.121	0.051	0.020	0.004	0.000	2.54	4.27	23.5

In urban areas, the total fertility rate is less than 2.5 children per woman in 9 of the 19 states for which estimates are shown. In every state which has urban and rural estimates, the total fertility rate from the NFHS is lower in urban areas than in rural areas. There is, however, a convergence of urban and rural fertility rates for states with low fertility. In the four states with the lowest overall fertility (Goa, Kerala, Tamil Nadu and Andhra Pradesh), rural fertility is only 12 percent higher than urban fertility, on average. In the remaining states, rural fertility exceeds urban fertility by an average of 35 percent, varying from 19 percent in Orissa to 58 percent in Jammu.

Table 5.3 and Figure 5.4 show current and cohort fertility by selected background characteristics. Current fertility is measured by the total fertility rate for the three years prior to the survey. Cohort fertility is measured by the mean number of children ever born to women

Table 5.2 Fertility by state (Contd.)

Age-specific and total fertility rates (TFR), average number of children ever born (CEB) for women age 40-49, and crude birth rate for the three-year period prior to the survey, according to residence and state, India, 1992-93

State	Age-specific fertility rates							TFR 15-49	Mean CEB for women age 40-49	Crude birth rate
	15-19	20-24	25-29	30-34	35-39	40-44	45-49			
TOTAL										
India	0.116	0.231	0.170	0.097	0.044	0.015	0.005	3.39	4.84	28.7
North										
Delhi	0.066	0.224	0.184	0.086	0.040	0.005	0.000	3.02	4.19	26.6
Haryana	0.143	0.316	0.196	0.088	0.036	0.015	0.003	3.99	5.21	32.9
Himachal Pradesh	0.075	0.259	0.172	0.046	0.034	0.007	0.000	2.97	4.42	28.2
Jammu Region of J & K	0.054	0.223	0.206	0.090	0.038	0.009	0.005	3.13	5.05	27.9
Punjab	0.065	0.238	0.180	0.072	0.021	0.005	0.002	2.92	4.18	25.0
Rajasthan	0.112	0.247	0.181	0.107	0.055	0.014	0.010	3.63	5.00	27.0
Central										
Madhya Pradesh	0.153	0.255	0.191	0.106	0.047	0.018	0.010	3.90	5.22	31.6
Uttar Pradesh	0.113	0.279	0.251	0.177	0.094	0.037	0.014	4.82	5.97	35.9
East										
Bihar	0.121	0.241	0.190	0.141	0.078	0.026	0.004	4.00	5.23	32.1
Orissa	0.086	0.204	0.163	0.089	0.031	0.010	0.000	2.92	4.88	26.5
West Bengal	0.123	0.202	0.138	0.075	0.031	0.008	0.005	2.92	4.72	25.5
Northeast										
Arunachal Pradesh	0.115	0.246	0.194	0.139	0.081	(0.039)	*	4.25	4.86	34.6
Assam	0.116	0.200	0.195	0.117	0.055	0.021	0.000	3.53	5.74	30.4
Manipur	0.037	0.152	0.170	0.128	0.057	0.010	(0.000)	2.76	4.80	24.4
Meghalaya	0.079	0.182	0.180	0.117	0.115	0.051	0.022	3.73	4.92	31.9
Mizoram	0.046	0.140	0.143	0.085	0.031	0.014	0.000	2.30	4.26	20.8
Nagaland	0.057	0.188	0.196	0.131	0.059	0.015	0.006	3.26	4.16	31.3
Tripura	0.085	0.166	0.125	0.081	0.052	0.026	(0.000)	2.67	5.44	23.1
West										
Goa	0.016	0.096	0.148	0.083	0.031	0.005	0.001	1.90	3.74	17.2
Gujarat	0.086	0.251	0.157	0.074	0.021	0.005	0.004	2.99	4.42	27.2
Maharashtra	0.141	0.227	0.132	0.053	0.012	0.006	0.000	2.86	4.25	26.3
South										
Andhra Pradesh	0.144	0.202	0.101	0.047	0.019	0.005	0.000	2.59	4.05	24.2
Karnataka	0.129	0.206	0.134	0.064	0.024	0.006	0.005	2.85	4.65	25.9
Kerala	0.038	0.160	0.123	0.054	0.017	0.006	0.001	2.00	3.65	19.6
Tamil Nadu	0.087	0.203	0.132	0.051	0.019	0.004	0.000	2.48	4.21	23.5

NC: Not calculated because there are too few women in this category

() Based on 125-249 woman-years of exposure for age-specific fertility rates and 25-49 unweighted women age 40-49 for CEB.

* Rate not shown; based on fewer than 125 woman-years of exposure for age-specific fertility rates and fewer than 25 unweighted women age 40-49 for CEB.

age 40-49 at the time of the survey. Both measures are calculated from the birth history information in the Woman's Questionnaire.

If there had been no change in fertility for three or more decades prior to the survey, the current and cohort indicators would be nearly identical, differences being due solely to the slightly incomplete fertility of women age 40-49. If fertility has declined, current fertility will be lower than cohort fertility, with larger differences generally indicating more rapid decline. The gap between the TFR of 3.4 and the mean number of children ever born of 4.8 indicates

Table 5.3 Fertility by background characteristics

Total fertility rate for the three years preceding the survey, and mean number of children ever born to women age 40-49, by selected background characteristics, India, 1992-93

Background characteristic	Total fertility rate ¹	Mean number of children ever born to women age 40-49
Residence		
Urban	2.70	4.16
Rural	3.67	5.13
Education		
Illiterate	4.03	5.26
Literate, < middle complete	3.01	4.50
Middle school complete	2.49	3.71
High school and above	2.15	2.80
Religion		
Hindu	3.30	4.78
Muslim	4.41	5.83
Christian	2.87	4.01
Sikh	2.43	3.99
Other	2.77	4.24
Caste/tribe		
Scheduled caste	3.92	5.40
Scheduled tribe	3.55	4.81
Other	3.30	4.76
Total	3.39	4.84

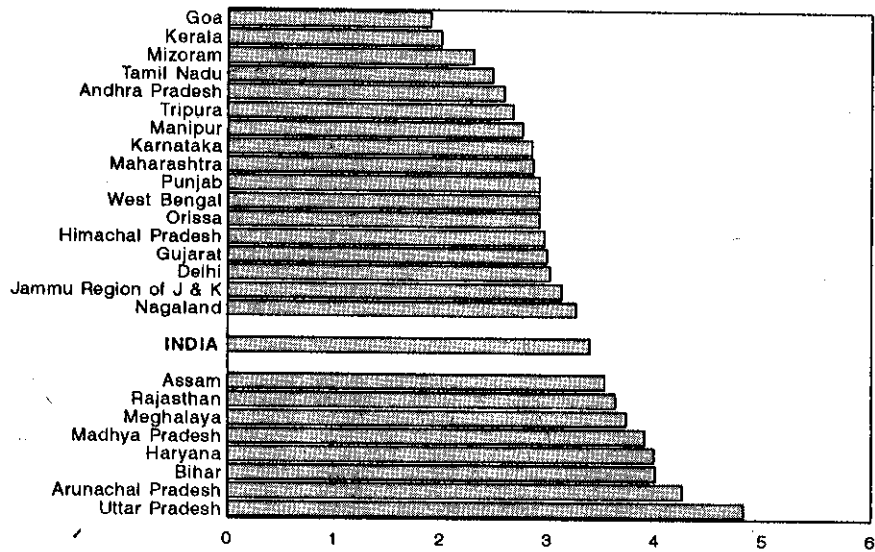
¹Rate for women age 15-49 years

that a substantial fertility decline has taken place in India. In absolute terms, the total fertility rate is 1.5 children lower than the average number of children ever born in both urban and rural areas. But the larger relative decline in urban areas (35 percent) than in rural areas (28 percent) indicates that fertility has been declining somewhat more rapidly in urban areas.

Differentials by education are substantial, with current fertility declining steadily from 4.0 children per woman for illiterate women to 2.2 children per woman for women with at least a high school education. Cohort fertility also is higher among illiterate women than among women with at least a high school education (5.3 children compared to 2.8 children). Fertility has declined rapidly in all education groups, but it has declined most rapidly among literate women with less than a high school education. Differences in current fertility by religion and caste/tribe are less pronounced, but still substantial. Although fertility has declined substantially in all caste/tribe groups, women from scheduled castes still have higher fertility than other groups. The fertility of scheduled tribe women is also slightly higher than the fertility of women who do not belong to either scheduled castes or scheduled tribes.

Muslims have considerably higher fertility than any other religious group. On average, Muslim women have 1.1 children more than Hindu women. However, even among Muslims there has been a considerable decline in fertility over time. The lowest fertility levels (under

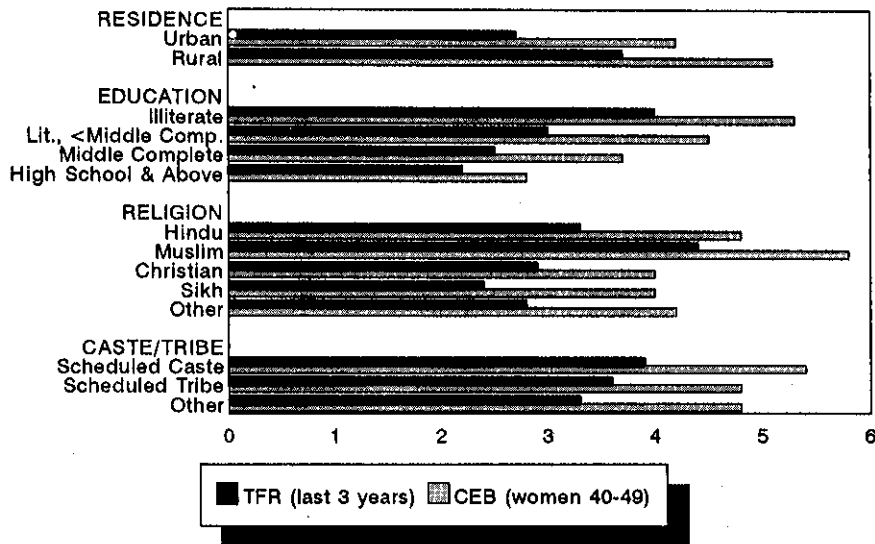
Figure 5.3
Total Fertility Rate (TFR) by State



Note: TFR is for the three years before the survey

NFHS, India, 1992-93

Figure 5.4
Total Fertility Rate (TFR) and Mean Number of Children Ever Born (CEB)



NFHS, India, 1992-93

three children per woman) are exhibited by Christians, Sikhs, and women from other religions (primarily Buddhists and Jains). Religious differentials may be due to socioeconomic differences among the different religious groups rather than religious affiliation itself. A complete examination of factors responsible for the religious differentials requires a multivariate analysis of the determinants of fertility, which is beyond the scope of this report. Some insight into the role of socioeconomic factors may be gained, however, by examining religious differentials in fertility within education groups (Table 5.4). Within each education group, Muslims have substantially higher fertility than Hindus. In the first three education groups, the Muslim TFR is 23-28 percent higher than the Hindu TFR. The differential is even larger (43 percent) for the relatively small number of women in the highest education group. The differential between Muslim and Hindu fertility overall (see Table 5.3) is 34 percent. Thus, controlling for the effects of education does decrease religious differentials in fertility to some extent for women with less than a high school education, but religion is still strongly related to fertility even within education groups. It should be noted, however, that according to both measures fertility generally declines sharply with increasing education in every religious group, including Muslims.

Table 5.4 Fertility by religion and education

Total fertility rate (TFR) for the three years preceding the survey, and mean number of children ever born (CEB) to women age 40-49, by religion and education, India, 1992-93

Religion	Illiterate		Literate, < middle complete		Middle school complete		High school and above	
	TFR	CEB	TFR	CEB	TFR	CEB	TFR	CEB
Hindu	3.93	5.18	2.93	4.44	2.45	3.73	2.07	2.79
Muslim	5.03	6.06	3.61	5.49	3.05	4.59	2.97	4.04
Christian	3.30	4.68	2.86	4.23	2.50	4.00	2.79	2.81
Sikh	3.43	4.43	2.80	3.73	2.06	3.53	1.68	2.64
Other	3.57	4.63	2.59	4.44	2.59	3.25	2.14	2.88
Total	4.03	5.26	3.01	4.50	2.49	3.71	2.15	2.80

Note: TFR is for women age 15-49 years.

The most direct way of observing fertility trends is to examine changes in age-specific rates over time. Table 5.5 shows age-specific fertility rates for the 20-year period preceding the survey, calculated from the birth history information. Because birth histories are obtained only for women under age 50 at the time of the survey, no rates are available for women age 45 and over for the period 5-9 years prior to the survey, or for women age 40 and over 10-14 years prior to the survey, or for women age 35 and over 15-19 years prior to the survey. In every age group, fertility fell steadily from the period 10-14 years before the survey to the period 0-4 years before the survey. There was a general tendency for the fertility decline to accelerate during the most recent period in both urban and rural areas. Over the last 15 years, the rate of fertility decline was slightly faster at age 15-19 than at age 20-24, probably because of the rising age at marriage. The rapidity of the fertility decline increases with age after age 20-24 as is typical during the fertility transition.

The TFR for the five years before the NFHS (roughly 1988-92) is 9 percent lower than the average TFR from the SRS for 1988-92. On the other hand, at ages 15-44 the average SRS

Table 5.5 Fertility trends				
Age-specific fertility rates for five-year periods preceding the survey by residence, India, 1992				
Maternal age at birth	Years preceding survey			
	0-4	5-9	10-14	15-19
URBAN				
15-19	0.079	0.114	0.128	0.129
20-24	0.204	0.249	0.262	0.266
25-29	0.155	0.189	0.216	0.226
30-34	0.072	0.100	0.129	[0.165]
35-39	0.027	0.042	[0.068]	U
40-44	0.006	[0.017]	U	U
45-49	[0.004]	U	U	U
RURAL				
15-19	0.137	0.181	0.190	0.181
20-24	0.246	0.306	0.305	0.299
25-29	0.179	0.233	0.253	0.260
30-34	0.107	0.146	0.171	[0.206]
35-39	0.051	0.080	[0.116]	U
40-44	0.019	[0.038]	U	U
45-49	[0.007]	U	U	U
TOTAL				
15-19	0.121	0.162	0.172	0.166
20-24	0.234	0.289	0.292	0.288
25-29	0.172	0.220	0.241	0.250
30-34	0.097	0.131	0.159	[0.195]
35-39	0.043	0.069	[0.103]	U
40-44	0.015	[0.033]	U	U
45-49	[0.006]	U	U	U

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

TFR for 1983-87 is 9 percent lower than the NFHS TFR for the period 5-9 years before the survey. This suggests that there was some age displacement of NFHS births out of the most recent five-year period. The average 10-year fertility rate estimates from the NFHS and the SRS for 1983-92 are virtually identical.

Further evidence of a decline in fertility over time is shown in Table 5.6, which gives fertility rates over the last 20 years by the number of years since women started living with their husbands². This measure controls to some extent for changing age at marriage and may help to elucidate the trends in Table 5.5. In almost all marital duration groups, fertility has fallen

² Information was collected on a woman's age at effective marriage, not the year and month of her effective marriage (which would be difficult to determine accurately in most cases). Therefore, the duration since first effective marriage is calculated as the woman's age during the specified time period minus the age at which she started living with her (first) husband. For those whose current age is the same as their age at effective marriage (marriage duration 0), the average period covered is only about six months rather than one full year. Hence, the 0-4 duration category effectively covers a period of only about 4.5 years, whereas all other duration categories cover 5 years.

Table 5.6 Fertility by marital duration

Fertility rates for ever-married women by duration since first effective marriage (in years) for five-year periods preceding the survey, India, 1992-93

Duration of effective marriage	Years preceding survey			
	0-4	5-9	10-14	15-19
URBAN				
0 - 4	0.304	0.329	0.325	0.307
5 - 9	0.186	0.228	0.263	0.272
10-14	0.093	0.138	0.170	0.215
15-19	0.046	0.071	0.118	0.160
20-24	0.019	0.044	0.070	(0.141)
25-29	0.006	0.016	(0.113)	*
RURAL				
0 - 4	0.287	0.320	0.308	0.281
5 - 9	0.240	0.300	0.304	0.302
10-14	0.152	0.207	0.229	0.249
15-19	0.089	0.129	0.159	0.198
20-24	0.044	0.076	0.115	0.151
25-29	0.018	0.038	0.117	*
TOTAL				
0 - 4	0.291	0.322	0.312	0.288
5 - 9	0.226	0.280	0.293	0.294
10-14	0.136	0.188	0.213	0.240
15-19	0.077	0.113	0.149	0.190
20-24	0.037	0.068	0.106	0.149
25-29	0.015	0.034	0.117	*

Note: Duration-specific fertility rates are per woman. The duration of effective marriage is defined as the difference between the woman's age at the specified time period and the age she began living with her husband.
 () Based on 125-249 unweighted woman-years of exposure
 * Rate not shown; based on fewer than 125 unweighted woman-years of exposure

steadily over time. The rapidity of the fertility decline increases dramatically with marital duration, being most pronounced for women married 20 years or more. The absence of any marked fertility decline in the group married for 0-4 years is typical of populations in which contraception is initiated only after the first birth or later (as is the case in India; see Chapter 6).

For women married at least five years, marital fertility is lower in urban than in rural areas in every five-year time period. The opposite relationship is observed for women who have been married for less than five years. This pattern is not uncommon in populations in which the age at marriage is higher in urban areas than in rural areas, as is the case in India (see Chapter 4). Women who marry at later ages often have their first birth sooner after marriage and concentrate their births earlier in their marriage.

5.2 Outcome of Pregnancies

Table 5.7 shows the outcome of all lifetime pregnancies reported by ever-married women according to their current age and current place of residence. Information on stillbirths and spontaneous and induced abortions was obtained in the reproduction section of the Woman's Questionnaire. In any survey, it is more difficult to collect retrospective information on pregnancies than on live births, particularly on pregnancies spontaneously aborted within the first few months after conception. The total number of pregnancies and the percentage of all pregnancies that end in spontaneous abortions are almost certainly underestimated, and should not be subject to very intensive interpretation. Stillbirths are probably much more accurately reported than abortions. Reports of induced abortions may be suppressed by respondents, or

Current age	Outcome of pregnancy				Total percent	Number of pregnancies
	Spontaneous abortion	Induced abortion	Still-birth	Live birth		
URBAN						
15-19	9.5	3.3	1.9	85.3	100.0	968
20-24	6.4	2.2	1.9	89.5	100.0	6842
25-29	6.1	2.5	2.0	89.4	100.0	12727
30-34	4.9	3.1	1.9	90.2	100.0	14710
35-39	5.4	2.7	1.9	89.9	100.0	14976
40-44	5.1	2.1	1.9	90.9	100.0	12960
45-49	5.2	1.3	2.0	91.5	100.0	10723
Total	5.5	2.4	1.9	90.2	100.0	73922
RURAL						
15-19	6.8	1.4	2.5	89.3	100.0	5357
20-24	5.2	0.9	2.6	91.3	100.0	25640
25-29	4.5	1.2	2.4	92.0	100.0	40551
30-34	4.1	0.9	2.4	92.6	100.0	43904
35-39	3.8	1.0	2.4	92.9	100.0	42069
40-44	3.7	0.7	2.3	93.2	100.0	36532
45-49	3.6	0.6	2.2	93.5	100.0	33397
Total	4.2	0.9	2.4	92.5	100.0	227478
TOTAL						
13-14	(11.9)	(--)	(--)	(88.1)	100.0	40
15-19	7.3	1.7	2.4	88.7	100.0	6325
20-24	5.5	1.2	2.5	90.9	100.0	32481
25-29	4.9	1.5	2.3	91.4	100.0	53278
30-34	4.3	1.4	2.2	92.0	100.0	58613
35-39	4.2	1.4	2.3	92.1	100.0	57045
40-44	4.1	1.1	2.2	92.6	100.0	49492
45-49	4.0	0.8	2.2	93.0	100.0	44121
Total	4.5	1.3	2.3	92.0	100.0	301400

Note: The urban and rural totals include 12 and 28 pregnancies to women age 13-14, respectively, which are not shown separately.
 () Based on 25-49 unweighted cases
 -- Less than 0.05 percent

induced abortions may be reported as spontaneous abortions, so that the actual incidence of induced abortions may be much higher than is reported.

Of the 301,400 pregnancies reported by sample women, 92 percent resulted in live births, 2 percent in stillbirths, 1 percent in induced abortions, and 5 percent in spontaneous abortions. There is relatively little variation in the outcome of pregnancies by the current age of the mother, although the proportion of live births increases somewhat with an increase in age, and spontaneous abortions are particularly common for young women. Women currently living in urban areas report somewhat higher pregnancy wastage than do rural women.

In view of the problems of underreporting early spontaneous abortions, it is useful to consider induced abortions and stillbirths in relation to live births rather than to total pregnancies. By this measure, there were 2.5 stillbirths and 1.4 induced abortions for every 100 live births in the country as a whole.

5.3 Children Ever Born and Living

The distribution of women age 15-49 by number of children ever born is shown in Table 5.8, both for currently married women and for all women (including never-married women). The table also shows the mean number of children ever born and surviving. Women of childbearing age in India, both ever-married and never-married, have borne an average of 2.5 children and have an average of 2.2 currently living children. Women who are currently married have borne 3.1 children, on average, of whom 2.7 children are still living. The mean number of children ever born increases steadily with age among all women as well as among currently married women, reaching a high of more than five children for women age 45-49. Currently, early childbearing is relatively rare in India. Only 19 percent of all women in the 15-19 age group have ever had a child.

It is not uncommon in sample surveys to find mean numbers of children ever born for older age groups declining, which may indicate deteriorating completeness of reporting of children ever born as women reach the end of the reproductive age span. Although the steady increase with age in the NFHS mean number of children ever born does not provide conclusive evidence that births have been completely reported by older women, there is no indication of underreporting, either in the pattern or the level of fertility.

The distribution of women age 45-49 by number of children ever born is of particular interest since these women have nearly completed their childbearing. The distribution of children ever born to this cohort, therefore, approximates their completed parity distribution. The majority of women in this age group have had five or more live births and 17 percent have had at least eight live births.

The parity distribution of older currently married women provides a measure of primary sterility, which is the proportion of couples who are unable to have children. In India, only 2 percent of currently married women age 45-49 (as well as women age 40-44) have never had a live birth.

Table 5.8 Children ever born and living

Percent distribution of all women and currently married women age 15-49 by number of children ever born and mean number of children ever born (CEB) and living, according to age and residence, India, 1992-93

Age	Children ever born											Total percent	Number of women	Mean CEB	Mean children living
	0	1	2	3	4	5	6	7	8	9	10+				
URBAN															
All women															
15-19	89.6	8.1	1.9	0.3	--	--	--	--	--	--	--	100.0	6299	0.13	0.12
20-24	47.3	22.2	19.0	8.5	2.2	0.6	0.2	--	--	--	--	100.0	6198	0.99	0.92
25-29	16.1	17.5	27.2	19.6	11.9	5.4	1.6	0.5	0.1	--	--	100.0	5166	2.20	2.02
30-34	7.5	10.1	24.6	22.8	17.1	9.9	4.7	1.9	0.8	0.3	0.3	100.0	4429	2.99	2.72
35-39	5.8	6.4	19.1	22.9	17.9	12.1	7.2	4.5	2.0	1.3	0.7	100.0	3781	3.56	3.20
40-44	4.9	4.9	15.9	20.1	18.9	13.5	7.9	6.8	3.4	2.2	1.5	100.0	2955	3.99	3.49
45-49	4.7	6.2	12.1	17.3	15.6	14.1	10.6	7.5	5.6	3.0	3.2	100.0	2232	4.39	3.73
Total	32.9	12.1	16.9	14.2	10.0	6.2	3.4	2.1	1.1	0.6	0.5	100.0	31061	2.15	1.92
Currently married women															
15-19	52.4	37.1	8.9	1.4	0.2	--	--	--	--	--	--	100.0	1339	0.60	0.55
20-24	22.5	32.6	28.0	12.4	3.3	0.9	0.4	--	--	--	--	100.0	4116	1.46	1.35
25-29	7.3	19.0	30.0	21.8	13.3	6.0	1.8	0.6	0.1	--	0.1	100.0	4553	2.44	2.24
30-34	3.8	9.7	25.6	24.0	18.2	10.1	5.1	2.0	0.8	0.4	0.3	100.0	4083	3.14	2.86
35-39	3.7	5.9	19.2	23.4	18.6	12.6	7.6	4.8	2.2	1.3	0.8	100.0	3493	3.68	3.32
40-44	2.4	4.6	15.6	20.8	19.7	13.9	8.4	6.9	3.6	2.4	1.7	100.0	2603	4.14	3.64
45-49	2.4	5.9	13.0	17.4	16.0	14.4	10.8	8.0	5.6	3.1	3.4	100.0	1849	4.51	3.88
Total	10.7	16.1	22.7	19.0	13.4	8.1	4.5	2.7	1.4	0.8	0.7	100.0	22036	2.85	2.56
RURAL															
All women															
15-19	78.4	15.9	4.9	0.8	0.1	--	--	--	--	--	--	100.0	16914	0.28	0.25
20-24	28.0	25.5	25.7	14.5	5.0	1.1	0.3	0.1	--	--	--	100.0	15846	1.48	1.31
25-29	8.5	10.5	22.3	27.0	17.6	9.2	3.4	1.2	0.3	0.1	--	100.0	13121	2.84	2.48
30-34	4.1	5.1	12.8	22.3	21.2	15.6	9.8	5.8	2.2	0.7	0.3	100.0	10483	3.88	3.28
35-39	3.6	3.8	10.7	17.7	18.6	16.7	11.5	7.7	5.2	2.4	2.1	100.0	8794	4.44	3.66
40-44	3.0	3.9	8.0	13.6	16.1	16.5	14.0	9.7	7.1	4.3	3.9	100.0	6870	4.96	3.99
45-49	3.4	3.3	5.7	10.3	15.5	16.1	14.6	11.8	8.4	5.4	5.6	100.0	5866	5.33	4.16
Total	25.6	12.1	14.1	14.6	11.5	8.4	5.6	3.6	2.2	1.2	1.0	100.0	77893	2.70	2.26
Currently married women															
15-19	52.3	35.0	10.8	1.7	0.2	--	--	--	--	--	--	100.0	7558	0.63	0.55
20-24	16.6	29.0	29.9	16.9	5.8	1.3	0.3	0.1	--	--	--	100.0	13388	1.72	1.52
25-29	5.0	10.1	23.2	28.3	18.5	9.7	3.6	1.3	0.3	0.1	--	100.0	12254	2.97	2.60
30-34	2.4	4.2	12.6	22.9	21.8	16.3	10.3	6.1	2.4	0.7	0.3	100.0	9818	4.00	3.39
35-39	2.5	3.0	10.0	18.0	19.1	17.2	11.9	8.1	5.4	2.5	2.2	100.0	8104	4.57	3.77
40-44	2.2	2.7	7.1	13.3	16.6	16.8	14.6	10.2	7.5	4.6	4.2	100.0	6122	5.13	4.15
45-49	2.4	2.5	5.2	9.9	15.6	16.5	14.9	12.3	8.8	5.8	6.1	100.0	5047	5.50	4.31
Total	12.0	14.0	16.7	17.5	13.7	10.0	6.6	4.3	2.6	1.4	1.3	100.0	62291	3.21	2.69

Table 5.8 Children ever born and living (Contd.)

Percent distribution of all women and currently married women age 15-49 by number of children ever born and mean number of children ever born (CEB) and living, according to age and residence, India, 1992-93

Age	Children ever born											Total percent	Number of women	Mean CEB	Mean children living
	0	1	2	3	4	5	6	7	8	9	10+				
TOTAL															
All women															
15-19	81.4	13.8	4.1	0.6	0.1	--	--	--	--	--	--	100.0	23150	0.24	0.21
20-24	33.5	24.5	23.8	12.8	4.2	1.0	0.3	--	--	--	--	100.0	22057	1.34	1.20
25-29	10.7	12.5	23.7	24.9	16.0	8.1	2.9	1.0	0.2	0.1	--	100.0	18296	2.66	2.35
30-34	5.1	6.6	16.3	22.4	20.0	13.9	8.3	4.6	1.8	0.6	0.3	100.0	14915	3.62	3.11
35-39	4.2	4.6	13.2	19.3	18.4	15.3	10.2	6.8	4.2	2.1	1.7	100.0	12577	4.18	3.52
40-44	3.9	4.2	10.3	15.5	16.9	15.5	12.1	8.8	5.9	3.7	3.1	100.0	9859	4.65	3.83
45-49	3.7	4.1	7.5	12.2	15.6	15.5	13.5	10.6	7.6	4.7	5.0	100.0	8088	5.07	4.05
Total	27.7	12.1	14.9	14.5	11.1	7.8	5.0	3.2	1.9	1.0	0.9	100.0	108940	2.54	2.16
Currently married women															
15-19	52.3	35.3	10.5	1.7	0.2	--	--	--	--	--	--	100.0	8897	0.62	0.55
20-24	18.0	29.9	29.5	15.9	5.2	1.2	0.3	0.1	--	--	--	100.0	17504	1.66	1.48
25-29	5.6	12.5	25.1	26.5	17.1	8.7	3.1	1.1	0.2	0.1	--	100.0	16807	2.83	2.50
30-34	2.8	5.8	16.4	23.2	20.7	14.5	8.8	4.9	1.9	0.6	0.3	100.0	13901	3.75	3.24
35-39	2.9	3.9	12.8	19.7	18.9	15.8	10.6	7.1	4.4	2.2	1.8	100.0	11596	4.30	3.63
40-44	2.2	3.3	9.7	15.6	17.6	15.9	12.8	9.2	6.3	4.0	3.5	100.0	8725	4.84	4.00
45-49	2.4	3.4	7.3	11.9	15.7	16.0	13.8	11.1	7.9	5.1	5.4	100.0	6896	5.23	4.19
Total	11.7	14.5	18.3	17.9	13.6	9.5	6.0	3.9	2.3	1.2	1.1	100.0	84327	3.11	2.65

Note: All women includes never-married women.

-- Less than 0.05 percent

Differentials in the number of children ever born and children still living by background characteristics, shown in Table 5.9, provide additional information on fertility patterns in India. To avoid the confounding influence of different age distributions of women in different groups, the mean values in the table are age-standardized according to the age distribution of all currently married women. The differentials by background characteristics seen in Table 5.9 are similar to those observed earlier in Table 5.3. Fertility is higher among illiterate women and those with low educational attainment, Muslims and scheduled caste women.

Differentials in the mean number of children still living are smaller than differentials in the mean number of children ever born. This convergence is caused by the simultaneous occurrence of high fertility and relatively high levels of infant and child mortality in some groups. For example, while women in rural areas have borne almost 0.4 children more than women in urban areas, they have only 0.1 living children more than urban women. Rural women have had more children, but have lost relatively more as well.

State differentials in the number of children ever born (Table 5.10) generally parallel the differentials in current fertility rates discussed earlier. For currently married women of all ages, the average number of children ever born ranges from 2.5 in Kerala to 3.7 in Assam. Because high fertility states tend to have high mortality as well, the range is somewhat smaller in the case of the average number of children still living (from 2.3 in Kerala and Tamil Nadu to 3.2 in Nagaland). High fertility and high mortality have combined to make the average child loss quite

Table 5.9 Mean number of children ever born and living by background characteristics

Age-standardized mean number of children ever born and living for currently married women, according to sex and selected background characteristics, India, 1992-93

Background characteristic	Children ever born			Children living		
	Male	Female	Total	Male	Female	Total
Age						
13-14	0.1	0.0	0.1	0.0	0.0	0.1
15-19	0.3	0.3	0.6	0.3	0.3	0.6
20-24	0.8	0.8	1.7	0.7	0.7	1.5
25-29	1.5	1.4	2.8	1.3	1.2	2.5
30-34	2.0	1.8	3.7	1.7	1.5	3.2
35-39	2.2	2.1	4.3	1.9	1.7	3.6
40-44	2.5	2.3	4.8	2.1	1.9	4.0
45-49	2.7	2.5	5.2	2.2	2.0	4.2
Residence						
Urban	1.5	1.4	2.8	1.3	1.2	2.6
Rural	1.6	1.5	3.2	1.4	1.3	2.7
Education						
Illiterate	1.8	1.7	3.5	1.5	1.4	2.9
Literate, < middle complete	1.5	1.4	2.9	1.3	1.3	2.6
Middle school complete	1.2	1.1	2.3	1.1	1.0	2.1
High school and above	1.0	0.9	1.9	0.9	0.9	1.8
Religion						
Hindu	1.6	1.5	3.0	1.3	1.2	2.6
Muslim	1.8	1.8	3.6	1.6	1.5	3.2
Christian	1.4	1.4	2.8	1.3	1.3	2.5
Sikh	1.5	1.4	2.9	1.4	1.2	2.6
Jain	1.3	1.2	2.5	1.2	1.2	2.3
Buddhist	1.6	1.4	3.0	1.3	1.2	2.5
Other	1.5	1.4	2.9	1.3	1.2	2.5
Caste/tribe						
Scheduled caste	1.7	1.6	3.3	1.4	1.3	2.7
Scheduled tribe	1.6	1.5	3.1	1.4	1.3	2.7
Other	1.6	1.5	3.1	1.4	1.3	2.6
Total	1.6	1.5	3.1	1.4	1.3	2.6

Note: The means by residence, education, religion and caste/tribe are standardized on the age distribution of all currently married women.

high (0.7 children per woman) in Uttar Pradesh. In the case of Rajasthan, the difference between the average number of children ever born and living is only 0.3 children, which may reflect underreporting of dead children in the birth history.

5.4 Sex Ratio at Birth

The sex ratio at birth of children ever born is shown in Table D.4 in Appendix D. Information is available for 277,192 children born to interviewed women. In all, the sex ratio at birth is 107.0 which is on the high end of the normal range of 105-107 which has been observed in most other countries. The sex ratio at birth is particularly high (112.0) for births occurring before 1972, indicating that there is underenumeration of female births that occurred more than 20 years before the survey. Since 1972, however, the sex ratio at birth has been almost constant at an average level of 106.3-106.6 for five-year periods. Therefore, there is no

Table 5.10 Mean number of children ever born and living by state

Mean number of children ever born and living for currently married women, according to sex and state, India, 1992-93

State	Children ever born			Children living		
	Male	Female	Total	Male	Female	Total
India	1.6	1.5	3.1	1.4	1.3	2.6
North						
Delhi	1.5	1.3	2.8	1.4	1.2	2.6
Haryana	1.6	1.5	3.1	1.4	1.3	2.7
Himachal Pradesh	1.5	1.4	3.0	1.4	1.3	2.7
Jammu Region of J & K	1.6	1.5	3.1	1.5	1.3	2.9
Punjab	1.5	1.4	2.9	1.4	1.3	2.7
Rajasthan	1.7	1.5	3.1	1.5	1.3	2.8
Central						
Madhya Pradesh	1.7	1.5	3.2	1.4	1.2	2.6
Uttar Pradesh	1.9	1.7	3.6	1.5	1.3	2.9
East						
Bihar	1.7	1.6	3.2	1.4	1.3	2.7
Orissa	1.6	1.5	3.0	1.3	1.2	2.5
West Bengal	1.5	1.5	3.0	1.3	1.2	2.6
Northeast						
Arunachal Pradesh	1.6	1.5	3.1	1.4	1.3	2.8
Assam	1.9	1.8	3.7	1.6	1.5	3.1
Manipur	1.8	1.6	3.4	1.6	1.5	3.1
Meghalaya	1.7	1.5	3.2	1.6	1.4	3.0
Mizoram	1.6	1.5	3.1	1.5	1.4	3.0
Nagaland	1.7	1.5	3.2	1.6	1.5	3.2
Tripura	1.7	1.5	3.3	1.5	1.3	2.8
West						
Goa	1.4	1.3	2.7	1.3	1.2	2.5
Gujarat	1.5	1.4	2.9	1.3	1.2	2.6
Maharashtra	1.5	1.4	2.9	1.3	1.3	2.6
South						
Andhra Pradesh	1.4	1.3	2.7	1.2	1.2	2.4
Karnataka	1.6	1.5	3.1	1.4	1.3	2.6
Kerala	1.3	1.2	2.5	1.2	1.2	2.3
Tamil Nadu	1.4	1.3	2.7	1.2	1.2	2.3

evidence in India of the type of rise in the sex ratio at birth over time that has been observed in countries such as Korea and China, where the preference for sons is strong and sex-selective abortions have been carried out based on the determination of the sex of unborn foetuses (Park and Cho, 1995)³.

5.5 Birth Order

Birth order analysis is important in understanding trends and differentials in fertility. Information on birth order can also be used to gauge the extent to which couples are following

³ Between 1982 and 1992, the sex ratio at birth increased from 107 to 114 in South Korea and from 108 to 119 in China.

the 2-child family norm promoted by the family welfare programme. The birth order of children born during the three years before the survey is shown in Table 5.11. Overall, 28 percent of all births were first births and 24 percent were second births. As one would expect, the number of births at each order is greater than the number at the next higher order. Also as expected, younger women have more lower order births and older women have more higher order births. First births, as a percent of all births, decline rapidly with increasing age of the mother and third and higher order births increase with increasing age of the mother. Predictably, the birth order distribution is more skewed toward lower order births in urban than in rural areas. Even in urban areas, however, 14 percent of all births were of order five and above. The birth order distribution in the NFHS is similar to the estimates produced by the Sample Registration System for live births in 1991, although the NFHS reports a slightly higher percentage of high order births (Office of the Registrar General, 1993a).

Table 5.11 Birth order by age of woman								
Percent distribution of births during the three years preceding the survey by order of birth and age of the woman at birth, according to residence, India, 1992-93								
Maternal age at birth	Order of birth						Total percent	Number of births
	1	2	3	4	5	6+		
URBAN								
13-14	(96.7)	(3.3)	(--)	(--)	(--)	(--)	100.0	41
15-19	67.9	24.6	6.1	1.1	0.3	--	100.0	1474
20-24	35.2	34.4	20.0	7.1	2.4	0.9	100.0	3533
25-29	15.8	26.3	21.3	18.4	11.9	6.4	100.0	2272
30-34	7.4	15.4	16.3	18.3	14.7	28.0	100.0	910
35-39	4.0	6.3	8.3	14.3	6.9	60.2	100.0	285
40-44	6.3	4.3	3.0	9.1	7.3	70.0	100.0	48
Total	31.8	27.2	16.9	10.5	6.0	7.6	100.0	8580
RURAL								
13-14	93.2	6.8	--	--	--	--	100.0	231
15-19	63.5	28.2	7.2	0.9	0.2	--	100.0	6824
20-24	24.6	33.6	25.1	11.6	3.9	1.2	100.0	10869
25-29	6.7	14.4	24.4	23.9	17.2	13.6	100.0	6523
30-34	1.6	5.0	11.1	15.9	18.5	47.9	100.0	3214
35-39	0.5	2.3	5.1	8.3	12.5	71.3	100.0	1244
40-44	0.3	0.4	1.7	5.6	11.4	80.6	100.0	366
45-49	0.2	--	1.1	6.9	6.2	85.6	100.0	65
Total	26.3	22.9	17.9	12.0	8.0	12.9	100.0	29336
TOTAL								
13-14	93.7	6.3	--	--	--	--	100.0	273
15-19	64.3	27.6	7.0	1.0	0.2	--	100.0	8298
20-24	27.2	33.8	23.9	10.5	3.5	1.1	100.0	14403
25-29	9.0	17.5	23.6	22.4	15.8	11.7	100.0	8794
30-34	2.9	7.3	12.2	16.4	17.6	43.5	100.0	4124
35-39	1.2	3.0	5.7	9.4	11.5	69.2	100.0	1529
40-44	1.0	0.8	1.8	6.0	10.9	79.4	100.0	414
45-49	0.2	1.3	2.2	8.0	6.7	81.5	100.0	82
Total	27.5	23.9	17.6	11.6	7.6	11.7	100.0	37916
Note: Table is based on children born in the period 1-36 months prior to the survey. Urban total includes 17 births to women age 45-49, which are not shown separately.								
() Based on 25-49 unweighted cases								
-- Less than 0.05 percent								

The birth order distribution for illiterate women differs dramatically from the distribution for women with a substantial amount of education (Table 5.12). Eighty percent of recent births to women with a high school education are first or second births and only 7 percent are fourth or higher order births. For illiterate women, only 43 percent of births are first and second order, whereas 39 percent are fourth or higher order.

Table 5.12 Birth order by education of woman

Percent distribution of births during the three years preceding the survey by order of birth and age of the woman at birth, according to education, India, 1992-93

Maternal age at birth	Order of birth						Total percent	Number of births
	1	2	3	4	5	6+		
ILLITERATE								
13-14	94.9	5.1	--	--	--	--	100.0	213
15-19	60.1	29.9	8.5	1.2	0.3	--	100.0	5598
20-24	19.9	31.6	27.8	13.9	5.0	1.7	100.0	8697
25-29	4.0	11.2	23.4	26.0	19.5	15.8	100.0	5678
30-34	1.2	3.4	9.6	16.8	18.9	50.1	100.0	3052
35-39	0.3	2.0	3.8	7.8	11.4	74.6	100.0	1271
40-44	0.3	0.1	1.5	5.2	10.8	82.2	100.0	366
45-49	0.2	1.5	2.5	7.2	5.4	83.3	100.0	75
Total	22.3	20.9	18.3	13.6	9.3	15.6	100.0	24949
LITERATE, < MIDDLE SCHOOL COMPLETE								
13-14	(86.8)	(13.2)	(--)	(--)	(--)	(--)	100.0	47
15-19	68.6	25.7	5.1	0.5	--	--	100.0	1570
20-24	28.0	37.5	23.5	8.6	2.1	0.4	100.0	2644
25-29	7.5	17.3	28.3	24.8	14.9	7.3	100.0	1333
30-34	3.5	7.0	15.4	17.4	19.1	37.6	100.0	539
35-39	0.7	3.1	10.5	19.5	12.2	54.0	100.0	157
40-44	(--)	(6.3)	(1.4)	(7.6)	(8.7)	(75.9)	100.0	33
Total	31.3	26.5	18.6	10.9	6.0	6.7	100.0	6328
MIDDLE SCHOOL COMPLETE								
15-19	76.5	20.1	2.5	0.4	0.5	--	100.0	683
20-24	35.5	42.8	18.0	3.4	0.3	--	100.0	1343
25-29	15.8	26.5	28.2	15.7	10.2	3.7	100.0	523
30-34	3.8	11.7	18.7	20.5	19.8	25.5	100.0	157
35-39	(11.5)	(2.2)	(15.5)	(2.2)	(15.8)	(52.8)	100.0	34
Total	40.1	31.5	16.0	6.0	3.5	2.9	100.0	2757
HIGH SCHOOL AND ABOVE								
15-19	82.5	16.1	1.4	--	--	--	100.0	446
20-24	56.5	32.0	9.2	1.5	0.5	0.3	100.0	1719
25-29	30.2	41.9	17.5	6.6	2.6	1.1	100.0	1260
30-34	15.3	37.1	26.1	10.7	4.2	6.6	100.0	376
35-39	13.4	23.1	24.7	20.6	8.2	10.0	100.0	67
Total	46.1	33.6	12.9	4.3	1.7	1.3	100.0	3882

Note: Table is based on children born in the period 1-36 months prior to the survey. Total for literate, < middle school complete includes 5 births to women age 45-49, total for middle school complete includes 11 and 5 births to women age 13-14 and 40-44, respectively, and total for high school and above includes 1, 12 and 2 births to women age 13-14, 40-44 and 45-49, respectively, which are not shown separately.

() Based on 25-49 unweighted cases

-- Less than 0.05 percent

Substantial differences in the birth order distribution by state (Table 5.13) reflect differences in the overall level of fertility in past years. The proportion of recent births that are first order births varies from 22-24 percent in Assam, Uttar Pradesh and Bihar to 38-40 percent in the low fertility states of Goa and Kerala. Similarly, higher order births (fifth order and above) are most common in Uttar Pradesh, Assam, Meghalaya and Bihar and relatively rare in Kerala, Goa and Tamil Nadu.

Table 5.13 Birth order by state
Percent distribution of births during the three years preceding the survey by order of birth and state, India, 1992-93

State	Order of birth						Total percent
	1	2	3	4	5	6+	
India	27.5	23.9	17.6	11.6	7.6	11.7	100.0
North							
Delhi	28.0	27.7	17.5	12.7	6.7	7.5	100.0
Haryana	28.4	24.1	19.4	11.6	6.5	10.2	100.0
Himachal Pradesh	30.8	26.5	21.3	10.9	4.6	5.9	100.0
Jammu Region of J & K	31.6	24.3	18.6	10.9	6.0	8.6	100.0
Punjab	29.2	28.1	20.1	11.3	6.1	5.2	100.0
Rajasthan	27.0	22.3	17.1	12.4	9.0	12.1	100.0
Central							
Madhya Pradesh	26.5	23.7	16.9	12.0	8.3	12.6	100.0
Uttar Pradesh	22.9	19.6	16.4	12.5	9.6	19.0	100.0
East							
Bihar	23.5	20.1	16.3	14.3	9.8	16.0	100.0
Orissa	27.4	24.6	19.8	12.8	6.8	8.6	100.0
West Bengal	29.2	24.6	17.2	11.0	7.5	10.4	100.0
Northeast							
Arunachal Pradesh	26.1	19.3	17.9	15.4	8.4	12.8	100.0
Assam	22.4	19.4	17.3	13.8	8.5	18.5	100.0
Manipur	27.5	20.5	18.9	13.5	7.5	12.1	100.0
Meghalaya	24.9	21.6	15.6	11.0	9.3	17.6	100.0
Mizoram	30.4	24.6	20.3	14.2	4.1	6.4	100.0
Nagaland	27.8	24.1	16.4	10.4	10.4	10.8	100.0
Tripura	29.0	25.2	16.1	11.1	8.1	10.6	100.0
West							
Goa	38.1	29.7	17.7	7.9	3.5	3.1	100.0
Gujarat	33.2	24.8	17.8	11.0	6.3	6.9	100.0
Maharashtra	29.9	27.3	19.9	11.8	5.1	6.1	100.0
South							
Andhra Pradesh	30.6	27.3	20.6	10.7	5.5	5.3	100.0
Karnataka	30.9	26.7	17.8	9.0	6.4	9.2	100.0
Kerala	39.5	34.5	15.5	4.2	2.5	3.8	100.0
Tamil Nadu	35.7	32.0	18.2	6.9	4.1	3.1	100.0

Note: Table is based on children born in the period 1-36 months prior to the survey.

5.6 Birth Intervals

Birth intervals are an important measure of the pace of childbearing. Past research has shown that children born too close to a previous birth have an increased risk of dying, especially if the interval between births is less than 24 months (Govindasamy et al., 1993; Hobcraft et al., 1983). Table 5.14 presents the percentage distribution of second and higher order births in the

Table 5.14 Birth intervals

Percent distribution of births during the five years preceding the survey by interval since previous birth, according to demographic and background characteristics, India, 1992-93

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+			
Age of the mother									
15-19	3.6	18.4	23.2	40.3	11.7	2.9	100.0	24.8	1263
20-24	2.7	12.6	18.5	38.8	19.2	8.2	100.0	27.8	12445
25-29	1.9	9.3	15.7	33.7	21.8	17.5	100.0	31.8	16093
30-34	1.4	7.5	11.9	30.7	21.9	26.6	100.0	35.4	9331
35-39	1.6	7.4	10.7	26.8	21.7	31.8	100.0	37.3	4060
40-44	1.3	5.7	6.2	26.6	21.4	38.8	100.0	40.0	1338
45-49	0.9	3.6	4.9	23.8	21.9	45.0	100.0	43.6	369
Order of prior birth									
1	1.9	10.9	16.8	33.3	19.5	17.6	100.0	30.7	14701
2	2.1	9.0	14.3	35.1	21.2	18.3	100.0	31.7	10883
3	1.8	9.0	14.6	33.8	21.2	19.5	100.0	31.9	7259
4	2.1	9.4	14.1	32.3	22.0	20.2	100.0	32.8	4758
5	1.7	8.8	14.7	33.2	22.0	19.6	100.0	32.9	2984
6+	2.4	10.2	13.5	33.9	21.5	18.5	100.0	31.9	4315
Sex of prior birth									
Male	1.9	9.5	15.0	33.2	21.2	19.2	100.0	32.1	22381
Female	2.1	10.0	15.1	34.3	20.5	18.0	100.0	31.3	22518
Survival of prior birth									
Still living	1.4	8.1	14.8	34.4	21.8	19.4	100.0	32.5	39043
Deceased	5.8	20.8	16.7	29.3	14.2	13.2	100.0	25.7	5856
Residence									
Urban	2.3	10.5	16.0	32.1	19.1	20.0	100.0	31.0	9563
Rural	1.9	9.6	14.8	34.2	21.3	18.2	100.0	31.8	35337
Education of the mother									
Illiterate	2.1	9.5	14.2	34.0	21.6	18.6	100.0	32.0	32113
Lit., < middle complete	1.5	10.3	16.9	35.5	19.3	16.5	100.0	30.6	7041
Middle school complete	1.6	10.7	18.3	32.6	19.1	17.7	100.0	29.6	2559
High school and above	2.1	11.1	17.1	28.3	17.7	23.6	100.0	31.7	3186
Religion									
Hindu	1.9	9.6	14.7	33.6	21.1	19.1	100.0	32.0	35344
Muslim	2.7	10.2	16.2	34.6	20.2	16.1	100.0	30.3	7411
Christian	1.7	8.8	17.9	33.6	18.2	19.8	100.0	31.1	829
Sikh	2.0	14.8	17.9	31.5	18.9	14.9	100.0	28.8	710
Jain	0.1	12.6	10.9	31.0	19.9	25.4	100.0	35.0	101
Buddhist	1.4	9.6	17.7	38.7	17.7	14.8	100.0	30.0	300
Other	2.1	8.1	17.0	36.7	13.9	22.1	100.0	30.3	205
Caste/tribe									
Scheduled caste	2.1	10.1	15.0	33.5	21.0	18.3	100.0	31.4	6280
Scheduled tribe	2.0	9.9	14.6	35.9	19.9	17.6	100.0	31.2	4361
Other	2.0	9.7	15.2	33.5	20.9	18.7	100.0	31.7	34258
Total	2.0	9.8	15.1	33.8	20.8	18.6	100.0	31.6	44900

Note: First order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth. There were no reported second or higher order births to women age 13-14.

five years prior to the survey by the interval since the previous birth. Intervals between marriage and first birth, which do not include an interval of postpartum amenorrhoea, are excluded to make comparisons of the intervals over different characteristics of women more meaningful. Overall, 12 percent of the births occurred within 18 months of the previous birth and 27 percent occurred within 24 months. The median birth interval is 32 months or about 2.6 years.

The relatively short median birth interval for women age 15-19 at the time of the survey probably results from a selection effect. Only women who have had two or more births are included in this table, and women age 15-19 with two or more births are likely to have considerably higher fecundability than women at large. Differences in fecundability by age of the mother may likewise account for the generally positive gradient in the length of birth intervals by mother's age. Curiously, in view of the correlation between age of women and birth order, there is little variation in median intervals according to the birth order of the previous birth. This is because women with large numbers of births are probably more fecund, and therefore have shorter median intervals than other women.

The median birth interval is seven months shorter when the last birth is deceased than when the last birth is still alive and very short birth intervals are unusually high for the former group. This probably reflects the cessation of breastfeeding when the child dies and the consequent shortening of the period of postpartum amenorrhoea.

Birth intervals vary little by the sex of the prior birth, residence, education, or caste/tribe. Jains have particularly long birth intervals (a median of 35 months) and birth intervals are shortest for Sikhs, who have low fertility but a more rapid pace of childbearing than other groups. Interestingly, median birth intervals are relatively high in both the highest and lowest fertility states (see Table 5.15). This phenomenon is probably due to the older average age of women having children in high fertility states and a number of factors in low-fertility states, such as high levels of child survivorship and more frequent use of temporary methods of contraception.

5.7 Age at First and Last Birth

The onset of childbearing is an important demographic indicator. Postponement of first births, reflecting a rise in the age at marriage, can make an important contribution to overall fertility decline. Table 5.16 shows the distribution of women by age at first birth. Nearly half of all women age 20-49 had their first birth at age 15-19 and more than one-quarter had their first birth at age 20-24. Very early childbearing (below age 15) is relatively rare in all of the age groups and the incidence has dropped fairly steadily across cohorts of women. Childbearing before age 15 is negligible in the 15-19 age group. Childbearing before age 20 has also declined slightly, with the proportion of women having their first child before age 20 dropping below 50 percent for the first time in the 20-24 age group. Urban women are much less likely than rural women to have their first birth before age 18 and much more likely to have their first birth after age 22.

Table 5.17 shows the median age at first birth by selected background characteristics. The median age at first birth for any group of women is the age by which half of them have had

Table 5.15 Birth intervals by state

Percent distribution of births during the five years preceding the survey by interval since previous birth, according to state, India, 1992-93

State	Months since previous birth						Total percent	Median months since previous birth
	<12	12-17	18-23	24-35	36-47	48+		
India	2.0	9.8	15.1	33.8	20.8	18.6	100.0	31.6
North								
Delhi	2.3	11.8	16.3	31.0	18.3	20.2	100.0	30.6
Haryana	2.1	13.7	17.6	34.7	18.7	13.2	100.0	28.1
Himachal Pradesh	1.9	12.7	18.7	37.4	16.9	12.4	100.0	28.3
Jammu Region of J & K	1.8	12.5	14.3	34.0	21.3	16.0	100.0	30.9
Punjab	2.4	13.7	17.1	32.8	18.1	15.9	100.0	29.3
Rajasthan	2.2	8.8	13.1	33.4	21.9	20.6	100.0	32.5
Central								
Madhya Pradesh	1.9	9.4	13.8	35.4	21.3	18.3	100.0	32.1
Uttar Pradesh	2.6	10.4	14.5	32.2	21.6	18.6	100.0	32.1
East								
Bihar	1.7	8.8	13.6	31.7	23.4	20.8	100.0	33.9
Orissa	1.9	9.7	13.8	32.6	21.6	20.5	100.0	32.7
West Bengal	1.3	8.8	14.4	35.4	20.7	19.4	100.0	31.7
Northeast								
Arunachal Pradesh	0.8	8.5	19.6	36.3	16.4	18.4	100.0	29.8
Assam	0.8	12.4	16.6	34.9	19.8	15.4	100.0	29.8
Manipur	1.3	10.1	14.5	35.6	20.4	18.1	100.0	31.6
Meghalaya	0.9	11.4	22.1	36.1	16.9	12.5	100.0	27.5
Mizoram	1.5	13.4	20.7	34.9	13.2	16.3	100.0	27.6
Nagaland	2.8	10.5	20.2	37.8	16.7	11.9	100.0	28.1
Tripura	0.6	8.7	12.7	34.1	20.4	23.6	100.0	33.9
West								
Goa	1.2	8.8	13.8	27.9	20.0	28.2	100.0	35.2
Gujarat	1.9	10.2	17.2	36.9	19.3	14.5	100.0	30.0
Maharashtra	2.8	9.0	18.8	36.1	19.6	13.6	100.0	28.7
South								
Andhra Pradesh	1.8	8.0	12.9	33.7	21.2	22.5	100.0	33.4
Karnataka	2.0	9.7	16.9	36.9	18.4	16.2	100.0	29.9
Kerala	1.4	8.3	13.5	28.5	19.7	28.6	100.0	34.9
Tamil Nadu	0.9	9.7	16.5	33.1	18.5	21.3	100.0	31.6

Note: First order births are excluded. The interval for multiple births is the number of months since the preceding pregnancy that ended in a live birth.

their first birth. For women in the younger age groups, the number who will eventually become mothers is not known since some first births to the cohort will occur only in the future. The medians are, therefore, calculated as the ages by which half of *all* women in the cohort have had a first birth, rather than the age by which half of all mothers in the cohort have had a first birth. This statistic may be computed without knowing how many women in the cohort will eventually have a first birth. The medians are, of course, undefined for cohorts in which fewer than half of the women have had a first birth. This is the reason why no medians are shown for women age 20-24 and 20-49 for some background characteristics in Table 5.17.

Table 5.16 Age at first birth

Percent distribution of women by age at first birth, according to current age and residence, India, 1992-93

Current age ¹	No birth ²	Age at first birth						Total percent
		<15	15-17	18-19	20-21	22-24	25+	
URBAN								
15-19	89.6	1.6	5.9	2.9	NA	NA	NA	100.0
20-24	47.3	2.6	13.5	17.5	14.1	5.0	NA	100.0
25-29	16.1	4.0	18.3	19.2	17.7	17.1	7.7	100.0
30-34	7.5	3.6	19.9	20.7	18.2	17.2	12.9	100.0
35-39	5.8	4.2	20.7	21.3	17.4	17.7	13.0	100.0
40-44	4.9	4.5	23.4	21.3	18.3	15.6	12.2	100.0
45-49	4.7	5.8	22.5	21.3	18.5	15.8	11.3	100.0
20-49	18.4	3.8	18.7	19.8	17.0	13.9	8.4	100.0
25-49	8.8	4.2	20.5	20.6	17.9	16.8	11.2	100.0
RURAL								
15-19	78.4	3.4	13.5	4.8	NA	NA	NA	100.0
20-24	28.0	6.1	27.0	21.4	13.2	4.3	NA	100.0
25-29	8.5	6.5	30.9	23.3	16.4	11.1	3.3	100.0
30-34	4.1	6.5	30.6	24.7	17.2	11.6	5.3	100.0
35-39	3.6	7.2	31.4	23.5	16.1	11.8	6.6	100.0
40-44	3.0	6.9	30.0	24.7	17.8	11.6	6.0	100.0
45-49	3.4	7.4	29.5	22.5	16.1	13.2	7.9	100.0
20-49	11.0	6.6	29.7	23.2	15.8	9.8	4.0	100.0
25-49	5.0	6.8	30.6	23.8	16.7	11.7	5.4	100.0
TOTAL								
15-19	81.4	2.9	11.4	4.3	NA	NA	NA	100.0
20-24	33.5	5.1	23.2	20.3	13.4	4.5	NA	100.0
25-29	10.7	5.8	27.3	22.2	16.8	12.8	4.6	100.0
30-34	5.1	5.7	27.4	23.5	17.5	13.2	7.6	100.0
35-39	4.2	6.3	28.2	22.8	16.5	13.5	8.5	100.0
40-44	3.9	6.1	27.9	23.6	17.9	12.8	7.8	100.0
45-49	3.7	7.0	27.6	22.2	16.8	13.9	8.9	100.0
20-49	13.2	5.8	26.5	22.2	16.1	10.9	5.3	100.0
25-49	6.2	6.1	27.6	22.8	17.1	13.2	7.1	100.0

NA: Not applicable

¹The current age groups include both never-married and ever-married women

²Never-married women are included in this category

For women age 25-49, the median age at first birth has been almost constant at 19.3-19.5 years. Although the median age at first marriage is 1.2 years higher for women age 25-29 than for women age 45-49 (see Table 4.5), and the median age at first cohabitation is 0.8 years higher (see Table 4.9), the median age at first birth is almost the same for these two age groups. This means that the interval between marriage and first cohabitation and the interval between first cohabitation and first birth have both been decreasing over time, as the age at first marriage and first cohabitation have been increasing.

On average, median ages at first birth are 1-2 months higher in urban than in rural areas. In all age groups, better educated women have a considerably higher median age at first birth than do less educated women: the median at age 25-49 is 23 years of age among women with

Table 5.17 Median age at first birth by background characteristics

Median age at first birth among women age 20-49 years, by current age and selected background characteristics, India, 1992-93

Background characteristic	Current age							
	20-24	25-29	30-34	35-39	40-44	45-49	20-49	25-49
Residence								
Urban	NC	20.9	20.6	20.4	20.1	20.0	NC	20.5
Rural	19.6	19.0	19.0	18.9	19.0	19.1	19.1	19.0
Education								
Illiterate	18.8	18.5	18.7	18.6	18.8	19.0	18.7	18.7
Lit., < middle complete	NC	19.5	19.3	19.3	19.2	19.5	19.5	19.4
Middle school complete	NC	20.6	20.2	20.5	20.1	21.0	NC	20.4
High school and above	NC	23.6	23.1	23.3	23.1	23.1	NC	23.3
Religion								
Hindu	NC	19.5	19.4	19.3	19.3	19.3	19.5	19.4
Muslim	19.5	18.8	18.8	18.6	18.7	18.8	18.9	18.7
Christian	NC	21.9	22.2	21.7	21.6	20.9	NC	21.7
Sikh	NC	21.8	21.3	20.9	21.3	21.5	NC	21.4
Other	NC	19.8	20.4	19.2	19.7	19.6	NC	19.8
Caste/tribe								
Scheduled caste	19.2	18.6	18.7	18.7	18.8	19.0	18.8	18.7
Scheduled tribe	19.2	19.0	18.9	18.8	19.2	19.3	19.1	19.0
Other	NC	19.7	19.6	19.5	19.4	19.4	19.7	19.6
Total	NC	19.5	19.4	19.3	19.3	19.4	19.6	19.4

NC: Median is not calculated when less than 50 percent of the women age x to x+n have had a birth by age x.

at least a high school education but only 19 years of age among illiterate women. Among the religious groups, Muslims have the youngest median age at first birth and Christians and Sikhs the oldest, with Hindus falling in between. Although the median age at first marriage is the same for Hindus and Muslims (see Table 4.5), Muslims begin childbearing at a slightly younger age than Hindus, reflecting the shorter gap between marriage and childbearing among Muslim women. Scheduled castes and tribes begin childbearing slightly earlier than non-SC/ST group, but the differences are small.

For all women age 25-49, the median age at first birth is four years higher than average in Goa and three years higher than average in Manipur and Mizoram (Table 5.18). Particularly young ages at first birth are common in Andhra Pradesh, West Bengal, Assam, Madhya Pradesh, and Karnataka. The difference between the median age at first birth and the median age at first marriage for women age 25-49 (Table 4.6) is less than three years in every state except the early marriage states of Rajasthan, Uttar Pradesh, Bihar, Haryana and Madhya Pradesh (where the difference ranges from 3.7 to 4.7 years). This result is consistent with the findings of Basu (1993) of particularly long first birth intervals related to cultural practices in North India. This finding may also be related to adolescent subfecundity among women who marry at very young ages. The difference between the median age at first birth and the median age at first marriage is unusually low in all of the northeastern states, where the culture is more accepting of premarital conception and even premarital births.

Table 5.18 Median age at first birth by state									
Median age at first birth among women age 20-49 years, by current age and state, India, 1992-93									
State	Current age							20-49	25-49
	20-24	25-29	30-34	35-39	40-44	45-49			
India	NC	19.5	19.4	19.3	19.3	19.4	19.6	19.4	
North									
Delhi	NC	21.2	21.1	20.9	20.8	19.8	NC	20.9	
Haryana	19.7	19.7	19.7	19.8	20.1	20.4	19.8	19.8	
Himachal Pradesh	NC	20.6	20.0	19.6	19.7	19.6	NC	20.0	
Jammu Region of J & K	NC	21.1	20.4	19.6	19.1	20.1	NC	20.2	
Punjab	NC	21.0	21.0	20.8	21.2	21.5	NC	21.0	
Rajasthan	20.0	19.1	19.4	20.0	20.0	20.6	19.8	19.7	
Central									
Madhya Pradesh	19.2	19.0	18.5	18.8	18.8	19.0	18.9	18.8	
Uttar Pradesh	NC	19.5	19.4	19.6	19.6	19.5	19.7	19.5	
East									
Bihar	19.5	19.1	19.1	19.2	18.9	18.8	19.1	19.0	
Orissa	NC	19.8	19.2	18.5	18.7	19.2	19.5	19.1	
West Bengal	19.3	19.0	18.7	18.4	18.1	18.6	18.8	18.6	
Northeast									
Arunachal Pradesh	NC	20.0	19.7	20.0	20.7	21.2	NC	20.1	
Assam	NC	19.1	18.9	19.0	18.3	18.7	19.2	18.8	
Manipur	NC	24.0	23.0	21.9	21.6	21.8	NC	22.4	
Meghalaya	NC	20.2	19.6	20.0	19.9	21.9	NC	20.3	
Mizoram	NC	22.6	21.1	22.1	21.9	22.3	NC	22.0	
Nagaland	NC	21.9	20.1	21.3	21.0	21.4	NC	21.2	
Tripura	NC	19.7	20.3	19.1	18.8	18.9	19.7	19.4	
West									
Goa	NC	NC	24.3	22.9	21.8	22.5	NC	23.7	
Gujarat	NC	20.4	20.5	20.1	20.1	20.0	NC	20.2	
Maharashtra	19.6	19.0	19.1	18.9	19.0	19.0	19.2	19.0	
South									
Andhra Pradesh	18.5	17.9	18.0	17.6	18.2	18.1	18.0	17.9	
Karnataka	19.9	18.9	18.9	18.9	18.9	18.7	19.1	18.9	
Kerala	NC	22.3	22.1	21.4	21.0	20.9	NC	21.6	
Tamil Nadu	NC	20.7	20.5	20.1	19.5	19.2	NC	20.1	

NC: Median is not calculated when less than 50 percent of the women age x to x+n have had a birth by age x

The age at last birth is another important determinant of overall fertility levels. Table 5.19 shows the distribution of women by age at last birth for women age 40-44 and 45-49. Although a few of these women may have another birth later on, the very low fertility rates for women in their forties seen earlier suggest that childbearing is virtually complete for this cohort. Nearly half of women age 40-49 completed their childbearing by age 30 and three-quarters had their last birth before age 35. The median ages at last birth for women age 40-44 and 45-49 at the time of the survey are 30.0 and 31.4 years, respectively.

Differentials in the age at last birth by background characteristics are shown in Table 5.20. Rural residents, illiterate women, Muslims and women from scheduled castes and scheduled tribes are most likely to continue childbearing into their late thirties and their forties.

Table 5.19 Age at last birth

Percent distribution of ever-married women age 40-49 by age at last birth, according to current age and residence, India, 1992-93

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			
URBAN											
40-44	3.0	2.6	19.0	32.7	29.1	11.8	1.9	NA	100.0	28.9	2899
45-49	3.2	2.8	13.3	31.8	30.0	14.5	3.5	0.9	100.0	29.8	2197
40-49	3.1	2.7	16.6	32.3	29.5	13.0	2.5	0.4	100.0	29.3	5096
RURAL											
40-44	2.7	3.2	13.1	27.9	29.5	18.8	4.9	NA	100.0	30.5	6850
45-49	3.0	2.3	9.6	24.1	27.7	22.9	9.0	1.5	100.0	32.1	5838
40-49	2.8	2.7	11.5	26.2	28.7	20.7	6.8	0.7	100.0	31.2	12688
TOTAL											
40-44	2.8	3.0	14.9	29.3	29.3	16.7	4.0	NA	100.0	30.0	9748
45-49	3.0	2.4	10.6	26.2	28.4	20.6	7.5	1.3	100.0	31.4	8036
40-49	2.9	2.7	13.0	27.9	28.9	18.5	5.5	0.6	100.0	30.6	17784

NA: Not applicable

Table 5.20 Age at last birth by background characteristics

Percent distribution of ever-married women age 40-49 by age at last birth, according to current age and selected background characteristics, India, 1992-93

Background characteristic	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			
Residence											
Urban	3.1	2.7	16.6	32.3	29.5	13.0	2.5	0.4	100.0	29.3	5096
Rural	2.8	2.7	11.5	26.2	28.7	20.7	6.8	0.7	100.0	31.2	12688
Education											
Illiterate	2.9	3.1	10.7	24.6	29.1	21.7	7.1	0.8	100.0	31.6	12370
Lit., < middle complete	2.5	2.3	17.7	32.6	28.9	13.2	2.7	0.2	100.0	29.3	3146
Middle school complete	3.7	2.0	20.7	40.8	23.9	7.9	1.0	--	100.0	27.9	832
High school and above	3.1	0.6	17.3	39.0	30.4	8.1	1.3	0.2	100.0	28.7	1436
Religion											
Hindu	2.9	2.8	13.5	28.6	28.5	17.8	5.3	0.6	100.0	30.4	14579
Muslim	3.2	2.9	8.5	20.1	28.5	26.8	9.3	0.8	100.0	32.8	1936
Christian	2.2	2.4	11.8	32.6	33.4	13.2	3.9	0.5	100.0	30.1	565
Sikh	1.6	0.4	15.3	33.6	34.2	13.6	1.4	--	100.0	29.9	366
Jain	5.1	--	19.1	33.1	31.4	9.4	1.9	--	100.0	29.4	111
Buddhist	3.1	2.8	10.1	30.2	38.9	14.1	0.6	0.2	100.0	30.4	150
Other	6.7	1.4	9.2	31.7	30.7	14.4	5.3	0.6	100.0	30.2	76
Caste/tribe											
Scheduled caste	2.2	2.8	9.8	24.4	30.4	22.3	7.2	1.0	100.0	31.9	2041
Scheduled tribe	3.7	3.9	13.9	27.3	24.0	19.3	7.1	0.8	100.0	30.2	1438
Other	2.9	2.6	13.3	28.5	29.2	17.8	5.2	0.5	100.0	30.4	14305
Total	2.9	2.7	13.0	27.9	28.9	18.5	5.5	0.6	100.0	30.6	17784

-- Less than 0.05 percent

Among all of the groups examined, the highest median age at last birth is for Muslims (32.8 years) and the lowest is for women who have completed middle school (27.9 years).

Differences between the median age at last birth and the median age at first birth for women in their forties are shown in Table 5.21. The difference between the median age at first birth and the median age at last birth gives an estimated reproductive life of 11 years for women who are approaching the end of their childbearing years. This span is likely to be considerably shorter for younger cohorts, who have begun their childbearing at a later average age and who can be expected to have their last birth at a younger age as fertility levels continue to decline. The reproductive life span is relatively short in South and West India. In fact, women in Goa and Kerala concentrated their births within a period of only 8 years. The reproductive life span is 6 years longer in Uttar Pradesh, Bihar and Tripura, where women have had their births over a period of 14 years.

Table 5.21 Median age at first birth and median age at last birth			
Median age at first birth and median age at last birth for women age 40-49, by state, India, 1992-93			
State	Median age at first birth	Median age at last birth	Difference
India	19.3	30.6	11.3
North			
Delhi	20.1	29.7	9.6
Haryana	20.2	31.2	11.0
Himachal Pradesh	19.6	29.3	9.7
Jammu Region of J & K	19.6	31.1	11.5
Punjab	21.4	30.0	8.6
Rajasthan	20.3	32.1	11.8
Central			
Madhya Pradesh	18.9	31.1	12.2
Uttar Pradesh	19.6	33.8	14.2
East			
Bihar	18.8	32.7	13.9
Orissa	18.8	30.9	12.1
West Bengal	18.2	29.8	11.6
Northeast			
Arunachal Pradesh	20.8	33.1	12.3
Assam	18.4	31.8	13.4
Manipur	21.6	32.7	11.1
Meghalaya	20.8	31.5	10.7
Mizoram	22.0	31.8	9.8
Nagaland	21.1	30.1	9.0
Tripura	18.8	32.8	14.0
West			
Goa	22.0	29.9	7.9
Gujarat	20.0	29.3	9.3
Maharashtra	18.9	28.0	9.1
South			
Andhra Pradesh	18.1	27.9	9.8
Karnataka	18.8	29.2	10.4
Kerala	20.9	29.0	8.1
Tamil Nadu	19.3	29.1	9.8

5.8 Childbearing at Young Ages

Fertility among teenagers (those under age 20) is drawing increasing attention from policymakers. Table 5.22 shows the percentages of ever-married women age 13-19 who are either mothers or are pregnant with their first child. The sum of these two percentages represents the proportion of young ever-married women who have begun childbearing. Overall, 58 percent of ever-married teenage women have started their childbearing (46 percent have already become mothers and 12 percent are pregnant with their first child). However, because the proportion in this age group who have never married has been rising over time, childbearing among teenage women is likely to be less common now than in the past. Only 25 percent of married women age 13-16 are mothers compared with 52 percent of those age 17-19. The percentage of ever-married women who have begun childbearing is slightly higher in urban areas than in rural areas, but since a smaller proportion of urban women are married, overall childbearing is higher among teenage women in rural areas. There is no difference in the percentage of ever-married women who have begun childbearing between illiterate women and literate women with less than a middle school education, but married women who have completed high school are less likely to have begun childbearing. Differentials by religion and

Background characteristic	Percentage who are:		Percent who have begun child-bearing	Number of women
	Mothers	Pregnant with first child		
Age				
13-16	24.5	11.7	36.1	2170
17-19	52.4	11.7	64.1	7277
Residence				
Urban	47.1	13.8	60.9	1418
Rural	45.8	11.3	57.1	8029
Education				
Illiterate	48.1	10.2	58.3	6359
Literate, <middle complete	45.1	13.7	58.8	1778
Middle school complete	39.3	15.6	54.9	787
High School and above	33.0	17.3	50.3	522
Religion				
Hindu	45.2	11.6	56.8	7858
Muslim	51.4	10.9	62.3	1261
Christian	47.3	16.0	63.4	104
Sikh	34.6	22.9	57.5	75
Buddhist	50.1	11.7	61.8	87
Other	48.2	15.5	63.7	45
Caste/tribe				
Scheduled caste	46.2	11.1	57.3	1419
Scheduled tribe	52.4	11.6	64.0	939
Other	45.1	11.8	56.9	7089
Total	46.0	11.7	57.7	9447

Note: Total includes 16 ever-married Jain women, who are not shown separately.

caste/tribe are not large. The percentage who have begun childbearing is slightly higher among scheduled tribe women and Christians and Muslims.

Table 5.23 contains similar information for ever-married teenage women in each state. The percentage who have begun childbearing is much higher than average in all of the northeastern states, as well as Goa, Maharashtra and Karnataka. Once again, however, these percentages should be considered in relation to the proportion of teenage women who have ever been married if one wants to examine the percentage of all teenage women who have begun

Table 5.23 Childbearing among women age 13-19 by state				
Percentage of ever-married women age 13-19 who are mothers or pregnant with their first child and percentage of ever-married women and all women age 13-19 who have begun childbearing, by state, India, 1992-93				
State	Ever-married women		All women	
	Mothers	Pregnant with first child	Percent who have begun child-bearing	Percent who have begun childbearing
India	46.0	11.7	57.7	17.0
North				
Delhi	45.5	14.3	59.7	8.0
Haryana	50.1	12.7	62.9	20.7
Himachal Pradesh	39.3	15.8	55.2	7.1
Jammu Region of J & K	37.3	12.8	50.1	6.5
Punjab	42.4	22.0	64.4	6.7
Rajasthan	35.6	9.8	45.4	13.0
Central				
Madhya Pradesh	41.9	13.0	54.9	26.5
Uttar Pradesh	41.4	8.1	49.4	14.1
East				
Bihar	39.1	9.1	48.2	18.6
Orissa	48.2	11.6	59.8	13.2
West Bengal	47.8	15.6	63.4	20.4
Northeast				
Arunachal Pradesh	50.6	18.5	69.1	14.8
Assam	59.9	10.7	70.6	17.9
Manipur	*	*	*	2.9
Meghalaya	49.3	22.4	71.6	11.5
Mizoram	(42.5)	(30.0)	(72.5)	5.7
Nagaland	(65.9)	(22.0)	(87.8)	7.3
Tripura	54.5	11.9	66.3	14.9
West				
Goa	(52.9)	(14.7)	(67.6)	1.6
Gujarat	46.9	8.8	55.7	8.9
Maharashtra	57.8	10.3	68.1	19.9
South				
Andhra Pradesh	47.4	12.7	60.1	25.4
Karnataka	57.8	13.9	71.7	20.8
Kerala	37.9	21.3	59.2	5.9
Tamil Nadu	47.9	17.1	65.0	12.0

() Based on 25-49 unweighted cases
 * Percent not shown; based on fewer than 25 unweighted cases

childbearing (see the last column of Table 5.23). Overall, only 17 percent of teenage women in India have begun childbearing. For individual states, the picture is quite different for all women than for ever-married women. Teenage childbearing is particularly high in Madhya Pradesh and Andhra Pradesh. On the other hand, less than 5 percent of teenage women have begun childbearing in Goa and Manipur.

5.9 Postpartum Amenorrhoea, Abstinence and Nonsusceptibility

The importance of lactational amenorrhoea and postpartum abstinence as determinants of fertility is well recognized. The duration of postpartum amenorrhoea (delayed resumption of ovulation) following a birth is closely associated with the duration of breastfeeding, which tends to suppress the resumption of ovulation. Conception can also be delayed by prolonged postpartum abstinence. The total period of protection from amenorrhoea or abstinence or both is defined as the nonsusceptible duration. The percentage of births during the last three years whose mothers are presently postpartum amenorrhoeic, abstaining or nonsusceptible is presented in Table 5.24. The mean and median durations and the prevalence/incidence mean duration are also shown in the table. Estimates of means and medians are based on a smoothed distribution of the current status proportion in each months-since-birth group. The prevalence/incidence mean is obtained by dividing the number of mothers who are nonsusceptible by the average number of births per month over a 36-month period. Ninety-two percent of all women who had a birth in the month prior to the survey were still amenorrhoeic when interviewed. The proportion amenorrhoeic gradually decreases as the number of months since birth increases, to half of women 8 months after the birth, and one-quarter of women 13-14 months after the birth. The proportions of mothers abstaining from sexual intercourse are much lower than the proportions amenorrhoeic. Half of women were still abstaining 3 months after the birth and nearly one-quarter of women were still abstaining 6 months after the birth.

Overall, nearly half (47 percent) of women become susceptible to pregnancy within 10 months of giving birth and 70 percent become susceptible after 15 months. The median and mean durations of nonsusceptibility are 10.2 and 11.1 months, respectively. The median duration of amenorrhoea (9.0 months) is longer than the median duration of abstinence (3.4 months). The prevalence-incidence mean suggests that on average, women remain nonsusceptible to conception for just under one year after a birth, primarily due to the effects of postpartum amenorrhoea.

Table 5.25 shows median durations of postpartum amenorrhoea, postpartum abstinence, and postpartum nonsusceptibility by selected background characteristics. Variations in postpartum abstinence are relatively small so that the duration of nonsusceptibility is determined largely by variations in the duration of postpartum amenorrhoea. The median duration of amenorrhoea is slightly longer for women age 30 and over than for women under age 30, but the median duration of abstinence does not show any consistent pattern with age. The median duration of postpartum nonsusceptibility rises consistently with the age of the mother until age 35-39. Median durations of postpartum amenorrhoea and nonsusceptibility are longer for women in rural areas than for women in urban areas, probably due to the longer period of breastfeeding in rural areas (see Table 10.5). Periods of amenorrhoea and nonsusceptibility are relatively long for illiterate women and women belonging to scheduled castes and tribes, again as a probable

Table 5.24 Postpartum amenorrhoea, abstinence and nonsusceptibility

Percentage of births occurring during the three years preceding the survey whose mothers are postpartum amenorrhoeic, postpartum abstaining or postpartum nonsusceptible, by number of months since birth, and median and mean durations, India, 1992-93

Months since birth	Percent of births whose mothers are:			Number of births
	Postpartum amenorrhoeic	Postpartum abstaining	Postpartum nonsusceptible	
<1	91.7	97.0	99.0	629
1	91.2	85.9	97.1	1105
2	81.3	63.1	87.8	1217
3	75.8	49.5	85.3	1234
4	70.5	35.3	76.7	1256
5	65.3	28.9	72.2	1163
6	59.0	24.4	64.9	1240
7	57.0	21.3	63.6	1206
8	49.9	19.1	57.1	1076
9	48.8	14.7	53.4	1022
10	43.6	15.0	48.4	891
11	39.4	11.5	43.3	825
12	30.5	10.9	35.6	1045
13	24.4	8.4	28.8	1238
14	25.3	9.3	30.9	1192
15	23.8	9.1	29.6	1214
16	17.2	7.5	22.1	1247
17	16.0	5.7	19.1	1158
18	13.7	7.7	19.0	1139
19	9.9	4.4	13.2	1024
20	11.0	4.7	14.5	989
21	8.6	5.3	13.1	921
22	8.6	5.4	12.4	795
23	6.9	3.6	9.9	814
24	5.1	5.3	9.2	1016
25	3.5	2.6	5.8	1149
26	2.4	3.6	5.6	1099
27	2.5	3.2	5.0	983
28	2.6	2.8	4.9	1077
29	2.6	4.0	6.1	934
30	2.2	3.5	5.5	997
31	1.2	1.5	2.6	889
32	1.4	2.5	3.8	903
33	1.1	2.0	2.9	887
34	1.8	3.2	4.6	882
35	2.0	2.2	4.1	803
Median	9.0	3.4	10.2	NA
Mean	9.5	5.4	11.1	NA
Prevalence/incidence mean	10.3	5.8	11.9	NA

Note: Medians and means are based on current status. Nonsusceptible is defined as amenorrhoeic or abstaining or both.

NA: Not applicable

Table 5.25 Median duration of postpartum nonsusceptibility by background characteristics

Median number of months of postpartum amenorrhoea, postpartum abstinence and postpartum nonsusceptibility, by selected background characteristics of mothers, for births during the three years preceding the survey, India, 1992-93

Background characteristic	Postpartum amenorrhoea	Postpartum abstinence	Postpartum nonsusceptibility	Number of births
Age				
13-14	(7.5)	(6.2)	(7.5)	35
15-19	7.2	3.5	9.5	4581
20-24	8.5	3.5	10.0	14131
25-29	9.2	3.3	10.4	10518
30-34	10.0	3.4	11.3	5167
35-39	10.7	3.4	11.7	2052
40-44	11.1	4.8	11.4	625
45-49	5.9	3.9	6.0	153
Residence				
Urban	6.7	3.3	8.0	8418
Rural	10.0	3.5	10.8	28845
Education				
Illiterate	10.8	3.5	11.4	24518
Lit., < middle complete	8.0	3.4	9.2	6222
Middle school complete	5.0	3.3	7.9	2704
High school and above	4.4	3.5	6.2	3820
Religion				
Hindu	9.3	3.6	10.3	29582
Muslim	8.3	2.9	9.2	5720
Christian	6.6	3.9	8.8	748
Sikh	4.0	3.1	4.4	653
Jain	3.7	2.8	3.7	114
Buddhist	11.8	4.0	12.1	266
Other	12.4	3.6	13.4	178
Caste/tribe				
Scheduled caste	10.7	3.7	11.0	5027
Scheduled tribe	12.0	3.5	12.3	3485
Other	8.5	3.4	9.5	28750
Total	9.0	3.4	10.2	37263

Note: Medians are based on current status. Nonsusceptible is defined as amenorrhoeic or abstaining or both.

() Based on 25-49 unweighted cases

consequence of relatively prolonged breastfeeding in these groups. Christians, Sikhs and Jains, who have the shortest durations of breastfeeding, are also most likely to resume ovulation quickly after having a birth.

The duration of postpartum abstinence varies considerably more by state than by other characteristics (see Table 5.26). The duration of postpartum abstinence is particularly long (about 4-7 months) in most of South India and West India, as well as in Nagaland and Orissa. For three states (Nagaland, Goa and Tamil Nadu), the duration of postpartum abstinence is at least as long as the duration of postpartum amenorrhoea. The pattern in these states is quite different from the situation elsewhere in India, where the median duration of postpartum amenorrhoea is nearly three times as long as the median duration of postpartum abstinence. The duration of postpartum abstinence is about one month shorter than average in all of the states

Table 5.26 Median duration of postpartum nonsusceptibility by state

Median number of months of postpartum amenorrhoea, postpartum abstinence and postpartum nonsusceptibility for mothers of children born during the three years preceding the survey, by state, India, 1992-93

State	Postpartum amenorrhoea	Postpartum abstinence	Postpartum nonsusceptibility
India	9.0	3.4	10.2
North			
Delhi	4.3	1.8	4.8
Haryana	8.9	2.0	8.9
Himachal Pradesh	7.6	2.6	8.5
Jammu Region of J & K	5.7	2.5	6.3
Punjab	4.1	2.4	4.4
Rajasthan	8.0	2.0	8.6
Central			
Madhya Pradesh	8.3	2.5	9.4
Uttar Pradesh	8.9	2.9	9.5
East			
Bihar	9.9	2.9	10.6
Orissa	8.5	4.7	10.2
West Bengal	9.5	2.3	10.0
Northeast			
Arunachal Pradesh	9.3	1.8	10.6
Assam	10.2	2.9	10.9
Manipur	8.7	2.5	9.3
Meghalaya	8.7	4.0	11.0
Mizoram	5.1	1.3	6.0
Nagaland	6.3	7.2	10.7
Tripura	6.9	3.3	7.9
West			
Goa	4.1	5.6	6.7
Gujarat	8.9	2.9	9.4
Maharashtra	8.5	4.5	9.8
South			
Andhra Pradesh	9.1	4.3	10.1
Karnataka	8.6	5.3	10.0
Kerala	5.4	4.8	7.3
Tamil Nadu	5.6	5.6	9.3

Note: Medians are based on current status. Nonsusceptible is defined as amenorrhoeic or abstaining or both.

in North India, as well as Madhya Pradesh, West Bengal and some small northeastern states.

The median duration of postpartum amenorrhoea varies widely from only 4 months in Delhi, Punjab and Goa, to 10 months in Assam, Bihar and West Bengal. Similarly, the median duration of nonsusceptibility varies from 4 months in Punjab to 11 months in Bihar and several northeastern states. These variations in the duration of postpartum nonsusceptibility are one important determinant of fertility differentials in the states of India. It is interesting to note that the median duration of nonsusceptibility is relatively low in many low fertility states. This suggests that the state differentials in fertility would be even larger in the absence of state differentials in nonsusceptibility.

5.10 Menopause

Another factor impinging on fertility is the onset of menopause. Later in life (typically beginning around age 30), the risk of pregnancy begins to decline with age. In the NFHS, menopause is defined as the lack of a menstrual period for at least six months preceding the survey for women who are neither pregnant nor postpartum amenorrhoeic. Women who report that they are menopausal are also included in this group. In India, menopause is relatively rare for women in their thirties, but its incidence increases rapidly after age 40 (Table 5.27). By age 44-45, 38 percent of women are in menopause. This figure increases to 56 percent for women age 46-47 and 71 percent for women age 48-49. The onset of menopause is slightly later in urban areas than in rural areas. Among the major states, menopause takes place at relatively young ages in Maharashtra and Andhra Pradesh, and relatively old ages in Haryana and Kerala.

Table 5.27 Menopause

Percentage of currently married women age 30-49 years who are in menopause, by age and state, India, 1992-93

State	Age						
	30-34	35-39	40-41	42-43	44-45	46-47	48-49
India - Urban	2.4	7.0	14.4	23.2	35.5	51.8	70.3
India - Rural	3.3	7.0	18.0	26.2	38.7	57.2	70.8
India - Total	3.0	7.0	16.9	25.3	37.8	55.8	70.6
North							
Delhi	2.5	4.1	12.1	12.1	30.1	52.1	73.7
Haryana	1.8	5.6	6.3	7.6	23.7	44.4	55.2
Himachal Pradesh	0.4	8.6	16.2	19.1	48.6	54.8	59.8
Jammu Region of J & K	0.6	4.8	8.8	20.3	36.7	56.8	66.7
Punjab	0.6	3.0	14.6	18.0	26.9	53.3	74.3
Rajasthan	2.8	5.4	12.1	20.6	36.6	45.3	59.7
Central							
Madhya Pradesh	3.5	4.3	17.7	22.5	32.5	58.7	55.0
Uttar Pradesh	2.3	5.6	13.6	24.6	37.2	57.9	73.1
East							
Bihar	1.5	7.8	18.8	26.3	48.2	52.9	72.5
Orissa	0.8	4.0	18.1	22.3	37.6	53.0	73.8
West Bengal	3.0	5.2	12.6	24.8	32.6	50.8	66.9
Northeast							
Arunachal Pradesh	2.6	9.2	(12.8)	*	*	*	*
Assam	5.7	11.6	16.1	44.0	40.8	68.1	(59.2)
Manipur	0.7	7.0	7.5	9.3	(25.5)	(47.2)	(53.8)
Meghalaya	0.9	2.1	(10.2)	(29.4)	(56.8)	(59.3)	(69.2)
Mizoram	0.8	0.7	5.8	(14.6)	(14.9)	(31.9)	50.8
Nagaland	10.3	7.6	6.7	*	21.1	(44.4)	40.3
Tripura	5.0	7.4	(5.4)	(21.3)	(39.4)	(51.4)	(69.4)
West							
Goa	2.1	6.6	16.0	21.1	37.4	48.1	67.1
Gujarat	3.7	7.0	16.3	23.5	38.8	62.6	70.4
Maharashtra	3.2	11.0	24.5	36.6	45.9	64.4	80.8
South							
Andhra Pradesh	8.0	15.2	26.5	41.9	52.3	66.3	82.8
Karnataka	3.7	8.1	21.6	27.3	39.2	58.5	71.3
Kerala	2.1	2.4	8.9	15.0	23.3	38.7	62.3
Tamil Nadu	1.9	4.8	17.9	18.1	30.9	49.3	70.9

Note: Percentage menopausal is defined as the percent of nonpregnant, nonamenorrhoeic currently married women whose last menstrual period occurred six or more months prior to the survey or who reported that they are menopausal.

() Based on 25-49 unweighted cases

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