

CHAPTER - 3

ESTIMATES OF FERTILITY INDICATORS

Since inception, SRS has been providing data for estimating various fertility measures. The fertility indicators considered in this chapter are Crude Birth Rate, General Fertility Rate, Age Specific Fertility/Marital Fertility Rates, Total Fertility/Marital Fertility Rates and Gross Reproduction Rate. Apart from this, the chapter includes sex ratio at birth and for the age group 0-4. The data on the sex ratio should enable the readers to gauge the gender disparity at birth and to map the improvements in the age group 0-4. To examine the changes in the levels of fertility during the last decade, the average values of these fertility indicators for the years 2009-11 are compared with that for 1999-01.

3.2 The crude birth rate (CBR) at all India level had declined from 36.9 in 1971 to 33.9 in 1981, registering a fall of about 8 per cent. During 1991-2011, the decline has been about 26.1 per cent from 29.5 to 21.8. The rural-urban differential has also narrowed over these years. However, the CBR has continued to be higher in rural areas compared to urban areas in the last three decades. The total fertility rate (TFR) has declined from 5.2 to 4.5 during 1971 to 1981 and from 3.6 to 2.4 during 1991 to 2011. The TFR in rural areas has declined from 5.4 to 2.7 from 1971 to 2011 whereas the corresponding decline in urban areas has been from 4.1 to 1.9 during the same period. In 2011, around 67 per cent of the deliveries were institutional which includes Government as well as private hospitals. The percentage of institutional deliveries in urban areas is 87.9 as against about 60.7 percent recorded in rural areas.

3.3 The data on most of the fertility indicators has been presented by age, sex and residence for all India and bigger States. It also includes data on fertility by level of education, order of birth, birth interval and medical attention at birth.

3.4 Apart from the fertility indicators at State and national levels, the SRS sample from 2004 onwards also provides estimates of birth rates at sub-State, viz. NSS Natural Division Level in rural areas. NSS natural divisions have been formed taking into consideration the geography of the State and by grouping contiguous districts having similar topography, population density, cropping pattern and rainfall etc. The Table 11 of this report contains data on birth rate besides death and infant mortality rate for 56 Natural Divisions of 16 bigger States. The Table 11 also contains data on birth rate besides death and infant mortality rate for four metro mega cities viz. Chennai, Delhi, Kolkata and Mumbai.

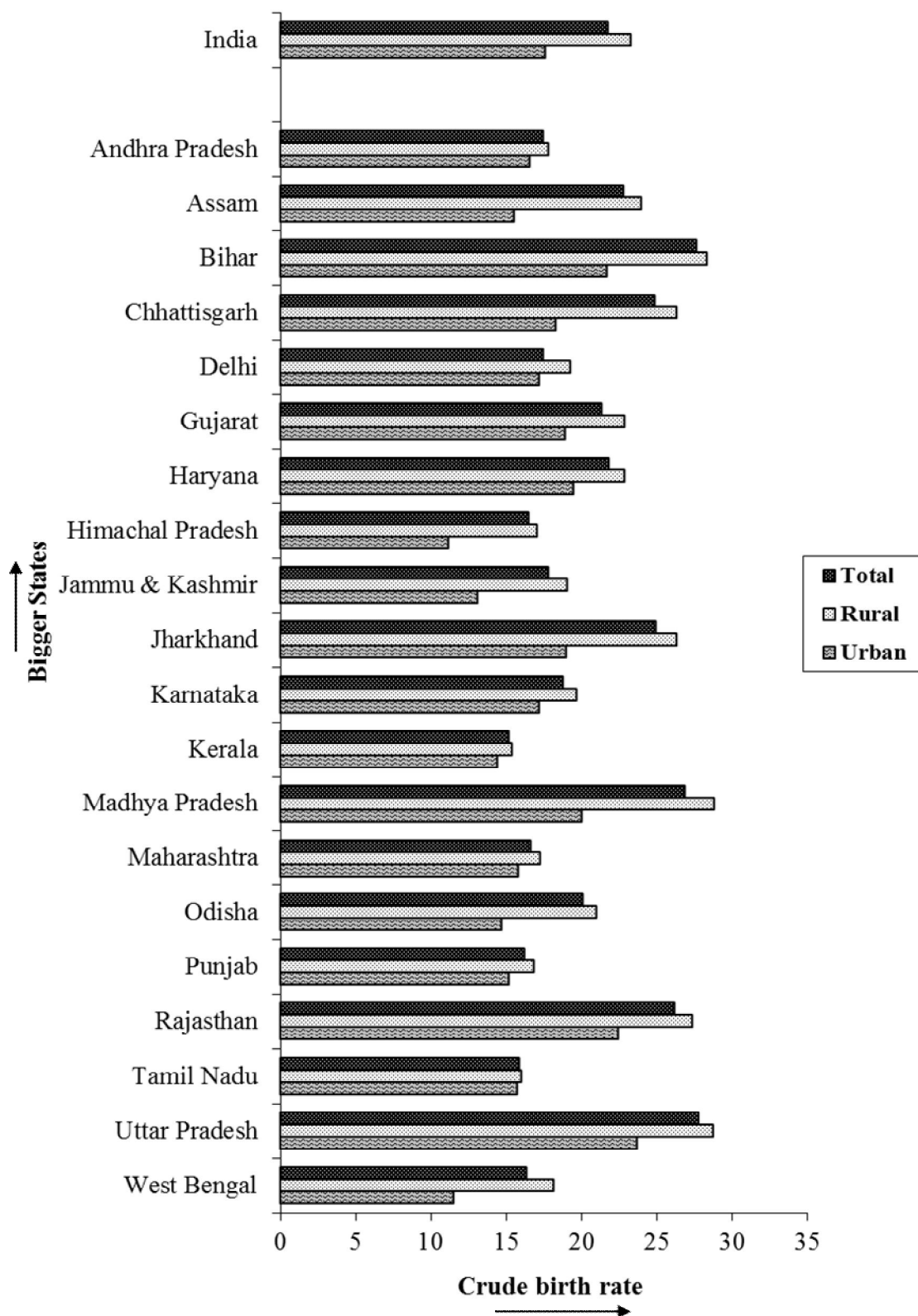
3.5 Based on the figures in the Statement 14 given below, the graphical representation of birth rate of bigger States by residence is depicted in Chart 8 and the distribution of bigger States by levels of birth rate in rural and urban areas is presented in Chart 9. Andhra Pradesh, Delhi, Himachal Pradesh, Jammu & Kashmir, Karnataka, Kerala, Maharashtra, Punjab, Tamil Nadu and West Bengal are the major States having birth rate below 20 both in rural and urban areas. On the other hand, Madhya Pradesh and Uttar Pradesh both have the highest birth rate in rural areas (28.8) and Uttar Pradesh has the highest in urban areas (23.7) followed by Rajasthan (22.5). The lowest CBR in rural areas (15.4) in Kerala whereas it has been estimated (11.2) in urban areas of Himachal Pradesh.

Statement 14

CBR (Crude birth rate) by residence, India and bigger States, 2011

India and bigger States	Total	Rural	Urban
India	21.8	23.3	17.6
Andhra Pradesh	17.5	17.8	16.6
Assam	22.8	24.0	15.5
Bihar	27.7	28.4	21.7
Chhattisgarh	24.9	26.3	18.3
Delhi	17.5	19.3	17.2
Gujarat	21.3	22.9	19.0
Haryana	21.8	22.9	19.5
Himachal Pradesh	16.5	17.1	11.2
Jammu & Kashmir	17.8	19.1	13.1
Jharkhand	25.0	26.3	19.0
Karnataka	18.8	19.7	17.2
Kerala	15.2	15.4	14.4
Madhya Pradesh	26.9	28.8	20.1
Maharashtra	16.7	17.3	15.8
Odisha	20.1	21.0	14.7
Punjab	16.2	16.8	15.2
Rajasthan	26.2	27.4	22.5
Tamil Nadu	15.9	16.0	15.7
Uttar Pradesh	27.8	28.8	23.7
West Bengal	16.3	18.1	11.5

Chart 8 : Crude birth rate by residence, India and bigger States, 2011



3.6 Statement 15 below provides the percentage change in average crude birth rate between the periods 1999-01 and 2009-11 for India and bigger States separately for rural and urban areas. At the national level, the rate of decline in birth rate is 14.0 per cent. The rate of decline in average birth rate varies from 24.2 per cent in Himachal Pradesh to 13.3 per cent in Bihar. Such decline in rural areas is from 23.7 per cent in Himachal Pradesh to 12.5 per cent in Assam. In urban areas, the decline ranges from 32.5 per cent in Himachal Pradesh to 8.4 per cent in Rajasthan. In Kerala, the average crude birth rate in rural areas is nearly same as in the urban areas during 2009-11.

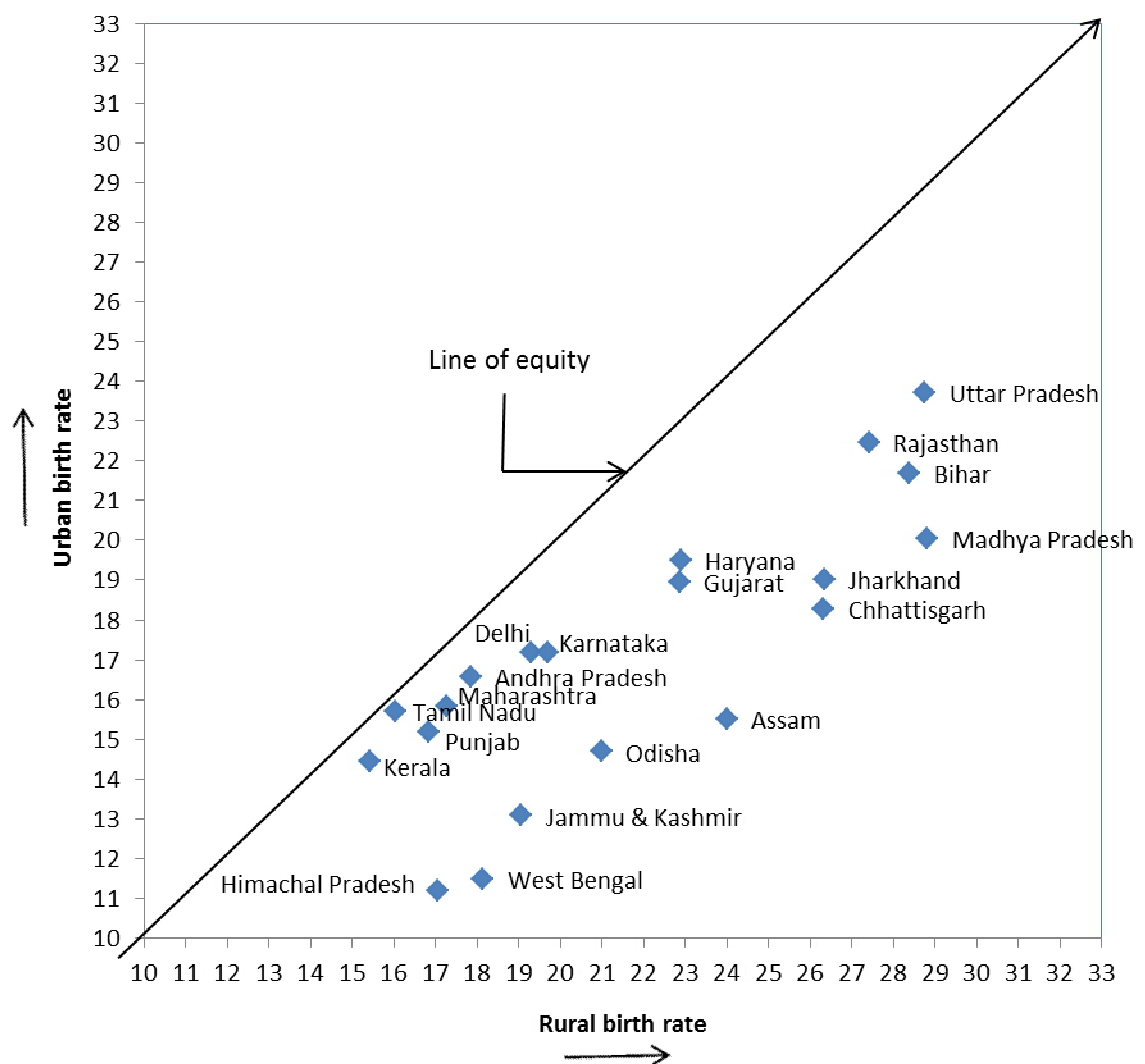
Statement 15

Percent change in average crude birth rate between 1999-01 and 2009-11 by residence, India and bigger States

India and bigger States	Total			Rural			Urban		
	1999-01	2009-11	% Change	1999-01	2009-11	% Change	1999-01	2009-11	% Change
India	25.8	22.2	-14.0	27.4	23.7	-13.5	20.6	18.0	-12.6
Andhra Pradesh	21.3	17.9	-16.0	21.7	18.3	-15.7	20.2	16.8	-16.8
Assam	27.0	23.2	-14.1	27.9	24.4	-12.5	18.7	15.8	-15.5
Bihar*	31.6	27.4	-13.3	32.5	28.3	-12.9	24.7	20.9	-15.4
Gujarat	25.2	21.8	-13.5	26.8	23.3	-13.1	21.8	19.4	-11.0
Haryana	26.8	22.3	-16.8	27.9	23.3	-16.5	23.1	19.8	-14.3
Himachal Pradesh	22.3	16.9	-24.2	22.8	17.4	-23.7	16.9	11.4	-32.5
Karnataka	22.2	19.2	-13.5	23.5	20.2	-14.0	19.1	17.4	-8.9
Kerala	17.7	14.9	-15.8	17.8	14.9	-16.3	17.3	14.7	-15.0
Madhya Pradesh*	31.2	26.8	-14.1	33.1	28.6	-13.6	23.4	20.0	-14.5
Maharashtra	21.0	17.1	-18.6	21.3	17.7	-16.9	20.3	16.4	-19.2
Odisha	24.0	20.5	-14.6	24.5	21.4	-12.7	20.1	15.2	-24.4
Punjab	21.4	16.6	-22.4	22.4	17.2	-23.2	18.6	15.5	-16.7
Rajasthan	31.2	26.7	-14.4	32.5	27.9	-14.2	24.9	22.8	-8.4
Tamil Nadu	19.2	16.0	-16.7	19.8	16.2	-18.2	18.0	15.8	-12.2
Uttar Pradesh*	32.5	27.8	-14.5	33.7	28.8	-14.5	27.2	23.7	-12.9
West Bengal	20.6	16.8	-18.4	22.9	18.6	-18.8	14.1	11.8	-16.3

* Bihar, Madhya Pradesh and Uttar Pradesh include Jharkhand, Chhattisgarh, and Uttarakhand respectively.

Chart 9: Distribution of bigger states by values of birth rate for rural and urban areas, 2011



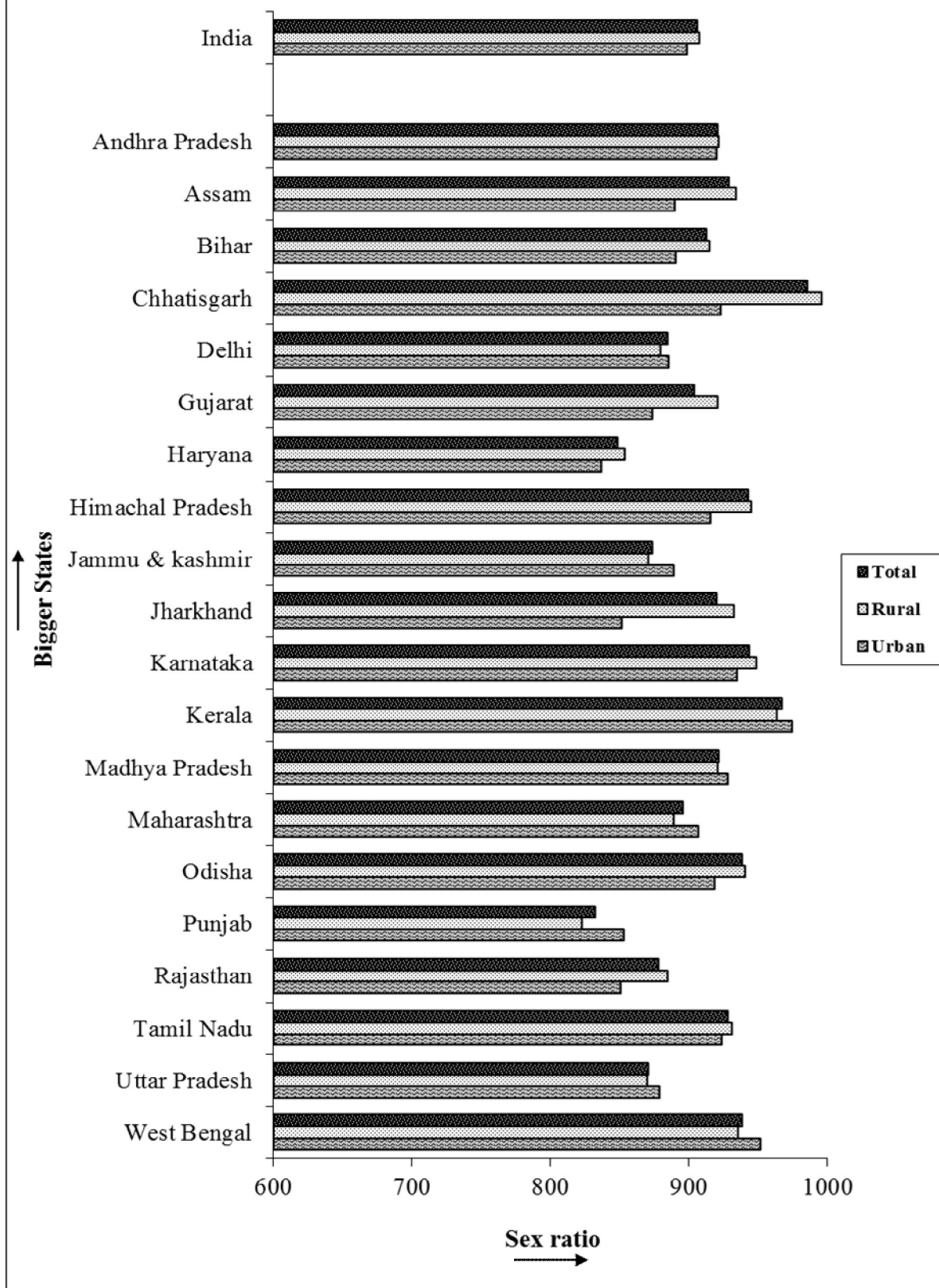
3.7 The Statement 16 below presents sex ratio at birth during the period 2009-11. The sex ratio at birth for the country for the period 2009-11 (3-years average) has been estimated as 906. At National level, it is 907 in rural area and 900 in urban area. Among the bigger States, the sex ratio at birth varies from 991 in Chhattisgarh to 841 in Punjab. In the rural areas, the highest and the lowest sex ratio at birth are in the States of Chhattisgarh (1001) and Punjab (829) respectively. The sex ratio in urban areas varies from 977 in Kerala to 844 in Jharkhand. Chart 10 depicts the variation in sex ratio by residence among bigger States in the country.

Statement 16

**Sex ratio (female per 1000 male) at birth by residence,
India and bigger States, 2009-2011**

India and bigger States	Total	Rural	Urban
India	906	907	900
Andhra Pradesh	915	914	919
Assam	926	929	900
Bihar	910	912	884
Chhattisgarh	991	1001	930
Delhi	880	876	881
Gujarat	909	923	883
Haryana	854	856	848
Himachal Pradesh	938	940	909
Jammu & Kashmir	880	876	898
Jharkhand	915	928	844
Karnataka	945	948	939
Kerala	965	961	977
Madhya Pradesh	920	919	926
Maharashtra	893	881	911
Odisha	946	949	921
Punjab	841	829	863
Rajasthan	878	882	861
Tamil Nadu	926	933	918
Uttar Pradesh	875	874	881
West Bengal	941	938	955

Chart 10: Sex ratio at birth by residence, India and bigger States, 2009-2011



3.8 The Statement 17 below presents the sex ratio for the age group 0-4. The sex ratio for the age group 0-4 for all India is 914. It varies from 916 in rural areas to 908 in urban areas. The maximum sex ratio of 1018 has been estimated in Chhattisgarh and the minimum of 836 in Haryana. For rural areas, the minimum sex ratio of 833 has been observed in Punjab and the maximum, 1035 in Chhattisgarh. In the urban areas, the maximum sex ratio is observed in West Bengal (970) and the minimum, in Haryana (831).

Statement 17

Sex ratio of child (age group 0-4), India and bigger States, 2009-2011

India and bigger States	Total	Rural	Urban
India	914	916	908
Andhra Pradesh	943	951	926
Assam	935	933	955
Bihar	920	920	921
Chhattisgarh	1018	1035	928
Delhi	881	865	885
Gujarat	895	912	864
Haryana	836	837	831
Himachal Pradesh	942	942	938
Jammu & Kashmir	872	875	859
Jharkhand	915	920	891
Karnataka	946	951	938
Kerala	961	965	949
Madhya Pradesh	934	935	928
Maharashtra	900	898	904
Odisha	947	949	930
Punjab	850	833	879
Rajasthan	880	882	872
Tamil Nadu	943	940	946
Uttar Pradesh	878	877	886
West Bengal	971	971	970

3.9 Estimates of General Fertility Rate (GFR), a refined measure of fertility, defined as the number of live births per thousand women in the reproductive age-group 15-49 years, is a useful tool for measuring fertility. The GFR for all-India and bigger States are given below in Statement 18 separately for rural and urban areas. At the national level, 81.2 children were born to every thousand women aged 15-49 years. This number varies from 62.0 in urban areas to 88.9 in rural areas. Among the bigger States, GFR varies from 54.2 in Kerala to 114.4 in Bihar. Chart 11 gives a pictorial comparison of bigger States by level of GFR. The distribution of bigger States by residence and levels of GFR is presented in Chart 12 and from which it is observed that GFR in rural areas of Kerala is just higher than urban areas with the difference of 3.9.

Statement 18

GFR (General fertility rate) by residence, India and bigger States, 2011

India and bigger States	Total	Rural	Urban
India	81.2	88.9	62.0
Andhra Pradesh	60.7	63.6	54.4
Assam	82.8	88.8	51.3
Bihar	114.4	118.2	83.8
Chhattisgarh	91.9	99.1	62.3
Delhi	63.3	70.9	62.1
Gujarat	79.7	87.0	68.7
Haryana	80.7	85.7	69.9
Himachal Pradesh	57.3	59.3	37.8
Jammu & Kashmir	62.5	67.7	43.8
Jharkhand	96.1	102.9	69.2
Karnataka	65.8	70.3	58.2
Kerala	54.2	55.2	51.3
Madhya Pradesh	103.4	113.0	71.9
Maharashtra	61.6	66.6	55.5
Odisha	72.6	76.5	50.2
Punjab	59.9	62.2	56.2
Rajasthan	102.1	108.9	81.8
Tamil Nadu	56.4	58.2	54.2
Uttar Pradesh	109.3	115.1	86.6
West Bengal	57.9	65.0	39.4

Chart 11: GFR by residence, India and bigger States, 2011

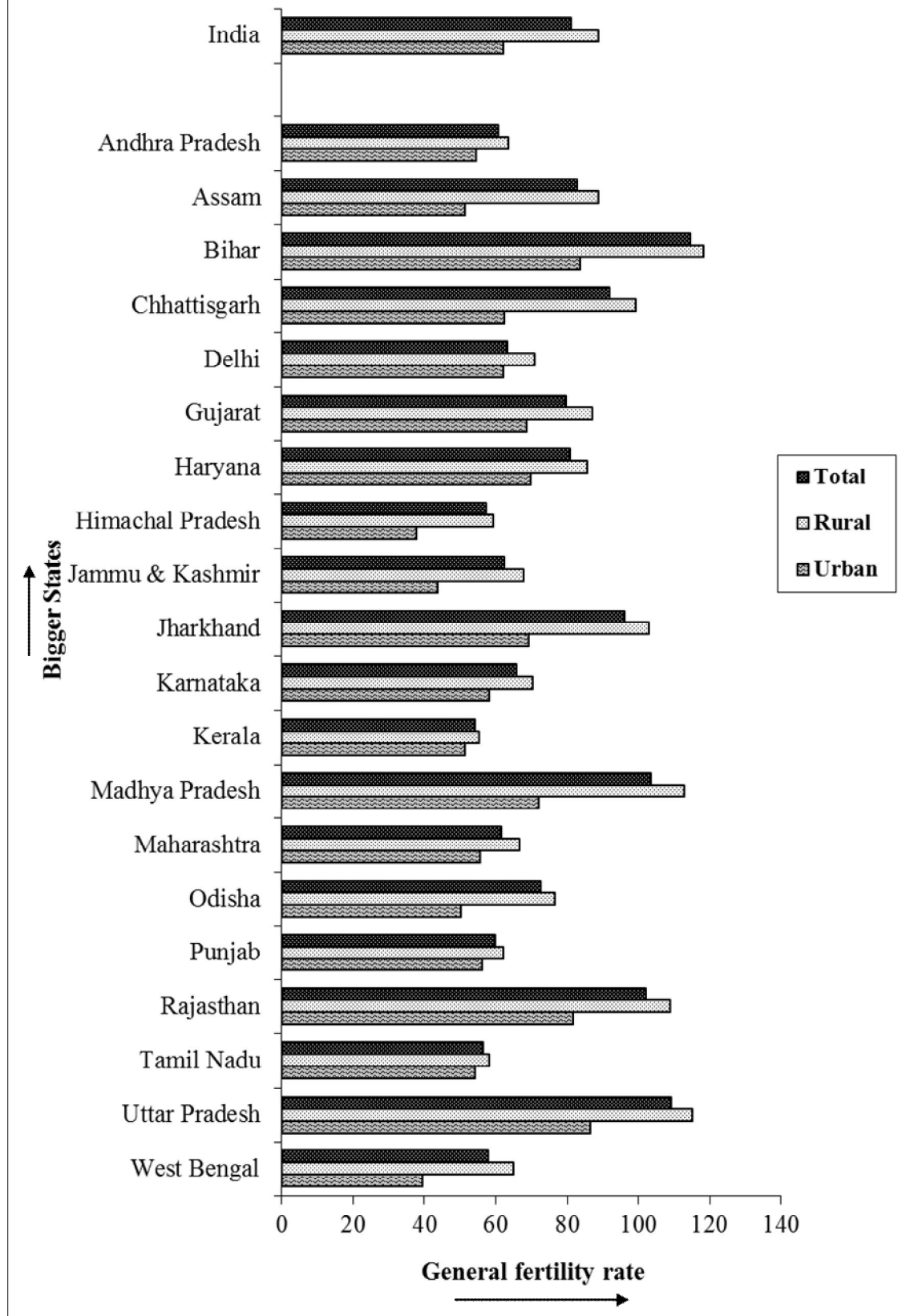
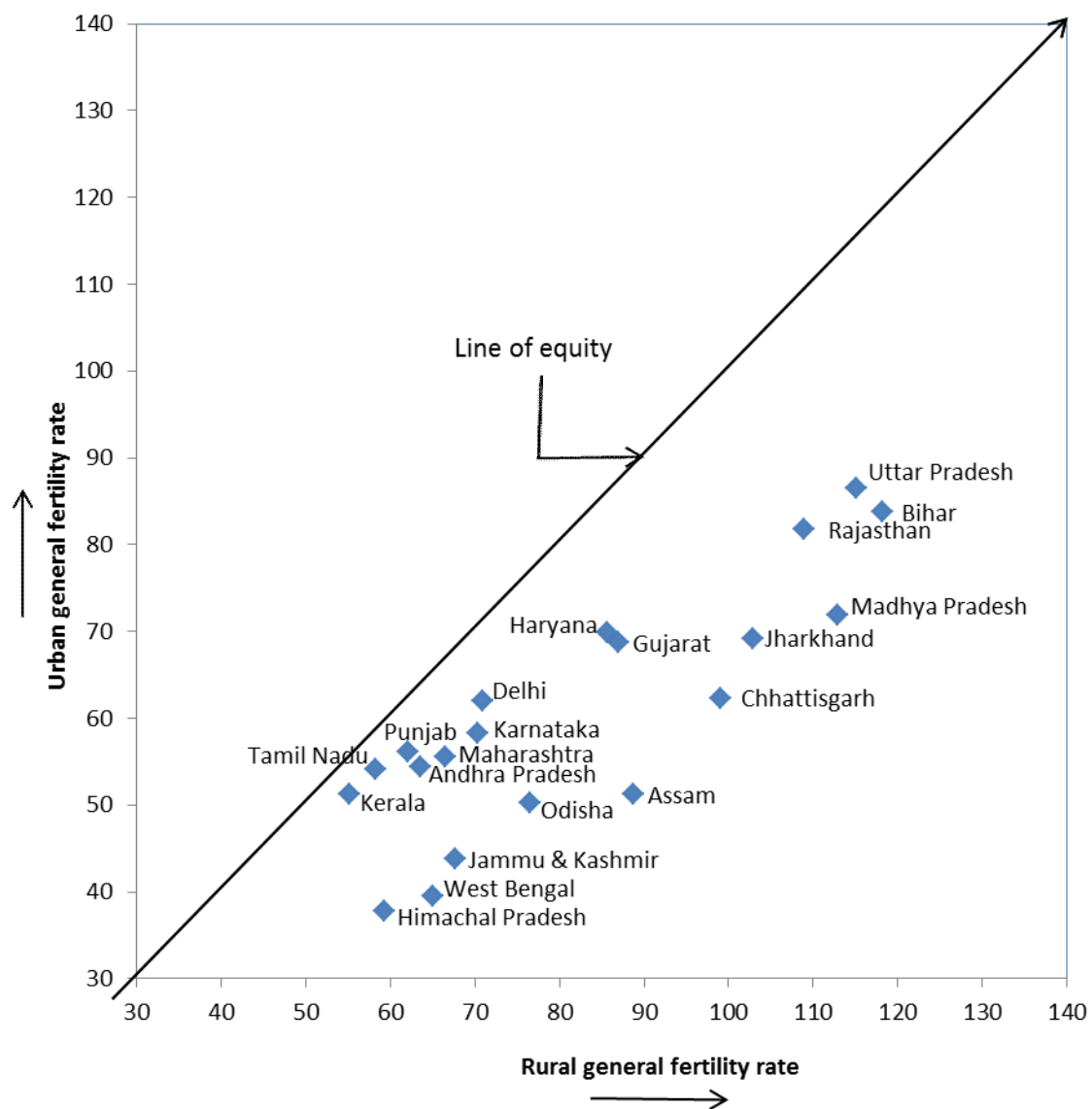


Chart 12: Distribution of bigger states by values of General fertility rate(GFR) for rural and urban areas, 2011



3.10 Changes in the average level of GFR between 1999-2001 and 2009-2011 for India and bigger States are shown below in Statement 19. At the all India level, a decline of 17.7 per cent in GFR has been registered during the decade and it varies from 17.4 per cent in rural to 15.9 per cent in urban areas. Among the bigger States, the percentage decline in GFR varies from 25.8 in Himachal Pradesh to 12.4 in Kerala.

Statement 19

Percent change in average GFR (General fertility rate) between 1999-01 and 2009-11 by residence, India and bigger States

India and bigger States	Total			Rural			Urban		
	1999-01	2009-11	% Change	1999-01	2009-11	% Change	1999-01	2009-11	% Change
India	101.9	83.9	-17.7	111.3	91.9	-17.4	76.1	64.0	-15.9
Andhra Pradesh	80.2	62.5	-22.1	83.0	65.4	-21.2	72.0	56.1	-22.1
Assam	103.0	85.1	-17.4	107.9	91.3	-15.4	64.7	52.6	-18.7
Bihar	136.1	113.7	-16.5	141.0	118.9	-15.7	101.7	80.4	-20.9
Gujarat	95.8	82.3	-14.1	104.3	89.8	-13.9	78.7	71.2	-9.5
Haryana	107.9	83.1	-23.0	114.0	88.4	-22.5	87.0	71.7	-17.6
Himachal Pradesh	79.6	59.1	-25.8	81.2	61.2	-24.6	60.0	38.9	-35.2
Karnataka	81.4	67.8	-16.7	88.1	72.9	-17.3	66.9	59.3	-11.4
Kerala	60.6	53.1	-12.4	61.3	53.4	-12.9	58.4	52.1	-10.8
Madhya Pradesh	130.6	103.4	-20.8	143.1	112.6	-21.3	87.7	72.0	-17.9
Maharashtra	81.6	63.8	-21.8	85.9	68.8	-19.9	75.1	57.7	-23.2
Odisha	91.1	75.3	-17.3	93.9	79.4	-15.4	71.4	52.3	-26.8
Punjab	81.6	61.4	-24.8	86.3	64.2	-25.6	68.4	56.9	-16.8
Rajasthan	130.9	105.8	-19.2	138.9	113.2	-18.5	96.7	84.3	-12.8
Tamil Nadu	68.8	57.2	-16.9	72.2	59.2	-18.0	62.2	54.7	-12.1
Uttar Pradesh	143.9	111.9	-22.2	152.0	118.0	-22.4	109.8	88.5	-19.4
West Bengal	78.1	60.7	-22.3	88.4	68.2	-22.9	50.6	41.4	-18.2

Fertility by age of women

3.11 Age of women is an important factor affecting the fertility levels. On the basis of data on births to women by specific age groups in the reproductive span 15-49 years as available from SRS, age specific fertility rates have been calculated. Statement 20 below presents the age specific fertility rates for India by residence.

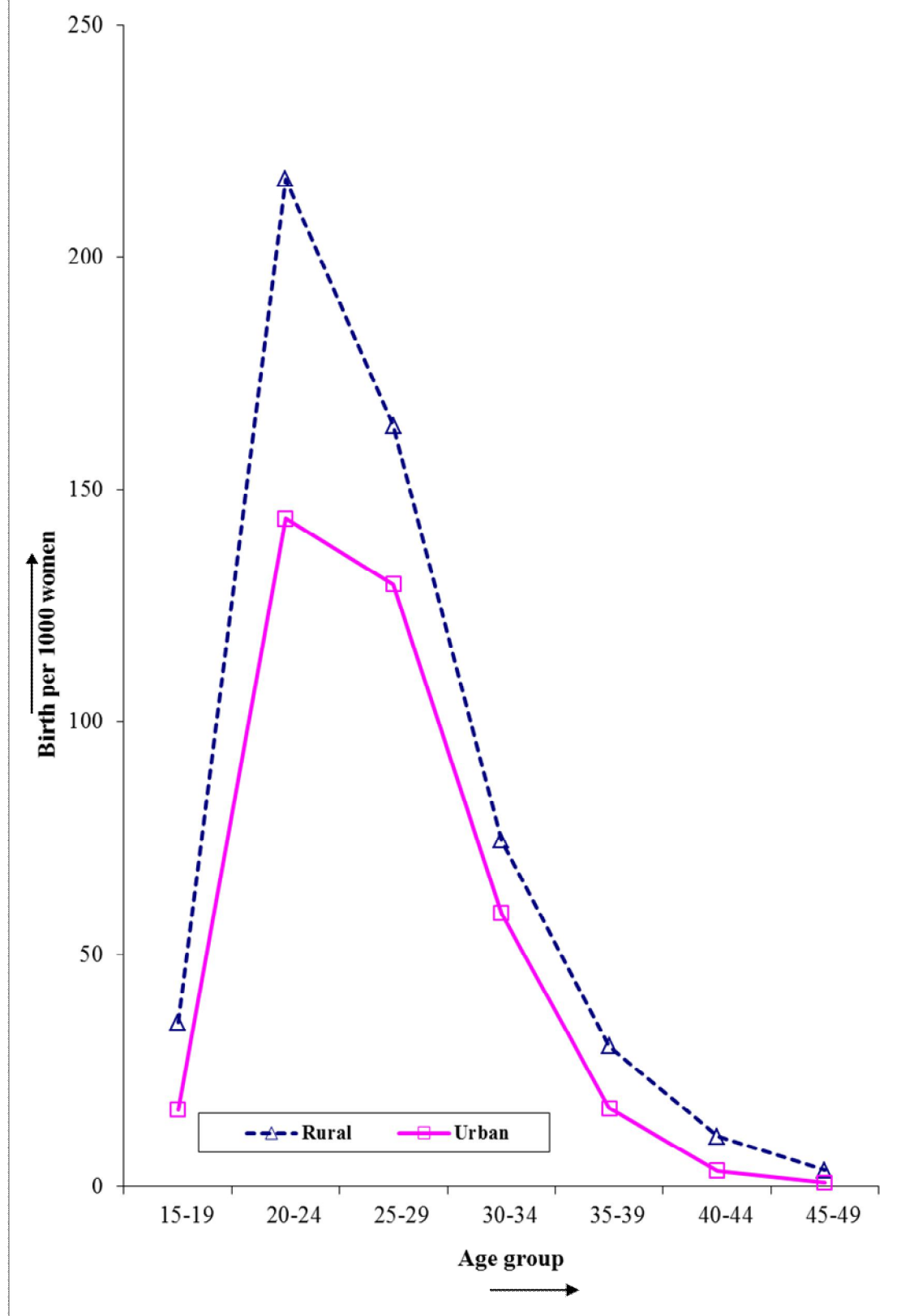
3.12 The data reveals that fertility in all the age groups is higher in rural areas than in urban areas. This distribution of age-specific fertility by residence is presented in chart 13. The fertility reaches the peak in the age group 20-24 and declines thereafter, irrespective of the place of residence. ASFR curve for urban areas falls under the ASFR curve of rural areas. Rural ASFR curve has declined very steeply after attaining peak for age 20-24 where as urban ASFR curve has gradually declined up to the age 25-29 after attaining peak at age 24.

Statement 20

ASFRs (Age specific fertility rates) by residence, India, 2011

Age Groups	Total	Rural	Urban
15-19	30.7	35.3	16.5
20-24	196.7	216.8	143.8
25-29	153.4	163.7	129.6
30-34	69.8	74.6	58.8
35-39	26.4	30.2	16.8
40-44	8.7	10.9	3.6
45-49	2.8	3.6	1.0

Chart 13 : Age-specific fertility rates by residence, India, 2011



3.13 The percentage change in age specific fertility rate during the last decade is presented below in Statement 21 separately for rural and urban areas. The data pertains to changes in the age specific fertility rates for the quinquennial age groups based on average value for three years period viz. 1999-01 and 2009-11 for all-India.

3.14 The data reveals that decline in fertility rates is more in urban areas compared to rural areas except in the age groups 25-29, 30-34 and 35-39. The decline is perceptible for the higher age groups 40-49 in urban areas. During the last decade, the fertility declined by 61.0 per cent in the age groups 40-44 in urban areas as compared to 54.1 per cent in rural areas. It is slower in the middle age groups 20-29 for both the areas. The minimum decline of 7.1 per cent has been noticed in the age group 20-24 at National level. The minimum decline of 6.1 percent and 10.2 percent in rural and urban areas respectively has also been noticed in the same age group.

Statement 21

Percent change in age specific fertility rates by residence between 1999-01 and 2009-11, India

Age group	Total			Rural			Urban		
	1999- 01	2009- 11	% Change	1999- 01	2009- 11	% Change	1999- 01	2009- 11	% Change
15-19	50.7	35.5	-30.0	58.5	40.9	-30.1	27.9	19.3	-30.8
20-24	215.9	200.6	-7.1	235.5	221.1	-6.1	165.2	148.3	-10.2
25-29	181.2	155.7	-14.1	192.3	165.8	-13.8	152.3	132.8	-12.8
30-34	101.0	70.3	-30.4	111.1	75.8	-31.8	73.1	57.3	-21.6
35-39	52.6	28.7	-45.4	61.2	33.2	-45.8	29.8	17.7	-40.6
40-44	22.2	9.8	-55.9	26.8	12.3	-54.1	10.0	3.9	-61.0
45-49	7.7	3.8	-50.6	9.5	5.1	-46.3	3.1	1.0	-67.7

3.15 The fertility pattern by age groups in different States is presented below in Statement 22. Except for Jammu & Kashmir and Uttar Pradesh where fertility reached its peak in the age group 25-29, the highest fertility in all the other bigger States has been attained in the age group 20-24. Fertility, however, declines after age 30 in all the bigger States. The ASFR in the younger age group 15-19 varies from 5.7 in Jammu & Kashmir to 55.4 in West Bengal. In the age group 30-34, the variation in the level of ASFR is from 25.9 in Andhra Pradesh to 128.8 in Bihar followed by 128.4 in Uttar Pradesh. The rural-urban levels in ASFR for bigger States are shown in Table 3.

Statement 22

ASFRs (Age specific fertility rates), India and bigger States, 2011

India and bigger States	15-19	20-24	25-29	30-34	35-39	40-44	45-49
India	30.7	196.7	153.4	69.8	26.4	8.7	2.8
Andhra Pradesh	38.8	199.1	95.5	25.9	6.0	0.8	0.0
Assam	45.8	163.2	146.0	82.7	27.6	17.3	2.9
Bihar	33.0	247.5	221.4	128.8	58.4	26.3	6.3
Chhattisgarh	39.8	230.4	168.0	67.1	29.8	5.3	0.7
Delhi	9.2	139.7	130.3	60.8	15.7	4.2	0.3
Gujarat	23.4	193.0	162.9	68.5	20.0	5.9	2.9
Haryana	17.0	223.8	147.1	43.6	16.5	4.8	0.0
Himachal Pradesh	12.3	162.6	122.7	40.3	10.5	1.5	1.1
Jammu & Kashmir	5.7	83.9	135.7	95.5	50.3	12.0	6.5
Jharkhand	37.8	193.4	189.1	100.3	44.1	14.7	6.7
Karnataka	35.8	192.7	110.8	32.2	8.8	0.9	0.4
Kerala	20.3	145.6	131.1	56.3	13.4	1.8	0.2
Madhya Pradesh	32.5	273.1	185.8	77.2	28.3	9.3	4.0
Maharashtra	28.6	179.5	107.5	34.8	9.1	1.6	0.4
Odisha	29.8	165.5	143.0	68.9	24.5	5.9	2.3
Punjab	10.4	150.5	132.9	47.1	11.7	2.5	0.6
Rajasthan	32.7	240.0	192.8	88.4	33.8	11.9	4.4
Tamil Nadu	19.4	151.6	121.2	38.4	9.4	0.9	0.3
Uttar Pradesh	26.1	220.3	223.1	128.4	51.9	22.4	7.2
West Bengal	55.4	154.8	85.3	35.0	11.2	3.1	1.3

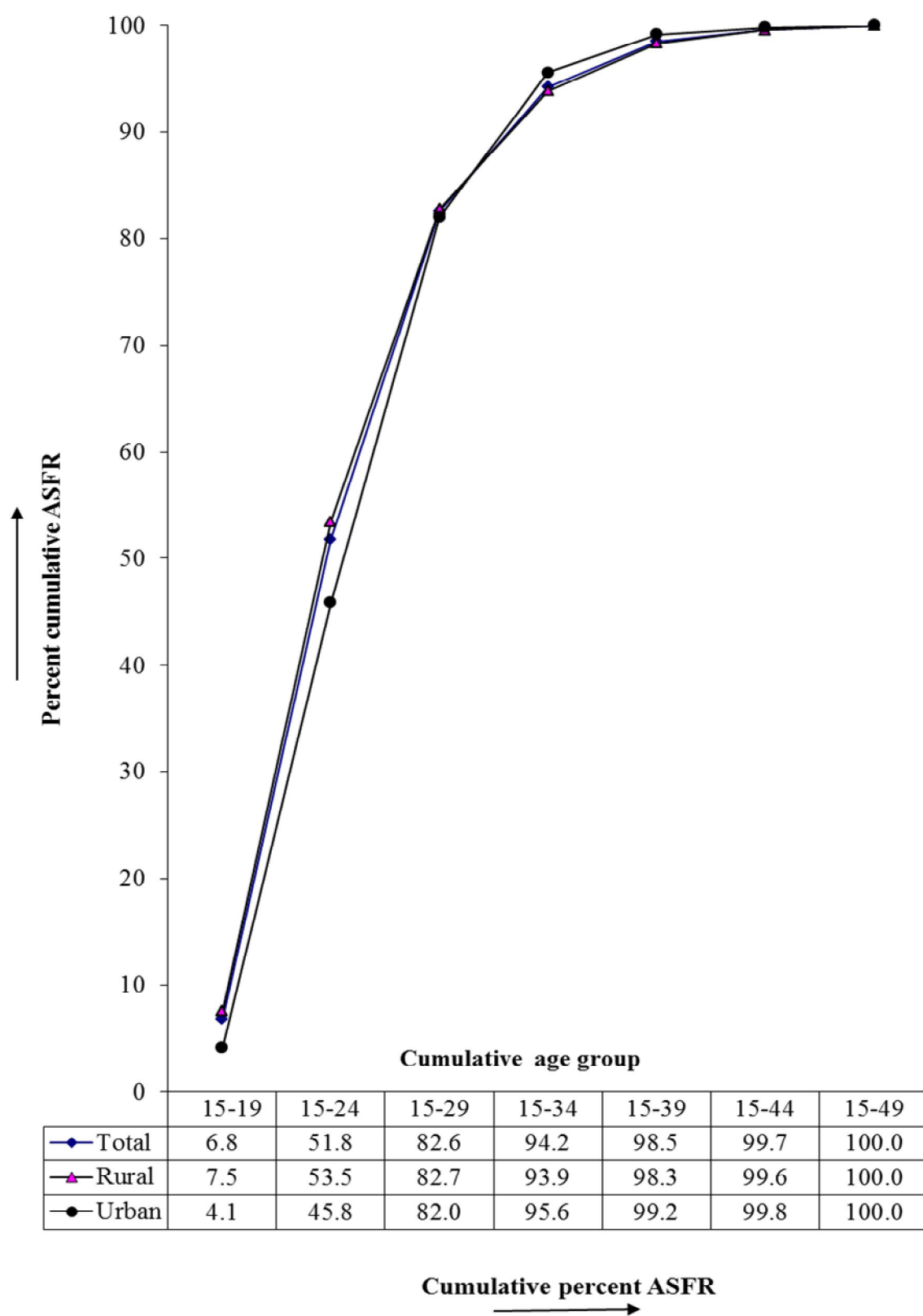
3.16 The percentage distribution of cumulative fertility by woman's age is shown below in Statement 23 for India and bigger States for the year 2011. The cumulative fertility for a specific age group has been worked out by adding the ASFRs up to that age group. The percentage share of fertility by woman in the age group 15-19 varies from 1.6 in Jammu & Kashmir to 15.8 in West Bengal. By the age 34, the percentage share of cumulative fertility varies from 87.4 in Jammu & Kashmir to 98.5 in Andhra Pradesh. The percentage share in cumulative fertility for women by the age 39 years varies from 96.9 in Jammu & Kashmir to 99.8 in Andhra Pradesh and Karnataka. At the national level, less than 2 per cent fertility is from women aged 40 years and above. Chart 14 gives percentage cumulative age specific fertility rate for India by residence.

Statement 23

Percentage distribution of cumulative fertility by age group, India and bigger States, 2011

India and bigger States	15-19	15-24	15-29	15-34	15-39	15-44	15-49
India	6.8	51.8	82.6	94.2	98.5	99.7	100.0
Andhra Pradesh	9.4	67.1	92.5	98.5	99.8	100.0	100.0
Assam	10.1	48.2	79.1	93.4	97.7	99.7	100.0
Bihar	6.2	45.0	75.8	90.5	97.3	99.5	100.0
Chhattisgarh	7.3	56.1	85.4	95.0	99.2	99.9	100.0
Delhi	2.4	43.5	82.0	96.1	99.3	100.0	100.0
Gujarat	4.8	49.6	83.6	95.5	98.8	99.6	100.0
Haryana	3.9	61.3	89.7	96.7	99.3	100.0	100.0
Himachal Pradesh	3.5	52.3	86.7	96.9	99.5	99.8	100.0
Jammu & Kashmir	1.6	27.7	66.4	87.4	96.9	99.1	100.0
Jharkhand	7.8	45.7	78.3	92.0	97.8	99.3	100.0
Karnataka	8.8	63.0	91.2	97.9	99.8	99.9	100.0
Kerala	5.2	43.8	80.4	95.8	99.5	99.9	100.0
Madhya Pradesh	6.1	56.5	85.5	95.2	98.7	99.6	100.0
Maharashtra	7.6	60.9	89.6	97.7	99.6	99.9	100.0
Odisha	6.8	48.3	80.6	94.1	98.8	99.7	100.0
Punjab	2.8	48.7	85.8	96.8	99.4	99.9	100.0
Rajasthan	6.5	52.4	82.9	94.4	98.5	99.6	100.0
Tamil Nadu	4.6	49.6	87.2	97.5	99.7	99.9	100.0
Uttar Pradesh	5.3	46.2	77.6	91.6	97.6	99.4	100.0
West Bengal	15.8	64.0	88.0	96.5	99.2	99.8	100.0

Chart 14: Percentage cumulative age specific fertility rate, by residence, India 2011



3.17 The difference in the pattern of child bearing can be measured in term of the mean age of fertility, which describes the age pattern of fertility of synthetic cohort of hypothetical group of women viewed as having, in their lifetime, similar fertility experience recorded in a calendar year. The mean age of fertility has been calculated from the age specific fertility rates. The associated standard deviations are also shown. The States having lower values of standard deviation recorded higher concentration of fertility about the mean age as compared to those with higher values. Statement 24 below shows the mean age of fertility for India and bigger States. At the National level, the mean age of fertility is 26.5 years and varies from 24.3 in Andhra Pradesh to 29.6 years in Jammu & Kashmir with standard deviation 5.5, 4.2 and 5.9 respectively.

Statement 24

**Mean age of fertility and associated standard deviation,
India and bigger States, 2011**

India and bigger States	Mean age of fertility			Standard deviation		
	Total	Rural	Urban	Total	Rural	Urban
India	26.5	26.5	26.6	5.5	5.7	5.0
Andhra Pradesh	24.3	24.0	25.1	4.2	4.1	4.3
Assam	27.0	27.0	26.9	6.2	6.2	5.7
Bihar	27.8	27.8	27.4	6.1	6.2	5.6
Chhattisgarh	26.0	25.9	26.7	5.2	5.2	4.9
Delhi	26.8	26.2	26.9	4.8	4.9	4.8
Gujarat	26.4	26.5	26.4	5.2	5.4	4.8
Haryana	25.7	25.5	26.1	4.6	4.6	4.5
Himachal Pradesh	25.8	25.7	28.1	4.5	4.4	5.3
Jammu & Kashmir	29.6	29.7	29.1	5.9	6.1	4.9
Jharkhand	27.4	27.5	27.1	6.1	6.2	5.1
Karnataka	24.7	24.4	25.5	4.5	4.4	4.5
Kerala	26.2	26.1	26.4	4.7	4.8	4.6
Madhya Pradesh	26.2	26.1	26.8	5.4	5.4	5.0
Maharashtra	25.0	24.3	26.2	4.5	4.3	4.7
Odisha	26.6	26.6	26.4	5.5	5.5	4.9
Punjab	26.2	26.2	26.4	4.6	4.7	4.2
Rajasthan	26.7	26.8	26.6	5.6	5.8	4.8
Tamil Nadu	25.6	25.3	26.0	4.4	4.3	4.6
Uttar Pradesh	27.9	27.8	28.3	6.0	6.0	5.6
West Bengal	24.7	24.6	25.5	5.3	5.4	5.3

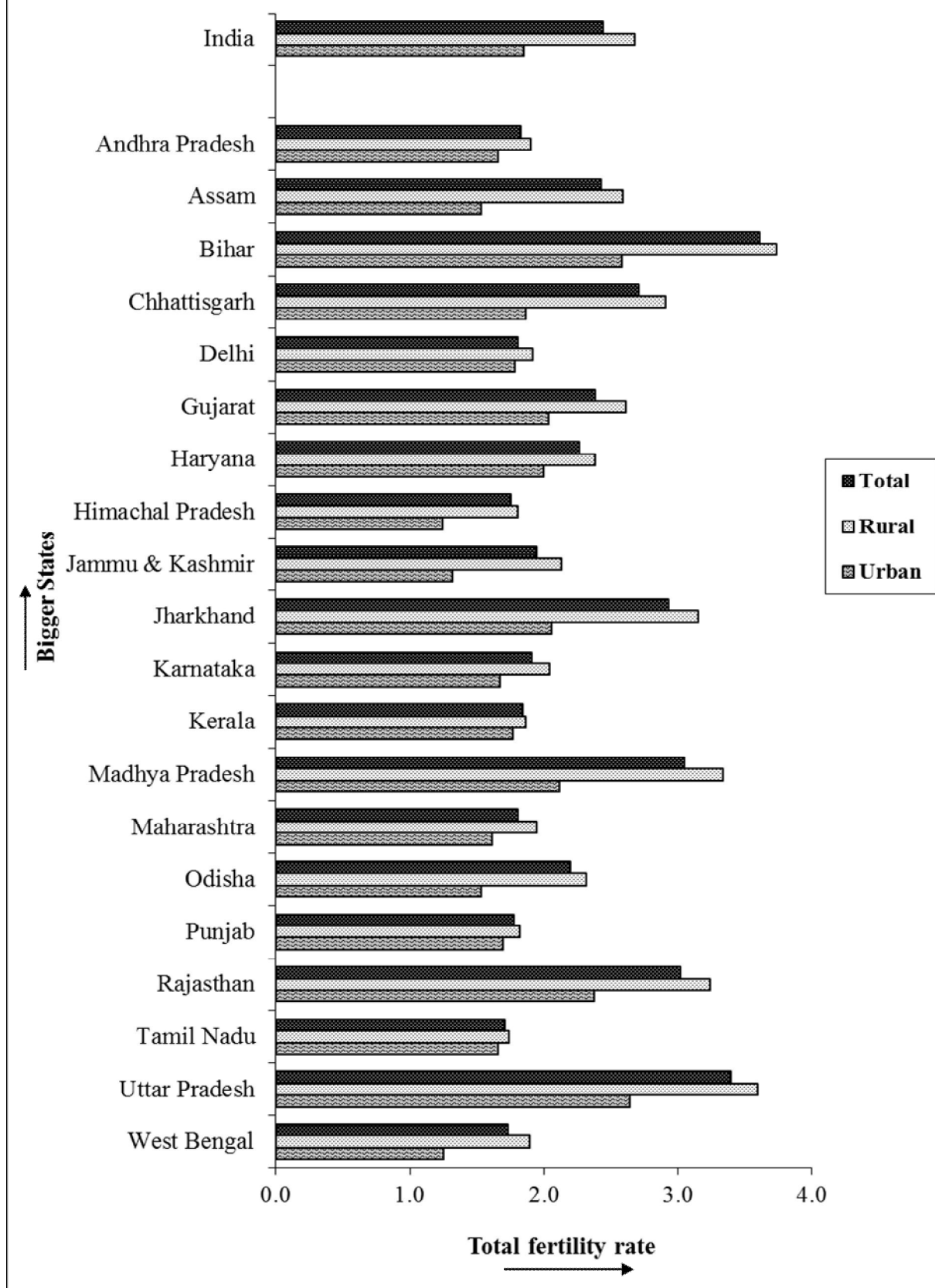
3.18 The cumulative value of the age specific fertility rates at the end of the child bearing ages gives a measure of fertility known as Total Fertility Rate (TFR). TFR indicates the average number of children expected to be born per woman during her entire span of reproductive period assuming that the age specific fertility rates, to which she is exposed to, continue to be the same and that there is no mortality. The TFRs worked out on the basis of the ASFRs for the year 2011 are given below in Statement 25 for India and bigger States separately for rural and urban areas. The TFR for India in the year 2011 was 2.4 per woman and varies from 2.7 in rural areas to 1.9 in urban areas. Among the bigger States, it varies from 1.7 in Tamil Nadu and West Bengal to 3.6 in Bihar. For rural areas, it varies from 1.7 in Tamil Nadu to 3.7 in Bihar. For urban areas, such variation is from 1.2 in Himachal Pradesh to 2.6 in Bihar and Uttar Pradesh. Chart 15 presents levels of TFR by residence for India and bigger States, 2011. Distribution of bigger States by level of TFR in rural and urban areas is shown in Chart 16.

Statement 25

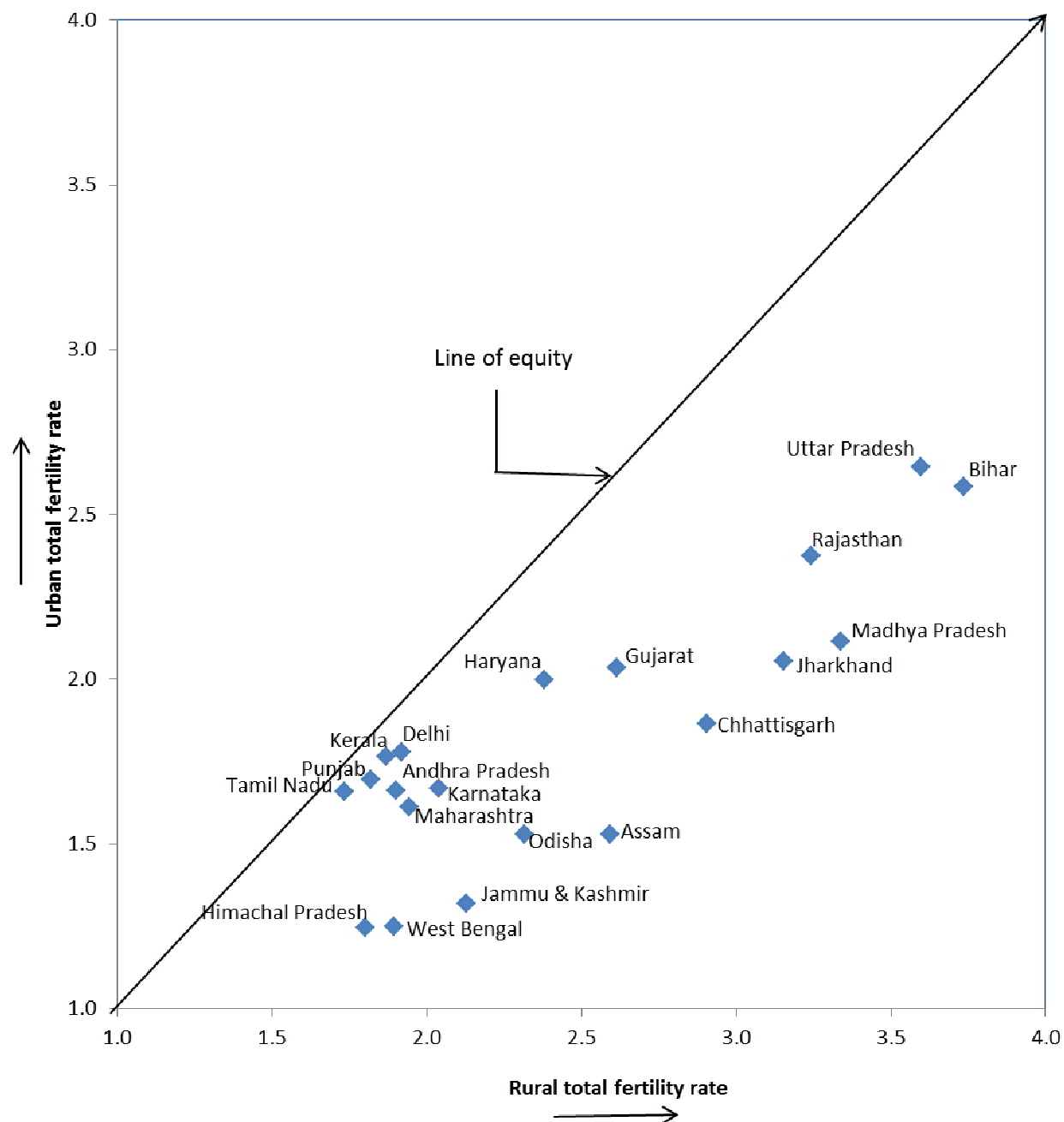
TFR (Total fertility rate) by residence, India and bigger States, 2011

India and bigger States	Total	Rural	Urban
India	2.4	2.7	1.9
Andhra Pradesh	1.8	1.9	1.7
Assam	2.4	2.6	1.5
Bihar	3.6	3.7	2.6
Chhattisgarh	2.7	2.9	1.9
Delhi	1.8	1.9	1.8
Gujarat	2.4	2.6	2.0
Haryana	2.3	2.4	2.0
Himachal Pradesh	1.8	1.8	1.2
Jammu & Kashmir	1.9	2.1	1.3
Jharkhand	2.9	3.2	2.1
Karnataka	1.9	2.0	1.7
Kerala	1.8	1.9	1.8
Madhya Pradesh	3.1	3.3	2.1
Maharashtra	1.8	1.9	1.6
Odisha	2.2	2.3	1.5
Punjab	1.8	1.8	1.7
Rajasthan	3.0	3.2	2.4
Tamil Nadu	1.7	1.7	1.7
Uttar Pradesh	3.4	3.6	2.6
West Bengal	1.7	1.9	1.3

Chart 15: Total fertility rate by residence, India and bigger States, 2011



**Chart 16: Distribution of bigger states by values of TFR
(total fertility rate) for rural and urban areas, 2011**



3.19 Statement 26 below presents the percentage change in the average level of TFR between the periods 1999-01 and 2009-11 in India and bigger States. During the period TFR has declined by 21.9 percent at the National level. Among the bigger States, the decline varies from 25.5 percent in Uttar Pradesh to nil in Kerala. All bigger States have shown decline in both rural and urban areas.

3.20 Among bigger States, Andhra Pradesh, Himachal Pradesh, Karnataka, Kerala, Maharashtra, Punjab, Tamil Nadu and West Bengal has the average TFR 2.0 and below during 2009-11.

Statement 26

Percent change in average TFR (Total fertility rate) between 1999-01 and 2009-11 by residence, India and bigger States

India and bigger States	Total			Rural			Urban		
	1999-01	2009-11	% Change	1999-01	2009-11	% Change	1999-01	2009-11	% Change
India	3.2	2.5	-21.9	3.5	2.8	-20.0	2.3	1.9	-17.4
Andhra Pradesh	2.3	1.8	-21.7	2.5	1.9	-24.0	2.0	1.6	-20.0
Assam	3.1	2.5	-19.4	3.3	2.7	-18.2	1.8	1.6	-11.1
Bihar*	4.5	3.5	-22.2	4.7	3.7	-21.3	3.3	2.5	-24.2
Gujarat	2.9	2.5	-13.8	3.2	2.7	-15.6	2.3	2.1	-8.7
Haryana	3.2	2.4	-25.0	3.3	2.5	-24.2	2.6	2.1	-19.2
Himachal Pradesh	2.3	1.8	-21.7	2.3	1.9	-17.4	1.8	1.3	-27.8
Karnataka	2.4	2.0	-16.7	2.7	2.1	-22.2	2.0	1.7	-15.0
Kerala	1.8	1.8	0.0	1.9	1.8	-5.3	1.8	1.8	0.0
Madhya Pradesh*	4.0	3.1	-22.5	4.4	3.4	-22.7	2.6	2.1	-19.2
Maharashtra	2.5	1.9	-24.0	2.6	2.0	-23.1	2.2	1.7	-22.7
Odisha	2.7	2.3	-14.8	2.8	2.4	-14.3	2.1	1.6	-23.8
Punjab	2.4	1.8	-25.0	2.5	1.9	-24.0	2.1	1.7	-19.0
Rajasthan	4.1	3.1	-24.4	4.4	3.4	-22.7	2.9	2.4	-17.2
Tamil Nadu	2.0	1.7	-15.0	2.2	1.8	-18.2	1.8	1.7	-5.6
Uttar Pradesh*	4.7	3.5	-25.5	4.9	3.7	-24.5	3.5	2.7	-22.9
West Bengal	2.4	1.8	-25.0	2.7	2.0	-25.9	1.6	1.3	-18.8

* Bihar, Madhya Pradesh and Uttar Pradesh include Jharkhand, Chhattisgarh, and Uttarakhand respectively.

3.21 Another refined measure of fertility which accounts for future mothers is the Gross Reproduction Rate (GRR). It measures the average number of female children a woman is expected to give birth during her entire reproductive span conforming to the age specific fertility rates (ASFRs) for a given year, if there is no mortality. The estimated value of GRR for India in the year 2011 is 1.2 and varies from 0.9 in urban areas to 1.3 in rural areas. Values of GRR by residence for India and bigger States for the year 2011 are presented below in Statement 27.

Statement 27

GRR (Gross reproduction rate) by residence, India and bigger States, 2011

India and bigger States	Total	Rural	Urban
India	1.2	1.3	0.9
Andhra Pradesh	0.9	0.9	0.8
Assam	1.1	1.2	0.8
Bihar	1.7	1.8	1.1
Chhattisgarh	1.3	1.4	0.9
Delhi	0.8	0.9	0.8
Gujarat	1.1	1.2	1.0
Haryana	1.0	1.1	0.9
Himachal Pradesh	0.9	0.9	0.6
Jammu & Kashmir	0.9	1.0	0.6
Jharkhand	1.3	1.4	0.9
Karnataka	0.9	1.0	0.8
Kerala	0.9	0.9	0.8
Madhya Pradesh	1.4	1.6	0.9
Maharashtra	0.8	0.9	0.8
Odisha	1.1	1.1	0.7
Punjab	0.8	0.9	0.8
Rajasthan	1.4	1.5	1.1
Tamil Nadu	0.8	0.8	0.8
Uttar Pradesh	1.6	1.7	1.2
West Bengal	0.8	0.9	0.6

Marital Fertility

3.22 Marriage is an important event in the social life of any population. In India, population censuses and large scale demographic sample surveys invariably collect data on the marital status of population separately for males and females. Age at effective marriage of females is a key factor that influences fertility. Marital distribution of the population enumerated through SRS and the age at effective marriage of females has been discussed in Chapter 2. Based on the distribution of live births by age of married females, age specific marital fertility rates (ASMFRs) are calculated. Statement 28 below provides the estimates of the ASMFRs for India separately for rural and urban areas for the year 2011. Marital fertility is higher in rural areas than in urban areas in all the age groups and its peak is in the age group 20-24 years. A perceptible decline in marital fertility is seen for female age 30 years and above both in rural areas and urban areas.

Statement 28

ASMFRs (Age specific marital fertility rates) by residence, India, 2011

Age group	(Per thousand)		
	Total	Rural	Urban
15-19	240.7	244.8	216.6
20-24	316.7	325.5	286.0
25-29	177.3	184.2	159.9
30-34	75.0	79.5	64.2
35-39	28.4	32.4	18.3
40-44	9.6	12.0	4.0
45-49	3.2	4.1	1.1

3.23 Values of the age specific marital fertility rates for the year 2011 in bigger States are given below in Statement 29. It is observed that the age pattern of marital fertility is almost similar to the pattern of age specific fertility. The marital fertility in the age group 15-19 is lesser in Andhra Pradesh, Bihar, Delhi, Gujarat, Haryana, Maharashtra and Rajasthan. ASMFR is at peak level in the age group 20-24 in all the bigger States except Assam, Himachal Pradesh, Jharkhand, Kerala, Tamil Nadu and West Bengal. There is significant decline in marital fertility for women aged 30 years onwards, for all major States.

Statement 29

ASMFRs (Age specific marital fertility rates), India and bigger States, 2011

India and bigger States	15-19	20-24	25-29	30-34	35-39	40-44	45-49
India	240.7	316.7	177.3	75.0	28.4	9.6	3.2
Andhra Pradesh	207.8	286.4	108.3	28.1	6.7	0.9	0.0
Assam	314.5	287.0	190.4	96.1	30.9	20.1	3.6
Bihar	235.3	344.6	235.8	132.4	60.4	27.7	6.8
Chhattisgarh	254.5	329.4	195.0	73.7	32.5	5.9	0.8
Delhi	166.1	315.7	163.6	65.1	16.5	4.6	0.4
Gujarat	179.4	300.2	184.0	72.8	21.4	6.5	3.3
Haryana	169.3	339.2	159.1	45.2	17.3	5.2	0.0
Himachal Pradesh	427.9	354.7	144.9	42.7	11.1	1.7	1.2
Jammu & Kashmir	339.0	362.9	238.2	111.9	53.7	12.7	7.1
Jharkhand	341.6	314.8	215.8	106.4	46.9	16.0	7.6
Karnataka	261.0	304.9	131.1	35.9	10.0	1.1	0.5
Kerala	319.9	279.0	157.3	61.9	14.7	2.0	0.3
Madhya Pradesh	244.6	382.0	200.0	80.5	30.0	10.1	4.5
Maharashtra	155.3	261.1	123.7	37.9	10.0	1.8	0.5
Odisha	273.3	278.3	173.7	76.2	26.9	6.6	2.7
Punjab	257.6	343.1	165.9	50.4	12.2	2.7	0.7
Rajasthan	173.0	332.6	204.1	90.8	35.2	12.8	4.9
Tamil Nadu	340.5	291.1	146.1	41.8	10.3	1.1	0.4
Uttar Pradesh	271.0	383.9	253.6	133.6	54.2	24.0	8.0
West Bengal	290.4	229.6	98.0	37.7	12.2	3.5	1.5

3.24 Like TFR, Total Marital Fertility Rate (TMFR) is the cumulative value of age specific marital fertility rates at the end of the reproductive period. It indicates the average number of children expected to be born per married woman during the entire span of her reproductive period, if the ASMFRs continue to be the same and if there is no mortality. The TMFRs worked out on the basis of ASMFRs for the year 2011 are given below in Statement 30 for India and bigger States separately for rural and urban areas. The TMFR for India is found to be 4.3 and varies from 3.8 in urban areas to 4.4 in rural areas. The TMFR is 5 and above in the States of Bihar, Jammu & Kashmir, Jharkhand and Uttar Pradesh.

Statement 30

TMFRs (Total marital fertility rates) by residence, India and bigger States, 2011

India and bigger States	Total	Rural	Urban
India	4.3	4.4	3.8
Andhra Pradesh	3.2	3.2	3.1
Assam	4.7	4.9	3.8
Bihar	5.2	5.3	4.6
Chhattisgarh	4.5	4.6	3.6
Delhi	3.7	3.3	3.8
Gujarat	3.8	4.0	3.6
Haryana	3.7	3.8	3.3
Himachal Pradesh	4.9	4.9	5.2
Jammu & Kashmir	5.6	5.8	4.8
Jharkhand	5.2	5.4	4.6
Karnataka	3.7	3.9	3.4
Kerala	4.2	4.3	3.7
Madhya Pradesh	4.8	4.9	4.1
Maharashtra	3.0	2.9	3.0
Odisha	4.2	4.3	3.7
Punjab	4.2	4.2	3.9
Rajasthan	4.3	4.4	3.8
Tamil Nadu	4.2	4.0	4.4
Uttar Pradesh	5.6	5.7	5.5
West Bengal	3.4	3.4	3.0

3.25 Statement 31 below presents the percentage change in the average level of TMFR between the period 1999-01 and 2009-11 in India and bigger States. During the period TMFR has declined by 8.5 per cent at the National level. Among the bigger States, the percentage varies from (-) 18.4 in Maharashtra to 8.3 in Kerala. Assam, Karnataka, Madhya Pradesh, Maharashtra, Punjab, Rajasthan and West Bengal have shown substantial decline in rural areas. In urban areas, Maharashtra has shown a decline of 20.0 percent followed by Haryana and Odisha with 19.6 percent and 17.8 percent, respectively.

Statement 31

Percentage change in average Total marital fertility rate (TMFR) between 1999-01 and 2009-11, by residence, India and bigger States

India and bigger States	Total			Rural			Urban		
	1999-01	2009-11	% Change	1999-01	2009-11	% Change	1999-01	2009-11	% Change
India	4.7	4.3	-8.5	4.9	4.5	-8.2	4.2	3.8	-9.5
Andhra Pradesh	3.6	3.3	-8.3	3.6	3.3	-8.3	3.6	3.1	-13.9
Assam	6.0	5.0	-16.7	6.2	5.1	-17.7	4.7	3.9	-17.0
Bihar	5.6	5.2	-7.1	5.7	5.3	-7.0	4.9	4.6	-6.1
Gujarat	4.2	4.0	-4.8	4.4	4.2	-4.5	3.6	3.6	0.0
Haryana	4.6	4.1	-10.9	4.6	4.2	-8.7	4.6	3.7	-19.6
Himachal Pradesh	4.4	4.6	4.5	4.4	4.6	4.5	4.2	4.3	2.4
Karnataka	4.3	3.8	-11.6	4.5	3.9	-13.3	4.1	3.4	-17.1
Kerala	3.6	3.9	8.3	3.6	4.0	11.1	3.7	3.7	0.0
Madhya Pradesh	5.3	4.7	-11.3	5.5	4.9	-10.9	4.4	4.0	-9.1
Maharashtra	3.8	3.1	-18.4	3.7	3.0	-18.9	4.0	3.2	-20.0
Odisha	4.5	4.3	-4.4	4.5	4.4	-2.2	4.5	3.7	-17.8
Punjab	4.8	4.2	-12.5	4.9	4.2	-14.3	4.4	4.0	-9.1
Rajasthan	5.0	4.4	-12.0	5.2	4.5	-13.5	4.0	4.0	0.0
Tamil Nadu	4.0	4.0	0.0	4.0	4.0	0.0	3.9	4.0	2.6
Uttar Pradesh	6.2	5.6	-9.7	6.3	5.7	-9.5	5.7	5.5	-3.5
West Bengal	4.0	3.4	-15.0	4.2	3.5	-16.7	3.4	3.1	-8.8

Fertility by level of education of the women

3.26 Education, more precisely the female education, has a direct impact on fertility. To ascertain levels of fertility by educational status of the women three indicators viz. general fertility rate, age-specific fertility rate and total fertility rate by educational status of the women have been worked out separately for rural and urban areas. These are discussed in the subsequent paragraphs.

3.27 Statement 32 below indicates the percentage of female population in the age group 15-49 by level of education, at the National level and for the bigger States. At the National level, 31.5 per cent of the female population is reported 'Illiterate' as against 68.5 per cent in the 'Literate' category. Of the literate women, about 81.7 per cent have education up to Class X, 10.5 per cent women have education level of Class XII, and only 7.4 per cent have reported education level of graduate and above. Among the illiterates, Kerala (1.3) has the lowest and Bihar (51.1) the highest percentage of illiterate women.

Statement 32

Percentage female population in the age group 15-49 by level of education, India and bigger States, 2011

India and bigger States	Educational level of women								
	Illiterate	Literate							
		Total literate	Without any formal education	Below primary	Primary	Middle	Class X	Class XII	Graduate and above
India	31.5	68.5	2.1	8.8	12.1	19.3	13.7	7.2	5.1
Andhra Pradesh	38.4	61.6	1.5	11.2	9.7	13.2	14.0	7.0	5.1
Assam	23.1	76.9	3.3	7.2	12.1	26.7	17.5	7.1	3.1
Bihar	51.1	48.9	5.6	7.8	8.0	13.4	9.4	3.4	1.4
Chhattisgarh	35.0	65.0	1.3	13.4	17.3	17.2	7.4	5.2	3.1
Delhi	19.4	80.6	0.7	6.6	11.9	15.4	16.6	13.2	16.2
Gujarat	30.6	69.4	0.2	11.9	15.6	16.4	11.5	7.7	6.1
Haryana	27.6	72.4	0.8	6.1	13.6	17.8	18.7	9.3	6.1
Himachal Pradesh	12.5	87.5	1.1	5.7	14.5	17.2	26.8	14.5	7.6
Jammu & Kashmir	33.9	66.1	0.2	3.3	7.0	19.4	18.8	11.5	5.8
Jharkhand	47.7	52.3	4.2	8.1	9.7	14.1	9.5	4.0	2.7
Karnataka	27.9	72.1	0.4	8.9	10.5	20.4	18.4	7.8	5.6
Kerala	1.3	98.7	0.6	3.7	9.2	34.5	25.4	14.7	10.5
Madhya Pradesh	38.1	61.9	1.6	12.4	13.3	16.8	10.3	4.3	3.0
Maharashtra	20.6	79.4	0.5	8.1	13.7	25.4	15.8	9.1	6.7
Odisha	34.3	65.7	2.0	11.6	10.0	24.5	9.7	4.2	3.7
Punjab	22.7	77.3	1.4	6.9	15.4	16.7	19.9	10.8	6.2
Rajasthan	47.4	52.6	3.8	7.6	11.1	13.0	8.1	4.9	4.0
Tamil Nadu	11.3	88.7	0.0	11.5	15.0	22.6	20.4	11.4	7.9
Uttar Pradesh	39.1	60.9	2.4	5.9	11.0	17.5	12.7	7.2	4.2
West Bengal	24.8	75.2	4.3	11.2	16.1	24.6	9.8	4.4	4.8

3.28 Statement 33 below presents the estimates of General Fertility Rate (GFR) by educational status of the women for India and bigger States. It is apparent from the Statement that there is a difference between the GFRs of the Illiterate and Literate women with the latter depicting substantially lower levels of GFR, both at the National and State level. Lower values of GFR for illiterate women as compared to literate for Andhra Pradesh, Chhattisgarh, Haryana, Himachal Pradesh, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Odisha, Punjab, Tamil Nadu and West Bengal are due to small sample size in illiterate category as literacy level is significantly high in all these States.

Statement 33

General fertility rate by level of education of women, India and bigger States, 2011

India and bigger States	Educational level of women								
	Illiterate	Literate							
		Total literate	Without any formal education	Below primary	Primary	Middle Class X	Class XII	Graduate and above	
India	86.7	78.7	91.9	104.9	91.8	74.8	64.6	62.9	72.8
Andhra Pradesh	43.4	71.5	23.2	82.2	75.2	74.3	75.1	45.9	73.4
Assam	103.0	76.8	48.9	104.2	110.6	77.0	56.8	60.1	58.9
Bihar	144.7	83.0	119.2	108.0	87.1	77.2	57.7	56.5	64.8
Chhattisgarh	62.9	107.8	76.4	132.4	140.1	92.9	74.3	64.8	69.3
Delhi	76.3	60.2	91.1	83.3	85.6	61.6	51.7	39.3	55.5
Gujarat	82.4	78.5	117.8	117.3	94.5	74.4	51.3	47.4	62.9
Haryana	61.7	87.9	60.9	88.7	94.2	95.5	79.9	79.1	92.8
Himachal Pradesh	18.4	62.8	36.2	32.6	45.6	42.6	78.1	81.7	78.1
Jammu & Kashmir	79.7	53.6	186.2	70.2	66.0	62.3	42.3	40.7	57.2
Jharkhand	109.7	83.7	100.0	121.7	73.1	74.5	71.6	70.6	92.0
Karnataka	41.5	75.2	86.8	81.9	91.8	79.0	66.0	52.5	80.1
Kerala	15.3	54.7	11.9	17.6	19.9	45.6	51.2	87.3	93.6
Madhya Pradesh	93.9	109.2	106.2	183.7	137.2	82.9	56.5	66.4	69.7
Maharashtra	34.0	68.8	68.4	43.5	66.1	83.4	70.7	60.6	55.5
Odisha	72.3	72.8	74.5	82.7	82.9	72.9	59.4	60.9	60.9
Punjab	52.4	62.2	65.9	46.4	55.3	61.6	66.5	70.6	69.2
Rajasthan	104.6	99.8	113.9	173.8	113.3	78.6	68.8	55.6	95.2
Tamil Nadu	11.1	62.2	0.0	28.6	51.4	71.1	71.0	64.6	79.2
Uttar Pradesh	115.4	105.4	141.4	175.2	138.4	91.7	72.9	81.9	96.9
West Bengal	46.9	61.4	40.0	94.3	74.6	54.3	46.8	43.0	43.1

3.29 Statement 34 below presents, at the National level, age specific fertility rates by level of education of women separately for rural and urban areas. The data reveals marked rural-urban differences with the rural areas generally reporting higher levels of fertility than the urban areas for all age groups. Fertility attains the peak in the age-group 20-24 years both in the rural and urban areas except for the women having education level 12th and above. 'Illiterate' women have higher levels of age-specific fertility rates both in the rural and urban areas than the 'Literate'. Within the 'Literate' group there is a general decline in the fertility rates with the increase in the educational status both in the rural and urban areas, barring a few exceptions.

Statement 34

Age specific fertility rate by level of education of women and residence, India, 2011

Age group	Educational level of women								
	Illiterate	Literate							
		Total literate	Without any formal education	Below primary	Primary	Middle	Class X	Class XII	Graduate and above
Total									
15-19	67.7	25.9	90.3	93.3	43.2	19.8	13.0	12.2	0.0
20-24	256.6	181.5	245.6	265.8	239.5	196.4	148.1	97.0	101.0
25-29	180.5	142.2	159.6	158.4	153.2	144.4	136.5	116.8	132.1
30-34	92.2	57.2	75.3	56.3	50.9	53.7	53.5	59.5	72.8
35-39	37.8	17.5	34.1	22.1	17.2	14.7	12.6	15.0	18.6
40-44	14.1	3.9	10.4	4.6	4.0	3.3	2.8	3.1	2.1
45-49	4.2	1.3	6.5	1.3	1.6	0.6	0.3	1.1	0.1
Rural									
15-19	72.4	29.7	97.2	103.4	46.7	21.6	14.7	14.5	0.0
20-24	264.7	201.8	246.2	279.3	249.4	204.5	158.4	116.5	120.9
25-29	185.2	151.7	163.5	166.1	158.0	150.9	145.0	126.5	143.8
30-34	96.3	57.4	71.3	57.4	53.0	56.8	52.9	62.8	69.9
35-39	39.9	19.4	33.7	23.5	18.2	16.7	13.1	17.4	22.6
40-44	15.1	5.4	12.0	5.6	4.3	4.8	4.7	7.1	4.0
45-49	4.7	1.8	7.1	1.5	1.9	1.0	0.7	1.2	0.3
Urban									
15-19	39.4	14.8	49.0	46.3	28.9	13.4	9.1	9.2	0.0
20-24	209.4	135.9	242.3	206.2	203.9	172.4	127.7	73.9	88.1
25-29	152.5	126.1	142.0	131.9	139.8	130.2	124.1	106.8	126.6
30-34	67.7	57.0	92.3	52.5	45.4	47.7	54.3	56.6	74.0
35-39	24.9	14.6	35.9	17.9	14.8	11.2	12.0	13.2	17.3
40-44	8.9	1.8	4.8	2.0	3.4	1.3	1.1	0.8	1.7
45-49	1.9	0.6	4.4	0.7	1.0	0.1	0.1	1.1	0.1

3.30 Total fertility rates by education levels of the women for India and bigger States are presented below in Statement 35. At the National level, total fertility rate for the women having educational status 'Illiterate' for 2011 is 3.3. This is much higher than the 'Literate' group of women. Among the 'Literate' (2.1), there is a gradual decline of TFR with the increase in the level of education. Chart 17 presents, at the National level, total fertility rate by level of education of women separately for rural and urban areas for the year 2011. The TFR by levels of education of the women for India and bigger States by place of residence are given in Table-4.

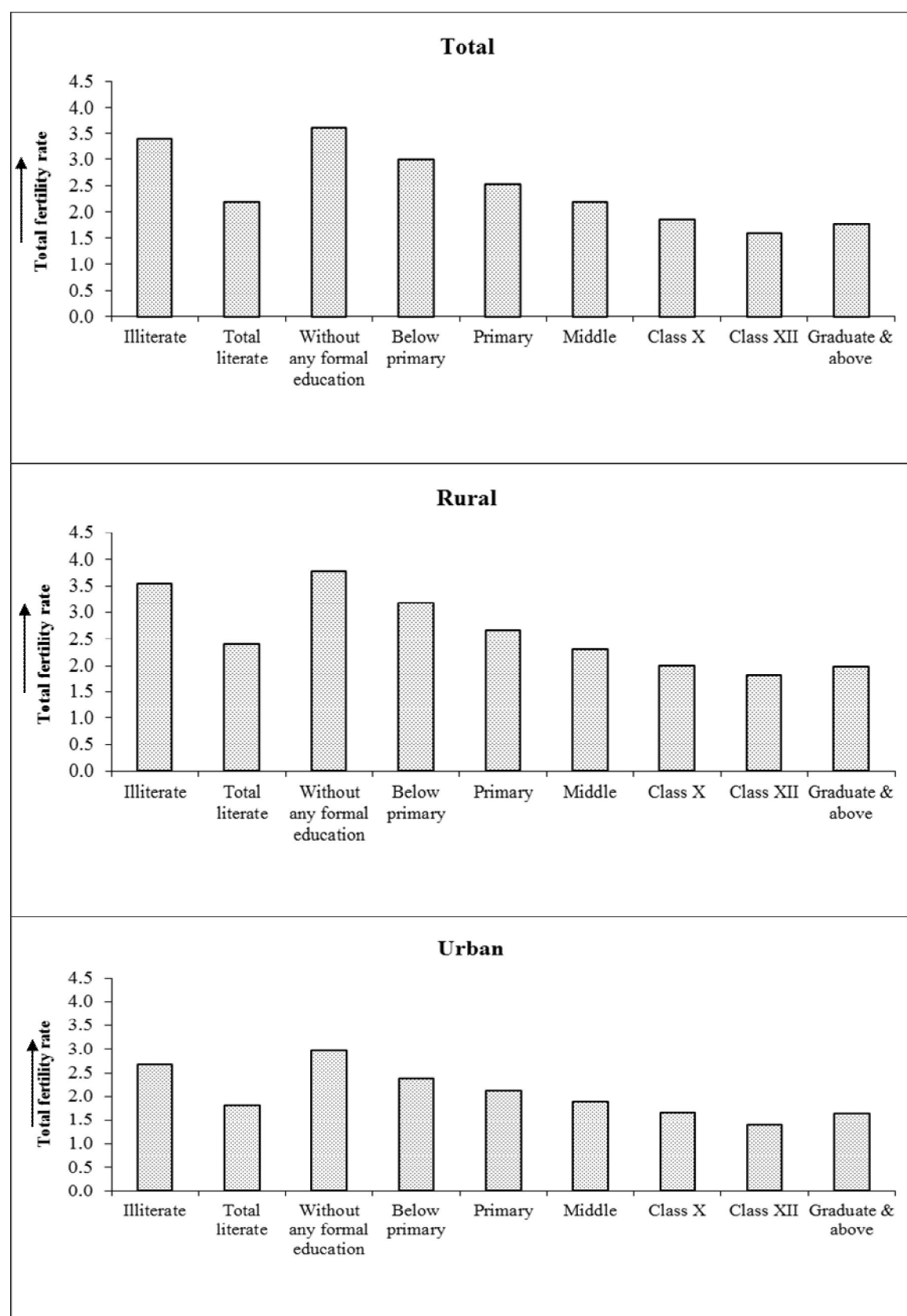
Statement 35

Total fertility rate by level of education of women, India and bigger States, 2011

India and Bigger States	Educational level of women								
	Illiterate	Literate							
		Total literate	Without any formal education	Below primary	Primary	Middle	Class X	Class XII	Graduate and above
India	3.3	2.1	3.1	3.0	2.5	2.2	1.8	1.5	1.6
Andhra Pradesh	1.9	1.8	0.7	2.6	2.1	2.0	1.9	1.1	1.5
Assam	3.7	2.1	1.6	3.2	3.2	2.1	1.7	1.6	1.5
Bihar	4.7	2.5	3.5	3.1	2.8	2.6	1.9	1.4	1.6
Chhattisgarh	3.0	2.7	4.7	3.6	3.2	2.5	2.0	1.7	1.6
Delhi	2.7	1.7	2.9	2.3	2.4	1.8	1.5	1.0	1.3
Gujarat	3.2	2.1	4.3	3.1	2.5	2.1	1.6	1.4	1.4
Haryana	2.8	2.2	3.5	2.5	2.5	2.5	2.0	1.6	1.9
Himachal Pradesh	1.3	1.8	3.3	1.6	1.9	1.6	2.0	1.6	1.6
Jammu & Kashmir	2.8	1.6	6.6	2.1	2.1	1.9	1.6	1.3	1.3
Jharkhand	3.7	2.4	2.7	3.3	2.4	2.2	2.2	2.1	2.1
Karnataka	2.1	1.9	4.7	2.8	2.6	2.0	1.8	1.2	1.8
Kerala	1.4	1.8	0.8	1.6	1.5	1.8	1.7	2.1	2.1
Madhya Pradesh	3.7	2.8	4.6	4.5	3.3	2.5	1.9	1.6	1.6
Maharashtra	1.6	1.9	4.1	1.6	2.0	2.3	1.8	1.3	1.3
Odisha	2.9	2.0	2.9	2.5	2.3	2.0	1.6	1.5	1.3
Punjab	2.2	1.7	2.0	1.5	1.8	1.8	1.8	1.6	1.6
Rajasthan	3.6	2.6	3.7	3.9	2.9	2.5	2.0	1.5	1.9
Tamil Nadu	1.2	1.7	0.0	1.5	1.9	2.0	1.9	1.5	1.7
Uttar Pradesh	4.0	3.1	4.6	4.4	3.7	3.1	2.4	2.1	2.1
West Bengal	2.1	1.7	1.9	2.8	2.0	1.5	1.2	1.0	1.2

*Note: 0.0 denotes negligible

Chart 17: Total fertility rate by level of education of women and residence, India, 2011



Birth order

3.31 Information on order of the live birth and interval between current and previous live births are also collected in SRS from 1990 onwards. These provide useful information on spacing of children and level of fertility. The estimated percentages on order of live birth and birth interval for India and bigger States are given in Tables 5, 6 and 7. Based on these tables, two State-wise comparative Statements are presented below.

3.32 The percentage distribution of live births by birth order for India and bigger States for the year 2011 is presented below in Statement 36. It is observed 41 percent of the current live births in India are first order births, and 31.4 percent of total births are second order births. The fourth and higher order births account for 13 percent of the total births. Among the bigger States, the percentage share of first order birth varies from 32.0 percent in Bihar to 51.6 percent in Himachal Pradesh and West Bengal. On the other hand, the percentage share of fourth and higher order births varies from 1.6 percent in Andhra Pradesh and Tamil Nadu to 24.6 percent in Bihar.

Statement 36

Percentage distribution of current live births by birth order, India and bigger States, 2011

India and bigger States	Birth order			
	1 st	2nd	3rd	4th & above
India	41.0	31.4	14.6	13.0
Andhra Pradesh	48.5	40.9	8.9	1.6
Assam	44.3	27.3	14.0	14.4
Bihar	32.0	25.0	18.4	24.6
Chhattisgarh	38.7	32.4	19.1	9.8
Delhi	47.0	28.4	14.7	9.9
Gujarat	41.1	33.3	14.9	10.7
Haryana	41.2	36.7	14.1	8.0
Himachal Pradesh	51.6	35.2	9.7	3.4
Jammu & Kashmir	40.1	30.8	16.2	12.9
Jharkhand	35.7	29.7	17.4	17.1
Karnataka	49.3	33.4	12.4	4.8
Kerala	49.7	38.5	9.7	2.1
Madhya Pradesh	39.3	31.9	15.6	13.3
Maharashtra	47.8	34.9	11.6	5.7
Odisha	43.5	32.0	14.4	10.2
Punjab	50.9	34.2	10.5	4.4
Rajasthan	34.5	30.6	16.8	18.0
Tamil Nadu	50.9	39.4	8.2	1.6
Uttar Pradesh	35.6	28.7	17.0	18.8
West Bengal	51.6	31.2	10.2	7.1

3.33 Statement 37 below presents the percentage distribution of current live birth by birth order and residence for India and bigger States. It may be observed that the percentage of current live births for 'first' and 'second' order taken together is generally higher for urban areas if compared to the rural areas for bigger States except for Andhra Pradesh. For 'third', 'fourth & above' order live births, the percentage contribution at National level is significantly higher in rural areas (29.7) compared to urban areas (19.8).

Statement 37

**Percentage distribution of current live births by birth order and residence,
India and bigger States, 2011**

India and bigger States	Birth order							
	Rural				Urban			
	1st	2nd	3rd	4th & above	1st	2 nd	3rd	4th & above
India	39.5	30.8	15.4	14.3	46.6	33.5	11.8	8.0
Andhra Pradesh	47.9	41.5	9.2	1.4	50.1	39.4	8.3	2.2
Assam	42.9	27.2	14.5	15.5	57.4	28.7	9.3	4.6
Bihar	31.4	25.0	18.5	25.1	38.8	25.1	17.9	18.2
Chhattisgarh	37.8	31.8	20.1	10.3	44.5	36.3	12.5	6.7
Delhi	46.7	27.5	16.2	9.5	47.1	28.5	14.4	10.0
Gujarat	38.6	32.4	16.3	12.7	46.0	34.9	12.3	6.8
Haryana	40.1	37.1	14.1	8.8	44.1	35.8	14.2	6.0
Himachal Pradesh	51.9	34.9	9.7	3.4	47.3	40.1	9.7	2.9
Jammu & Kashmir	38.5	30.0	16.9	14.6	48.8	35.3	12.3	3.6
Jharkhand	35.3	29.2	17.3	18.3	38.4	32.7	18.6	10.3
Karnataka	48.1	32.9	13.9	5.1	51.9	34.4	9.5	4.2
Kerala	50.0	37.9	10.0	2.1	48.7	40.3	9.0	2.0
Madhya Pradesh	38.7	31.3	16.0	14.0	42.1	34.7	13.4	9.9
Maharashtra	46.8	35.3	12.3	5.5	49.2	34.4	10.6	5.8
Odisha	42.5	32.1	14.8	10.7	52.3	31.2	11.0	5.4
Punjab	51.8	32.8	11.1	4.3	49.2	36.9	9.3	4.6
Rajasthan	32.5	30.0	17.4	20.0	42.4	33.0	14.4	10.2
Tamil Nadu	49.8	38.4	9.7	2.1	52.5	40.7	6.1	0.8
Uttar Pradesh	35.0	28.4	17.4	19.3	38.8	30.4	14.9	15.9
West Bengal	49.7	32.4	10.5	7.3	59.4	25.9	8.7	6.0

Birth interval

3.34 The percentage distribution of second and higher order live births by interval between current and previous live birth is shown below in Statement 38 for India and bigger States for the year 2011. At the National level, 1.7 per cent of the live births occur within one year from the previous live birth. Such percentage varies from 0.3 in Kerala to 2.4 in Madhya Pradesh and Uttar Pradesh. The percentage of births beyond three years of birth interval from the previous live birth for India is 42.4. It varies from 34.2 in Bihar to 65.8 in Kerala.

Statement 38

Percentage distribution of second and higher order live births by interval, India and bigger States, 2011

India and bigger States	Interval between current and previous live birth (in months)			
	10-12	12-24	24-36	36+
India	1.7	25.8	30.1	42.4
Andhra Pradesh	0.6	29.4	32.3	37.8
Assam	1.5	17.4	27.9	53.2
Bihar	1.7	30.5	33.6	34.2
Chhattisgarh	0.8	19.9	36.1	43.2
Delhi	1.2	19.0	25.0	54.9
Gujarat	2.0	26.3	31.6	40.1
Haryana	1.6	31.8	30.3	36.4
Himachal Pradesh	2.0	30.1	30.4	37.6
Jammu & Kashmir	1.6	20.7	28.5	49.3
Jharkhand	1.1	17.9	28.2	52.8
Karnataka	1.2	28.7	35.2	34.9
Kerala	0.3	14.7	19.2	65.8
Madhya Pradesh	2.4	28.6	33.0	35.9
Maharashtra	0.7	24.4	33.3	41.6
Odisha	1.3	14.0	28.0	56.7
Punjab	1.4	18.1	20.8	59.7
Rajasthan	2.0	30.9	31.5	35.7
Tamil Nadu	1.1	27.9	28.2	42.8
Uttar Pradesh	2.4	27.5	28.1	42.0
West Bengal	0.9	15.4	25.3	58.4

3.35 Statement 39 below presents the percentage distribution of second and higher order live births by interval between current and previous live birth separately for rural and urban areas. At the National level, 1.7 percent of live births have been reported within an interval of one year for rural and 1.4 percent in urban areas. The data reveals that so far as spacing of children is considered, there is marginal difference between the rural and urban areas indicate that about half of the birth have spacing 36 months and above in urban compared to about two fifth in rural areas. More than 70 percent of births have birth interval of 24 and more months both in rural and urban areas.

Statement 39

Percentage distribution of second and higher order live births by interval and residence, India and bigger States, 2011

India and bigger States	Interval between current and previous live birth (in months)							
	Rural				Urban			
	10-12	12-24	24-36	36+	10-12	12-24	24-36	36+
India	1.7	26.7	31.3	40.2	1.4	22.1	25.4	51.2
Andhra Pradesh	0.5	30.4	33.0	36.1	0.8	26.5	30.5	42.2
Assam	1.6	17.8	28.6	51.9	0.2	12.1	19.7	67.9
Bihar	1.7	30.5	33.8	34.0	2.0	30.8	31.0	36.2
Chhattisgarh	0.8	19.8	37.3	42.0	0.9	20.4	26.9	51.8
Delhi	1.1	22.7	26.2	50.0	1.2	18.2	24.7	55.9
Gujarat	2.3	28.6	34.3	34.7	1.2	21.2	25.5	52.0
Haryana	1.9	34.9	31.4	31.8	0.7	23.0	27.1	49.2
Himachal Pradesh	2.1	31.3	31.2	35.4	0.0	14.2	19.7	66.1
Jammu & Kashmir	1.7	20.7	29.0	48.6	1.3	20.4	24.5	53.7
Jharkhand	1.1	17.3	28.3	53.3	1.1	21.5	27.6	49.8
Karnataka	1.3	31.2	38.1	29.5	0.9	23.5	28.9	46.7
Kerala	0.3	14.7	19.5	65.6	0.6	14.7	18.3	66.4
Madhya Pradesh	2.6	29.6	34.3	33.5	1.2	23.5	25.9	49.4
Maharashtra	0.7	27.3	38.1	34.0	0.7	19.9	26.1	53.3
Odisha	1.3	14.0	28.6	56.1	1.5	14.3	21.3	63.0
Punjab	1.7	21.9	23.9	52.5	0.8	11.4	15.5	72.4
Rajasthan	2.3	31.7	32.8	33.2	0.6	27.1	25.4	46.9
Tamil Nadu	1.2	30.7	31.0	37.1	0.9	24.0	24.2	50.9
Uttar Pradesh	2.3	28.2	28.8	40.6	3.1	23.4	23.9	49.6
West Bengal	0.9	15.6	26.0	57.4	0.8	14.4	21.4	63.4

Medical attention at delivery

3.36 While recording details of every outcome of pregnancy during continuous enumeration and half yearly survey, the enumerators and supervisors are required to enquire about the type of medical attention received by the mother at the time of delivery/abortion of the new born. In the new sample from 2004, the options on types of medical attention received by the mother at delivery have been modified to capture the deliveries specifically at private hospital/nursing homes. The new options include 'Government Hospital', 'Private Hospital', 'Qualified professional', 'Untrained functionary and others' in comparison to 'Institutional'; 'Doctor, Nurse or trained midwife'; 'Traditional birth attendants'; and 'relatives or others' adopted in 1991 SRS sample. Statement 40 below gives the percentage distribution of live births recorded in the year 2011 by type of medical attention received by the mother at the time of delivery for India and bigger States separately by rural and urban areas. At the National level, 45.2 per cent births were attended by Government Hospitals and vary from 43.2 per cent in rural areas to 52.4 per cent in urban areas. Among the bigger States, it varies from 23.7 per cent in Jharkhand to 65.1 per cent in Rajasthan. About 21.4 per cent of birth occurred at Private Hospital. Medical attention by qualified professionals constitutes 13.7 per cent of total delivery whereas untrained and others constitute 19.6 per cent. More than three fourth of deliveries are occurring in institutional and by the qualified professional.

Statement 40

Percent distribution of live births by type of medical attention received by the mother at delivery by residence, India and bigger States, 2011

India and bigger States	Govt. Hospital			Private Hospital			Qualified professional			Untrained functionary and others		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
India	45.2	43.2	52.4	21.4	17.5	35.5	13.7	15.1	9.0	19.6	24.2	3.1
Andhra Pradesh	48.5	50.6	43.1	42.2	36.9	55.5	8.5	11.4	1.2	0.9	1.1	0.2
Assam	45.7	44.2	59.6	16.1	14.7	28.8	15.0	15.4	10.5	23.2	25.6	1.1
Bihar	34.5	33.4	47.8	13.9	12.1	35.8	10.3	10.2	11.8	41.2	44.4	4.7
Chhattisgarh	36.0	33.0	55.4	18.1	17.3	23.8	21.5	22.5	15.0	24.4	27.2	5.7
Delhi	59.1	56.3	59.7	26.5	25.0	26.8	9.2	7.2	9.6	5.1	11.5	3.9
Gujarat	40.5	40.9	39.8	43.9	37.7	55.8	10.6	14.1	3.8	4.9	7.3	0.5
Haryana	32.9	33.2	32.1	37.0	33.7	45.6	24.9	26.5	20.7	5.2	6.5	1.6
Himachal Pradesh	51.3	49.2	81.9	12.8	13.1	9.2	20.9	21.9	6.5	15.0	15.9	2.4
Jammu & Kashmir	63.6	59.9	83.7	10.5	10.2	11.9	9.3	10.4	3.1	16.6	19.4	1.3
Jharkhand	23.7	19.8	46.5	12.6	9.2	32.8	16.7	16.4	18.1	47.0	54.5	2.6
Karnataka	61.5	63.3	58.0	26.9	22.6	35.6	4.2	5.7	1.0	7.4	8.3	5.4
Kerala	45.5	48.2	36.2	54.2	51.4	63.3	0.2	0.2	0.3	0.2	0.2	0.2
Madhya Pradesh	47.1	43.3	67.0	19.5	18.7	24.0	13.1	14.7	5.0	20.2	23.3	4.0
Maharashtra	52.5	48.4	58.4	38.2	37.0	39.9	4.2	6.3	1.3	5.1	8.4	0.4
Odisha	51.4	49.5	68.5	11.2	10.3	19.0	11.0	11.3	8.2	26.4	28.9	4.3
Punjab	31.2	28.9	35.2	42.2	37.9	50.1	25.5	31.8	14.0	1.1	1.4	0.7
Rajasthan	65.1	63.7	70.6	11.5	10.3	16.3	15.5	16.3	12.3	7.9	9.7	0.8
Tamil Nadu	61.1	63.1	58.4	31.3	24.4	40.7	7.2	12.2	0.5	0.3	0.3	0.3
Uttar Pradesh	36.0	35.4	39.0	12.4	9.3	28.6	23.3	22.8	25.5	28.4	32.5	6.9
West Bengal	59.2	57.9	65.0	11.3	8.6	22.8	8.5	9.4	4.7	21.0	24.2	7.6