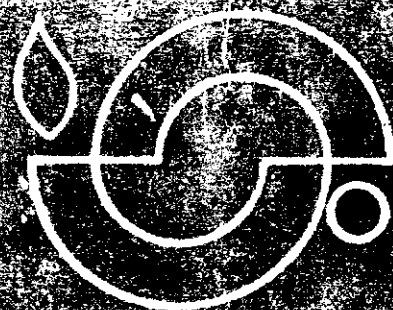




# SAMPLE REGISTRATION SYSTEM 1990



**S**

250/11  
No  
380/4

OFFICE OF THE REGISTRAR GENERAL, INDIA  
(VITAL STATISTICS DIVISION)  
MINISTRY OF HOME AFFAIRS  
NEW DELHI

**SAMPLE REGISTRATION SYSTEM - 1990**

**OFFICE OF THE REGISTRAR GENERAL, INDIA  
(VITAL STATISTICS DIVISION)  
MINISTRY OF HOME AFFAIRS  
NEW DELHI**

FIGURES AT A GLANCE, INDIA - 1990

Item	Combined	Rural	Urban
<b>I. Percent distribution of population by broad age groups</b>			
0-14	36.9	37.7	34.0
15-49	50.3	49.2	54.2
50+	12.0	13.1	11.8
<b>II. Fertility Indicators</b>			
Crude Birth Rate	30.2	31.7	24.7
General Fertility Rate	123.9	132.6	96.1
Total Fertility Rate	3.0	4.1	2.8
Gross Reproductin Rate	1.8	2.0	1.3
General Marital Fertility Rate	162.4	170.0	135.7
Total Marital Fertility Rate	5.2	5.4	4.6
Mean age at effective marriage for females	19.3	19.0	20.6
<b>III. Percent distribution of live births by birth order</b>			
1	32.2	31.9	34.0
2	25.6	25.1	27.8
3	10.1	10.3	17.6
4	11.0	11.3	9.6
5+	13.1	13.4	11.0
<b>IV. Percent distribution of live births by birth interval between current live birth and previous live birth (in months)</b>			
10-12	4.7	4.7	4.8
12-18	9.1	8.8	10.6
18-24	24.7	25.0	23.3
24-30	14.4	14.2	15.2
30-36	10.3	10.8	15.9
36+	28.8	20.5	30.2
<b>V. Mortality Indicators</b>			
Crude Death Rate	9.7	10.5	6.8
Infant Mortality Rate	80.0	86.0	50.0
Neo-natal mortality rate	52.5	57.4	30.9
Post-natal mortality rate	27.2	28.9	19.5
Peri-natal mortality rate	48.4	51.7	34.0
Still Birth Rate	11.8	11.9	11.0

Item	Combined	Rural	Urban
<b>VI. Medical Attention</b>			
At Birth			
-Institutional	22.9	16.2	52.8
-Trained	21.3	20.2	26.1
-Untrained	54.4	62.0	20.6
-Others	1.4	1.5	0.6
Before death			
-Institutional	15.1	12.5	28.7
-Medical Practitioner	35.4	32.9	40.3
-Unqualified Practitioner	26.0	29.1	9.5
-Others	2.4	25.5	13.5

**EXTREME AMONG STATES**

FERTILITY	HIGHEST	LOWEST
Crude Birth Rate	Uttar Pradesh (35.6)	Kerala (19.6)
General Fertility Rate	Uttar Pradesh (159.2)	Kerala (69.7)
Total Fertility Rate	Uttar Pradesh (5.2)	Kerala (1.9)
General Marital Fertility Rate	Uttar Pradesh (197.6)	Kerala (112.2)
Total Marital Fertility Rate	Uttar Pradesh (6.2)	Kerala (4.0)
Mean age at effective marriage for females	Kerala (22.2)	Andhra Pradesh (17.9)
<b>MORTALITY</b>		
Crude Death Rate	Madhya Pradesh (12.6)	Kerala (6.0)
Percent child death (0-4) years	Madhya Pradesh (45.7)	Kerala (7.9)
Infant Mortality Rate	Orissa (122)	Kerala (17)
Neo-natal mortality rate	Orissa (78.8)	Kerala (12.6)
Peri-natal mortality rate	Orissa (73.1)	Kerala (20.0)
Still Birth Rate	Punjab (27.9)	Gujarat (6.5)

# C O N T E N T S

## Page No.

Preface	(i)
List of tables	(ii)
List of statements	(iii)-(vii)

Chapter 1 - Introduction	1 - 11
Chapter 2 - Age Composition of Population	12 - 17
Chapter 3 - Measures of Fertility	18 - 36
Chapter 4 - Measures of Mortality	37 - 59
Chapter 5 - Zonal Patterns of Fertility and Mortality	60 - 67

## DETAILED TABLES

India and Zones	69 - 110
Andhra Pradesh	111 - 116
Assam	117 - 122
Bihar	123 - 128
Gujarat	129 - 134
Haryana	135 - 140
Karnataka	141 - 146
Kerala	147 - 152
Madhya Pradesh	153 - 158
Maharashtra	159 - 164
Orissa	165 - 170
Punjab	171 - 176
Rajasthan	177 - 182
Tamil Nadu	183 - 188
Uttar Pradesh	189 - 194
West Bengal	195 - 200

## GLOSSARY

## P R E F A C E

In the absence of dependable data from Civil Registration System in India, the Sample Registration System (SRS) has become the main source of information on fertility and mortality indicators at state and national levels. The SRS mechanism involves collection of data through two different procedures viz., continuous enumeration and retrospective half-yearly survey which is followed by a process of matching of the two records and subsequent field verification of unmatched and partially matched events. The methodology provides a cross-check on the correctness and completeness of events of births and deaths listed in both the records.

This report while presenting data for the year 1990 gives a detailed account of the salient features of the SRS along with other aspects connected with the implementation of SRS. The present report gives an analysis of population composition by broad age groups, fertility and mortality levels by age and broad age groups, etc., for major states having population of 10 million and above. Zonal level estimates of fertility and mortality have also been included in this report. The report also includes some new items of demographic interest such as mean age at effective marriage for females, interval between current live birth and previous live birth, and also distribution of live births by birth order. These additional items are being collected through SRS from 1990 onwards on the basis of certain recommendations of a Technical Committee on Sample Registration System appointed by the Ministry of Home Affairs under the chairmanship of Director-General, Central Statistical Organisation. I am sure these new items will be of much interest to demographers and other data users.

The SRS is a Centre-State venture and the present study would not have been possible without active involvement of various State implementing agencies for whom my thanks are due. I am also thankful to the concerned staff and officers of the Directorates of Census Operations and the Sample Registration Division at the headquarters for their hard work. This report has been processed and prepared for the first time on the personal computers of the Vital Statistics Division and has come out as a collective efforts of all members of the P.C. Unit under the guidance of Shri A.K. Saxena, Assistant Director of Census Operations. In particular, I am happy to place on record my appreciation of efforts put in by S/Shri S.P. Grover, Deputy Director of Census Operations, K.M. Vasudevan, Senior Research Officer and A.K. Saxena, Assistant Director of Census Operations in bringing out this report under the overall guidance of Shri S.K. Sinha, Deputy Registrar General (VS-SRS). I also place on records the efforts put in by Shri K.S. Natarajan, Deputy Registrar General (Demography), in looking into the technical contents of the present report.

New Delhi  
Dated: 27th April, 1993

A.R. Nanda  
Registrar General, India

## LIST OF TABLES

1. Per cent distribution of estimated population by age groups and sex, 1990
2. Estimated age specific fertility rates and other fertility indicators, 1990
3. Estimated age-specific marital fertility rates and other fertility indicators, 1990
4. Per cent distribution of live births by order of birth 1990
5. Percentage distribution of current live births by birth interval, 1990
6. Percentage distribution of current live births by birth interval and birth order, 1990
7. Estimated age specific death rates by sex, 1990
8. Mortality indicators, 1990
9. Per cent distribution of sample births by type of medical attention at birth, 1990
10. Per cent distribution of sample deaths by type of medical attention received before death, 1990.

LIST OF STATEMENTS

<u>Statement Number</u>	<u>Page No.</u>
A. Population covered (1990), number of sample units and average sample size	7
B. Agency-wise distribution of sample units in the major states	8-9
1. Per cent distribution of population by broad age-group, India, 1990	12
2. Per cent distribution of population by broad age-groups by rural/urban, India, 1990	14
3. Per cent distribution of population by broad age-groups for India and major states, 1990	15
4. Per cent distribution of population for India by residence 1981-83 and 1988-90	16
5. Per cent distribution of population by broad age-groups for India and major states, 1981-83 and 1988-90	17
6. Crude birth rates by residence, India and major states, 1990	18
7. Distribution of major states by rural and urban birth rates for 1990	19
8. Average crude birth rates for India and major states, 1981-83 and 1988-90	20
9. General fertility rates by residence, India and major states, 1990	21
10. Average general fertility rates for India and major states, 1981-83 and 1988-90	22
11. General marital fertility rates by residence, India and major states, 1990	23



	<u>Statements</u>	<u>Page No.</u>
12.	Age specific fertility rates by residence, India, 1990	24
13.	Age specific fertility rates, India and major states, 1990	25
14.	Age specific marital fertility rates by residence, India, 1990	25
15.	Age specific marital fertility rates, India and major states, 1990	26
16.	Mean age at effective marriage, India and major states, 1990	27
17.	Mean age of fertility, India and major states, 1990	28
18.	Total fertility rates by residence, India and major states, 1990	29
19.	Total fertility rates, India and major states, 1981-83 and 1988-90	30
20.	Total marital fertility rates by residence, India and major states, 1990	31
21.	Gross reproduction rates by residence India and major states, 1990	32
22.	Per cent distribution of births by type of attention at birth by residence, India, 1990	33
23.	Per cent distribution of births by type of attention at birth in major states, 1990	34
24.	Per cent distribution of births by type of attention at birth in rural areas of major states, 1990	35

	<u>Statements</u>	<u>Page No.</u>
25.	Per cent distribution of births by type of attention at birth in urban areas of major states, 1990	36
26.	Estimated crude death rates by residence, India and major states, 1990	37
27.	Average estimated crude death rates, India and major states, 1981-83 and 1988-90	39
28.	Estimated death rates by sex and residence India, 1990	39
29.	Estimated death rates by sex, major states, 1990	40
30.	Estimated infant mortality rates by residence, India and major states, 1990	41
31.	Estimated infant mortality rates by sex, India and major states, 1990	42
32.	Average estimated infant mortality rates, India and major states, 1981-83 and 1988-90	43
33.	Percentage of infant deaths to total deaths by residence, India and major states, 1990	44
34.	Neo-natal and post neo-natal mortality rates by residence, India, 1990	45
35.	Neo-natal and post neo-natal mortality rates for major states, 1990	46
36.	Percentage of neo-natal and post neo-natal deaths to total infant deaths, India and major states, 1990	47

	<u>Statements</u>	<u>Page No.</u>
37.	Estimated peri-natal mortality rate and still birth rates by residence, India, 1990	48
38.	Estimated peri-natal mortality rates and still birth rates, major states, 1990	48
39.	Estimated death rates for children aged 0-4 years by residence and sex, India, 1990	49
40.	Estimated death rates for children aged 0-4 years by residence, major states, 1990	50
41.	Percentage of deaths among children aged 0-4 years to total deaths by residence, India and major states, 1990	51
42.	Estimated death rates for children aged 5-14 years by residence and sex, India, 1990	51
43.	Estimated death rates for children aged 5-14 years by residence, major states, 1990	52
44.	Estimated death rates for age-group 15-34 years by residence and sex, India, 1990	53
45.	Estimated death rates for age-group 15-34 years by residence, major states, 1990	53
46.	Estimated death rates for age group 35-39 years by residence and sex, India, 1990	54
47.	Estimated death rates for age-group 35-49 years by residence, major states, 1990	54
48.	Estimated death rates for age group 50 years and above by residence and sex, India, 1990	55

<u>Statements</u>	<u>Page No.</u>
49. Estimated death rates for age group 50 years and above by residence, major states, 1990	55
50. Per cent distribution of deaths by type of medical attention received before death, India, 1990	56
51. Per cent distribution of deaths by type of medical attention received before death for major states, 1990	57
52. Per cent distribution of deaths by type of medical attention received before death in rural areas of major states, 1990	58
53. Per cent distribution of deaths by type of medical attention received before death in urban areas of major states, 1990.	59
54. Sample Population, number of Sample Units and average Sample Size, India and zones, 1990	61
55. Percent distribution of Population by Broad Age-group and residence, India and zones, 1990.	62
56. Fertility Indicators by residence, India and zones, 1989, 1990.	63
57. Mortality Indicators by residence, India and zones, 1989, 1990.	64
Chart-1 - Crude Birth Rate by place of residence, India and zones, 1990	65
Chart-2 - Crude Death Rate by place of residence, India and zones, 1990	66
Chart-3 - Infant Mortality Rate by place of residence, India and zones, 1990	67

## CHAPTER - 1

### INTRODUCTION

The increasing acuteness of the population problem in India and the deficiencies in the statutory civil registration system have greatly intensified the need for quick and reliable estimates of birth and death rates on a current and continuous basis. The population census provides decadal vital rates. It does not provide a measure of the change in population from year to year. To measure short-term changes in the growth of population for projecting its future trends and to evaluate the results of the family planning programmes, there is need for resorting to alternate sources of data. Various alternate methods based on the application of sampling techniques have been tried and tested in many developing countries. Such methods include single and multiround retrospective surveys and the dual record system. In the absence of dependable vital rates from civil registration, the Office of the Registrar General, India, initiated the sample registration of births and deaths in India popularly known as sample registration system (SRS) in 1964-65 on a pilot basis and on full scale from 1969-70. This is a demographic sample survey based on a dual record system.

1.1 The main objective of Sample Registration System is to provide reliable estimates of birth and death rates at the state and national levels for rural and urban areas separately. It also provides various other measures of fertility and mortality.

1.2 The field investigation under Sample Registration System consists of continuous enumeration of births and deaths in a sample of villages/urban blocks by a resident part-time enumerator, and an independent six monthly retrospective survey by a full-time supervisor. The data obtained through these two sources are matched. The unmatched and partially matched events are reverified in the field to get an unduplicated count of correct events. The advantage of this procedure, in addition to elimination of errors of duplication, is that it leads to a quantitative assessment of the sources of distortion in the two sets of records making it a self-evaluating technique.

### Basic structure of the System

1.3 The main components of SRS are :

- (i) Base-line survey of the sample units to obtain usual resident population of the same sample areas;
- (ii) Continuous (longitudinal) enumeration of vital events pertaining to usual resident population by the enumerator;
- (iii) An independent half-yearly survey for recording births and deaths which occurred during the half-year under reference and up-dating the Houselist and Household schedule by the Supervisor;
- (iv) Matching of events recorded during continuous enumeration and those listed in course of half-yearly survey;

- (v) Field verification of unmatched and partially matched events.

1.4 Baseline Survey : The base-line survey is carried out prior to the start of continuous enumeration. This involves preparation of a notional map of the area to be surveyed, house numbering and houselisting and filling-in of a household schedule. Wherever a sound system of house numbering exists the same is adopted. Otherwise, the house numbering is done by the enumerator/supervisor with the help of chalk and tar, etc. at conspicuous place near the entrance of the house. The supervisor prepares a notional map with the help of the enumerator showing important landmarks and location of the houses covered by the sample unit. He then prepares a list of houses/households covered by the sample in the House-list (Form 1) and fills-in the Household Schedule (Form 2) wherein he records the residential status and demographic particulars of each individual residing in the household e.g. name, sex, age, marital status and relation to head of household. Visitors to the household on the specified data, who are likely to stay in the household for fairly long period, are also listed and their residential status is shown as 'V' as against 'UR' for usual residents. The inmates of public institutions like hotels, inns, schools and hospitals are excluded, but house-holds living permanently within the compound of such institutions are covered.

1.5 Continuous enumeration The enumerator maintains a Birth Record (Form 5) and a Death Record (Form 6) in respect of his area. The enumerator is expected to record all births and deaths occurring within the sample unit, as well as those of the usual residents occurring outside the unit.

The events to visitors occurring within the sample unit are also listed, but these are not taken into account while calculating rates. Thus the events to be enumerated by the enumerator are those pertaining to: (i) Usual residents inside the sample unit; (ii) Usual residents outside the sample unit; (iii) Immigrants present; (iv) Immigrants absent; (v) Visitors inside the sample unit.

1.6 For ensuring complete netting, the enumerator uses different means to keep himself informed of the occurrence of vital events in the sample unit. He takes the help of the village priest, barber, village headman, midwife and such other functionaries and contacts these informants at frequent intervals and collects information about the occurrence of births and deaths. On being informed about the occurrence of an event, he visits the concerned household and records the prescribed particulars. He also keeps in touch with other socially important persons and visits local or nearby hospitals, nursing homes, cremation or burial grounds, at frequent intervals to keep himself informed about the occurrence of events. He is required to maintain a list of pregnant women (Form 7) which helps him in netting of all the births. Despite all these efforts, the enumerator may fail to have information about some of the events. So he is required to visit all the households once in each quarter so as to ensure that all the events have been recorded. In the urban areas, the enumerator is required to visit each household once a month so as to net all births and deaths pertaining to his area.

1.7 Half-yearly survey: Half yearly survey is carried out independently in each sample unit by a full-time supervisor. The supervisor belonging to the statistical cadre of the Census Directorates (either a Computer or Statistical



Assistant or any suitable official) visits households in the sample unit and records the particulars of births and deaths in Forms 3 & 4 pertaining to usual residents and visitors (only those occurring within the sample unit) which had occurred during the half-yearly period under reference (January-June or July-December). Simultaneously, he updates the Houselist and Household Schedule by making suitable entries for each birth, death or migration. In carrying out this survey he does not have access to the birth and death records of the enumerator which are withdrawn from the field before the supervisor is deputed for the half yearly survey. An overlapping reference period of one year is also adopted in the survey in order to net the events which might have been missed in the previous half-yearly survey.

1.8 Matching: On completion of the half-yearly survey, the Form 3 & 4 filled-in by the supervisors are compared with the Forms 5 & 6 filled-in by the enumerators. This is done either at the state or district headquarters. Each entry in the enumerator's and supervisor's records is matched item by item and events are classified as fully matched, partially matched and unmatched. The items generally considered for matching are location of the household i.e. name of the head of house-hold and house-number, name of the mother (for birth) and name of the deceased (in case of death), residential status, sex and month of occurrence.

1.9 Field verification of unmatched and partially matched events: Every unmatched or partially matched event is verified by a visit to the concerned household. This is done either by a third person or jointly by the supervisor and the enumerator, depending upon the availability of staff.

1.10 Sample design: The Sample design adopted for SRS is a unistage stratified simple random sample without replacement. In rural areas, each state has been divided into a number of natural divisions. The natural divisions conform to the regions adopted by NSSO in their 32nd round. These natural divisions or regions were formed by grouping contiguous districts having similar topography, population density, cropping pattern and rainfall etc. Each natural division within a state has been further stratified by grouping villages into four population size classes : (a) less than 500, (b) 500 to 999, (c) 1,000 to 1,999 and (d) 2,000 and above. In order to cover the village by one part-time enumerator, large size villages having population of more than 2,000 were segmented into two or more segments of equal size. A simple random sample sample of villages and segments was selected without replacement in each State/Union Territory. In urban areas stratification has been done on the basis of size class of the twons/cities. The towns/cities were grouped into five classes, viz:- towns with population below 20,000 (b) towns with population of 20,000 and more but less than 50,000 (c) towns with population of 50,000 and more but less than 100,000 (d) towns with population of 100,000 and more but less than 1,000,000, and (e) towns with population of 1,000,000 and above. Each city with population 1,000,000 or more was treated as a seprate stratum. The sampling unit in urban area was a census enumeration block. A simple random sample of these enumeration blocks was selected without replacement from each of the size classes of Towns/cities in each State/Union Territory. Statement 'A' shows the population covered in 1990, number of sample units and average size of the sampled areas separately for rural and urban areas of all the states and union territories where SRS is being implemented.

**STATEMENT A**

Population covered (1990), No. of Sample Units  
and average sample size.

States/ Union Territories	Sample Population			No. of units			Average Sample Size		
	Com- bined	Rural	Urban	Com- bined	Rural	Urban	Com- bined	Rural	Urban
<b>States</b>									
Andhra Pradesh	364955	254380	110575	290	190	100	1258	1339	1106
Arunachal Pr.	25227	20486	4741	50	45	5	505	455	948
Assam	283709	229795	53914	254	200	54	1117	1149	998
Bihar	518640	449140	69500	500	400	100	1037	1123	695
Goa	64775	49343	15432	63	36	27	1028	1371	572
Gujarat	317013	265867	51146	300	200	100	1057	1329	511
Haryana	176666	134212	42454	160	100	60	1104	1342	708
Himachal Pr.	69110	53751	15359	140	115	25	494	467	614
Jammu & Kashmir	N.A.	N.A.	N.A.	166	100	66	N.A.	N.A.	N.A.
Karnataka	392639	287581	105058	360	250	110	1091	1150	955
Kerala	323140	263720	59420	240	150	90	1346	1758	660
Madhya Pradesh	321886	259929	61957	400	300	100	805	866	620
Maharashtra	310972	224720	86252	330	190	140	942	1183	616
Manipur	108130	81032	27098	125	95	30	865	853	903
Meghalaya	46302	34305	11997	85	65	20	545	528	600
Nagaland	16721	11996	4725	25	20	5	669	600	945
Orissa	234820	196949	37871	310	250	60	757	788	631
Punjab	155756	109191	46565	160	100	60	973	1092	776
Rajasthan	312472	252717	59755	320	230	90	976	1099	664
Sikkim	47891	40561	7330	50	42	8	958	966	916
Tamil Nadu	373212	279088	94124	330	190	140	1131	1469	672
Tripura	109587	100411	9176	75	60	15	1461	1674	612
Uttar Pradesh	648649	523352	125297	630	450	180	1030	1163	696
West Bengal	502092	399952	102140	450	300	150	1116	1333	681
<b>Union Territories</b>									
A. & N. Islands	32948	24152	8796	38	28	10	867	863	880
Chandigarh	11296	3095	8201	15	2	13	753	1548	631
D & N Haveli	15553	15553	-	10	10	-	1555	1555	-
Daman & Diu	6758	5037	1721	6	4	2	1126	1259	861
Delhi	80515	15916	64599	100	10	90	805	1592	718
L.M. & A. Islands	7909	4358	3551	5	2	3	1582	2179	1184
Pondicherry	30836	15672	15164	35	15	20	881	1045	758
<b>I N D I A</b>	<b>5910179</b>	<b>4606261</b>	<b>1303918</b>	<b>6022</b>	<b>4149</b>	<b>1873</b>	<b>1009</b>	<b>1138</b>	<b>722</b>

Note: Sample Population/Average Sample Size for India excludes Jammu and Kashmir.

1.11 Organisation The SRS is being implemented through the Directorates of Economics & Statistics/Directorates of Health Services/Directorates of Census Operations. The implementing agencies for the rural sample are the respective Directorates of Economics & Statistics in the States of Kerala, Madhya Pradesh and Maharashtra, Directorates of Health Services in Andhra Pradesh, Gujarat, Haryana, Orissa, Punjab, Tamil Nadu, Directorate of Census Operations in these (except Kerala) and the remaining States/Union Territories. The implementing agencies for the urban sample are the Directorates of Health Services in Haryana, Orissa and Punjab, and the Directorates of Census Operations in the remaining States/Union Territories. Statement B gives the agency-wise distribution of sample units in the major states.

#### STATEMENT B

Agency-wise distribution of sample units  
in the major states.

Major States	Rural areas	Urban areas
1. Andhra Pradesh	1.Dte. of Health (150) 2.Dte. of Census Operations (40)	Dte. of Census Operations (100)
2. Assam	Dte. of Census Operations (200)	Dte. of Census Operations (54)
3. Bihar	Dte. of Census Operations (400)	Dte. of Census Operations (100)
4. Gujarat	1.Commissionerate of Health (166) 2.Dte. of Census Operations (34)	Dte. of Census Operations (100)
5. Haryana	1.Dte. of Health (60) 2.Dte. of Census Operations (40)	Dte. of Health (60)

STATEMENT B (Concl'd.)

Major States	Rural areas	Urban areas
6. Himachal Pradesh	Dte. of Census Operations (115)	Dte. of Census Operations (25)
7. Jammu & Kashmir	Dte. of Census Operations (100)	Dte. of Census Operations (66)
8. Karnataka	Dte. of Census Operations (250)	Dte. of Census Operations (110)
9. Kerala	Dte. of Economics & Statistics (150)	Dte. of Census Operations (90)
10. Madhya Pradesh	1.Dte. of Economics & Statistics (150) 2.Dte. of Census Operations (150)	Dte. of Census Operations (100)
11. Maha-rashtra	1.Dte. of Economics & Statistics (150) 2.Dte. of Census Operations (40)	Dte. of Census Operations (140)
12. Orissa	1.Dte. of Health (150) 2.Dte. of Census Operations (100)	Dte. of Health (60)
13. Punjab	1.Dte. of Health (80) 2.Dte. of Census Operations (20)	Dte. of Health (60)
14. Rajasthan	Dte. of Census Operations (230)	Dte. of Census Operations (90)
15. Tamil Nadu	1.Dte. of Health (150) 2.Dte. of Census Operations (40)	Dte. of Census Operations (140)
16. Uttar Pradesh	Dte. of Census Operations (450)	Dte. of Census Operations (180)
17. West Bengal	Dte. of Census Operations (300)	Dte. of Census Operations (150)

Note: In small states and union territories the SRS sample is being implemented by the Directorate of Census Operations.

1.12 For continuous enumeration, there is an enumerator for each sample unit, who is usually a resident teacher employed on a part-time basis and is paid a small honorarium for this purpose. For supervision and conduct of half-yearly surveys, there are full-time supervisors at the state headquarters. One supervisor is usually assigned a set of 10 sample units for conducting half-yearly surveys. The state headquarters have a complement of staff necessary for planning and organising various field operations, training of the field staff, effecting proper supervision and control, ensuring regular flow of returns from the field, forwarding of various returns to the Office of the Registrar General, India and for undertaking certain minimum tabulations.

1.13 At the national level, the Vital Statistics Division of the office of the Registrar General, India co-ordinates the implementation work, formulates and prescribes necessary standards, provides necessary instructions and guidance, undertakes tabulation and analysis of data and their dissemination.

1.14 Training and Supervision: Each enumerator is given the necessary training before he starts the work. This is followed by periodic training. In addition, he is provided with manual of instructions for day to day consultation in order to sort out any difficulties in course of work. Each computer-supervisor is also given the necessary training with a view to enabling him to carry out the supervision work and conduct the half-yearly surveys properly and efficiently. He is also provided with a manual of instructions for this purpose. Various state officials associated with the implementation of the SRS are also given necessary training. There is a manual for the staff of the state headquarters which provides detailed instructions and guidance with regard to the various stages of work involved at

the state level. The manual is very comprehensive and covers all aspects of the system.

1.15 Supervision forms an important component of SRS. This is undertaken by the supervisory level officials such as the Investigator, Assistant Director, Deputy Director/Joint Director and Director. In addition each supervisor is expected to supervise the enumeration work in a set of 10 sample units. Officers at the state headquarters undertake visits to sample units and inspect the work at the field level.

1.16 Flow of returns: An enumerator is required to send to the state headquarters in the first week of the following month, a monthly report (Form 10) in duplicate. This report is copied from the birth and death records (Forms 5 and 6). On the basis of the monthly reports received from the sample units, the state headquarters are required to prepare a consolidated monthly report (Form 10A) and forward the same to the Office of the Registrar General, India by the end of the following month. The monthly reports for the individual units remain at the state headquarters till the results of the half yearly survey are finalised. These are corrected in the light of the results of the half yearly survey and matching and field verification operations associated therewith. Finalised forms 9 and 9A after necessary corrections and inclusion of additional events recorded during the survey are sent to the Office of the Registrar General, India alongwith the half-yearly survey results in Form 11.

1.17 Estimation procedure: Estimates of births, deaths and population for both rural and urban areas are obtained using unbiased method of estimation. The estimates of birth and death rates are obtained as the ratios of the estimated deaths to the estimated population respectively.

## C H A P T E R 2

### AGE COMPOSITION OF POPULATION

Age is the most important variable in the study of fertility, mortality and certain other areas of demographic analysis. Tabulations on age are basically essential for having an overview of the population composition and change. The Sample Registration System (SRS) provides information on age structure of population being covered by the sample unit. This chapter deals with percentage distribution of population by broad age groups and place of residence for major states and all-India. Statement 1 below gives the per cent distribution of population by broad age groups at the national level for the year 1990. Children aged 0-14 years comprise 36.9 per cent of the total population. While 50.3 per cent of the population is in the age group 15-49 years, population aged 50 years and above is about 12.8 per cent of the total population. The differences between the male and female percentages are small.

#### STATEMENT 1

Per cent distribution of population by  
broad age-group, India, 1990\*

Sex	Age group		
	0-14	15-49	50 & above
Male	37.1	50.4	12.5
Female	36.6	50.3	13.1
Person	36.9	50.3	12.8

\* Excludes Jammu & Kashmir



2.1 A comparison of rural and urban age composition of population shows that the percentage of child population (0-14) years in rural areas is higher than the corresponding percentage in urban areas (Statement 2). However, reverse is the case in respect of population aged 15-49 years which has a higher percentage in urban areas. Population aged 50 years and above has a slightly higher percentage in rural areas than in urban areas. The apparent difference between the rural-urban age composition of population may be mainly due to higher fertility in rural areas than in urban areas and migration of population from rural to urban areas. Higher fertility in rural areas as compared to urban areas would result in a higher percentage of child population in rural areas than in urban areas. Migration from rural to urban areas may be mostly for employment purposes and mainly concentrated in the age-group 15-49 years. This would tend to inflate/deflate the percentages of population aged 15-49 years in urban/rural areas. As a result of increase in percentage of population aged 15-49 years in urban areas, there would be corresponding reduction in the percentage of population aged 0-14 years and 50 years and above. Similarly as a result of decrease in the percentage of population aged 15-49 years in rural are there would be corresponding increase in the percentages of population 0-14 years and 50 years and above.

**STATEMENT 2**  
Per cent distribution of population by  
broad age-group by rural/urban, India, 1990\*

Residence/	Sex	Age group		
		0-14	15-49	50 & above
Rural	Male	38.1	49.1	12.8
	Female	37.3	49.3	13.4
	Person	37.7	49.2	13.1
Urban	Male	33.8	54.6	11.6
	Female	34.1	53.7	12.2
	Person	34.0	54.2	11.8

\* Excludes Jammu & Kashmir

2.2 Statewise variations in the age composition of population are observed from Statement 3. Kerala is found to have the lowest percentage of population in age group 0-14 years closely followed by Tamil Nadu. Bihar, Rajasthan and Uttar Pradesh are reported to have about 40 per cent child population and Haryana and Madhya Pradesh have around 38 per cent population in the age group 0-14 years. More than 50 per cent population in the 15-49 years age group is found in 10 states viz. Andhra Pradesh, Assam, Gujarat, Haryana, Karnataka, Kerala, Madhya Pradesh, Maharashtra, Orissa, Punjab, Tamil Nadu and West Bengal. Bihar, Rajasthan and Uttar Pradesh are reported to have 46-50 per cent of their population in the age group 15-49 years. Andhra Pradesh, Karnataka, Madhya Pradesh, Maharashtra, Orissa, Punjab and Tamil Nadu have about 13 to 15 per cent of their population aged 50 years and above. Around 9 to 12 per cent of the population are aged 50 years and above in the states of Assam, Bihar, Gujarat, Haryana, Rajasthan, Uttar Pradesh and West Bengal.

STATEMENT 3

Percent distribution of population by broad  
age groups for India and major states, 1990

India/ Major States	Age - group		
	0-14	15-49	50 & above
INDIA*	36.9	50.3	12.8
Andhra Pradesh	35.2	50.5	14.3
Assam	36.8	53.2	10.0
Bihar	41.4	46.5	12.1
Gujarat	34.9	52.7	12.4
Haryana	38.0	50.7	11.3
Karnataka	35.9	51.5	12.6
Kerala	30.5	54.3	15.1
Madhya Pradesh	38.5	58.7	12.8
Maharashtra	35.2	51.3	13.5
Orissa	35.4	51.3	13.3
Punjab	34.0	52.0	14.0
Rajasthan	39.8	48.6	11.6
Tamil Nadu	31.5	53.6	14.9
Uttar Pradesh	39.8	47.8	12.4
West Bengal	35.3	52.9	11.8

\* Excludes Jammu & Kashmir

2.3 A comparison of the percentages of child population and population in the age-group 15-49 for the period 1981-83 and 1988-90 shows that the percentage of child population over the two periods has declined whereas population both in the age-group 15-49 year and 50 years and above has gone up marginally (Statement 4).

STATEMENT 4

Percent distribution of population for India  
by residence 1981-83 & 1988-90\*

Resi- dence	Age-group	1981-83	1988-90	Percentage change w.r.t. 1981-83
Combined	0-14	38.5	37.3	-3.1
	15-49	49.1	50.0	1.8
	50 & above	12.5	12.7	1.6
Rural	0-14	39.1	38.1	-2.6
	15-49	48.1	49.0	1.9
	50 & above	12.8	13.1	2.3
Urban	0-14	36.0	34.2	-5.0
	15-49	52.6	53.8	2.3
	50 & above	11.4	11.8	3.5

\* Excludes Jammu & Kashmir

2.4 State-wise comparison of the percentage distribution of population for the periods 1981-83 and 1988-90 by broad age-groups is shown in Statement 5. It is observed that, over the years, there is a decline in the percentage of child population in all the states except Bihar whereas in the age group 50 years and above there is an increase in all states except Bihar, Haryana, Punjab, Rajasthan and Uttar Pradesh. Proportion of population in the age group 15-49 has increased during this period in all the states.

## STATEMENT 5

Percent distribution of population by broad  
age-groups for India and major states,  
1981-83 & 1988-90\*

India/ Major States	0-14			15-49			50 & above		
	81-83	88-90	Per cent change w.r.t. 1981-83	81-83	88-90	Per cent change w.r.t. 1981-83	81-83	88-90	Per cent change w.r.t. 1981-83
INDIA	38.5	37.3	-3.1	49.1	50.0	1.8	12.5	12.7	1.6
Andhra Pradesh	37.0	36.0	-2.7	49.7	50.1	0.8	13.3	13.9	4.5
Assam	38.7	37.5	-3.1	51.8	52.8	1.9	9.6	9.8	2.1
Bihar	41.3	41.7	1.0	46.3	46.4	0.2	12.4	11.9	-4.0
Gujarat	38.0	35.6	-6.3	50.4	52.5	4.2	11.6	11.9	2.6
Haryana	40.2	38.8	-3.5	48.0	49.8	3.7	11.7	11.3	-3.4
Karnataka	38.0	36.5	-3.9	49.7	50.8	2.2	12.3	12.7	3.3
Kerala	34.1	30.9	-9.4	52.0	54.0	3.8	14.0	15.2	8.6
Madhya Pradesh	40.1	38.8	-3.2	48.0	48.3	0.6	11.9	12.9	8.4
Maha- rashtra	36.8	35.3	-4.1	50.3	51.0	1.4	12.8	13.6	6.2
Orissa	38.1	36.0	-5.5	49.6	50.8	2.4	12.3	13.3	8.1
Punjab	34.9	34.2	-2.0	50.3	51.7	2.8	14.9	14.1	-5.4
Rajasthan	40.5	40.3	-0.5	47.9	48.2	0.6	11.7	11.6	-0.9
Tamil Nadu	34.0	32.0	-5.9	52.0	53.4	2.7	14.0	14.7	5.0
Uttar Pradesh	40.3	40.0	-0.7	47.0	47.7	1.5	12.7	12.3	-3.1
West Bengal	38.5	35.7	-7.3	50.3	52.5	4.4	11.2	11.8	5.4

\* Excludes Jammu & Kashmir

**C H A P T E R - 3**  
**MEASURES OF FERTILITY**

Crude birth rate is the most commonly used measure of fertility. For the year 1990, the crude birth rate for India is found to be 30.2. The rate for rural areas is 31.7 which is much higher than the rate of 24.7 for urban areas. From Statement 6 it is seen that Kerala is having the lowest birth rate (19.6) and Madhya Pradesh is having the highest birth rate (37.1) followed by Uttar Pradesh (35.6). Haryana and Bihar have birth rates as 31.9 and 32.9 respectively. In respect of Kerala, Andhra Pradesh and Tamil Nadu, the rural-urban differences are relatively small as compared to other states. There are ten states having birth rates below national level. Whereas for the five states, viz. Bihar, Haryana, Madhya Pradesh, Rajasthan and Uttar Pradesh, the birth rates exceed the all-India rate.

STATEMENT 6  
Crude birth rates, by residence,  
India and major States, 1990

India/Major States	Combined	Rural	Urban
INDIA*	30.2	31.7	24.7
Andhra Pradesh	26.3	26.6	25.1
Assam	29.7	30.3	22.1
Bihar	32.9	33.8	24.6
Gujarat	29.6	30.2	28.3
Haryana	31.9	33.1	27.5
Karnataka	28.0	29.0	25.0
Kerala	19.6	19.6	19.8
Madhya Pradesh	37.1	38.9	29.3
Maharashtra	27.5	29.5	23.8
Orissa	30.0	30.7	23.7
Punjab	27.6	28.4	25.6
Rajasthan	33.6	34.7	28.3
Tamil Nadu	21.6	21.8	21.1
Uttar Pradesh	35.6	37.0	29.3
West Bengal	28.2	32.0	18.6

\* Excludes Jammu & Kashmir

3.1 Statement 7 shows the distribution of states according to rural and urban birth rates. Kerala and Tamil Nadu have relatively low rural and urban birth rates. On the other extreme, Haryana and Madhya Pradesh have relatively very high birth rates for rural as well as urban areas. The rural birth rates are above 30 for all states except Andhra Pradesh, Karnataka, Kerala, Maharashtra Punjab and Tamil Nadu.

STATEMENT 7

Distribution of major states by rural and urban birth rates for 1990

Rural birth Rate	Urban Birth rate	
	below 25	25-30
Below 25	Kerala, Rajasthan Tamil Nadu	-
25-30	Maharashtra	Andhra Pradesh, Karnataka, Punjab.
30-35	Assam, Bihar, Orissa, West Bengal.	Gujarat, Haryana, Rajasthan.
35 & Above	-	Madhya Pradesh, Uttar Pradesh.

3.2 Statement 8 shows the average birth rate for India and major states for the periods 1981-83 and 1988-90. Statewise comparison of the average birth rate for the two periods 1981-83 and 1988-90 shows decline in all the major states except Karnataka.

## STATEMENT 8

Average crude birth rates for India  
and major states, 1981-83 & 1988-90\*

India/ Major States	1981-83	1988-90	Percent change w.r.t. 1981-83
INDIA	33.8	30.7	-9.2
Andhra Pradesh	31.2	26.5	-15.1
Assam	34.0	30.6	-10.0
Bihar	37.9	34.9	-7.9
Gujarat	34.3	29.3	-14.6
Haryana	36.4	33.6	-7.7
Karnataka	28.4	28.2	-0.7
Kerala	25.6	20.0	-21.9
Madhya Pradesh	38.2	36.5	-4.5
Maharashtra	29.3	28.4	-3.1
Orissa	33.5	30.8	-8.1
Punjab	30.3	28.1	-7.3
Rajasthan	38.5	33.7	-12.5
Tamil Nadu	27.9	22.5	-19.4
Uttar Pradesh	38.9	36.5	-6.2
West Bengal	32.5	28.0	-13.8

\* Excludes Jammu & Kashmir

3.3 General Fertility Rate (GFR) is yet another measure of fertility expressed as the number of live births per thousand women in the reproductive age-group 15-49 years. This at the national level is found to be 132.6 for rural areas, 96.1 for urban areas and 123.9 for rural and urban areas combined (Statement 9). Statewise rates indicate wide variations, the lowest being 69.7 for Kerala and the highest 159.2 for Uttar Pradesh. In general the rates are higher in rural areas than in urban areas both for all of the states and all-India. The rural rates vary from 168.9 in Uttar Pradesh to 69.9 in Kerala, while the urban rates vary from



121.2 in Uttar Pradesh to 68.6 in Kerala. The states can be grouped as under on the basis of the rates for rural and urban areas combined:

Range	States
Below 100	Kerala, Tamil Nadu
100 - 125	Andhra Pradesh, Assam, Gujarat, Karnataka, Maharashtra, Orissa, Punjab, West Bengal
125 - 150	Bihar, Haryana, Rajasthan
150 - 175	Madhya Pradesh, Uttar Pradesh

#### STATEMENT 9

General fertility rates by residence,  
India and major States, 1990

India/Major States	Combined	Rural	Urban
INDIA*	123.9	132.6	96.1
Andhra Pradesh	105.5	108.6	94.8
Assam	114.5	117.3	79.5
Bihar	146.7	151.3	106.2
Gujarat	116.7	119.6	110.1
Haryana	133.8	141.1	110.1
Karnataka	109.7	116.0	93.4
Kerala	69.7	69.9	68.6
Madhya Pradesh	158.2	168.5	117.9
Maharashtra	109.7	120.3	91.2
Orissa	116.5	119.5	90.3
Punjab	111.9	115.5	102.5
Rajasthan	146.8	153.8	116.8
Tamil Nadu	80.9	83.2	76.8
Uttar Pradesh	159.2	168.9	121.2
West Bengal	113.8	130.9	72.2

\* Excludes Jammu & Kashmir

3.4 A comparison of the GFRs for the periods 1981-83 and 1988-90 is given in Statement 10. It may be observed that there is a decline in the rate over the period both at state and national level which varies from 22.5 per cent in Kerala to 4.5 per cent in Karnataka.

## STATEMENT 10

Average general fertility rates for India  
and major states, 1981-83 and 1988-90

India/ Major States	1981-83	1988-90	Percentage change w.r.t. 1981-83
INDIA*	142.2	127.1	-10.6
Andhra Pradesh	128.3	107.0	-16.6
Assam	134.9	119.0	-11.8
Bihar	175.4	156.2	-10.9
Gujarat	139.5	119.3	-14.5
Haryana	158.4	143.2	-9.6
Karnataka	117.8	112.5	-4.5
Kerala	91.8	71.1	-22.5
Madhya Pradesh	164.3	155.7	-5.2
Maharashtra	121.6	112.9	-7.2
Orissa	133.8	120.7	-9.8
Punjab	126.4	114.3	-9.6
Rajasthan	170.1	148.5	-12.7
Tamil Nadu	107.1	84.4	-21.2
Uttar Pradesh	173.9	162.9	-6.3
West Bengal	136.7	113.2	-17.2

\* Excludes Jammu & Kashmir

3.5 Another important measure of fertility is the Marital Fertility Rate. The general marital fertility rate is expressed as the number of live births per thousand married women in the reproductive age-group 15-49 years. This at the national level is 170.0 for rural areas, 135.7 for urban areas and 162.4 for rural and urban areas combined (Statement 11). Statewise rates indicate variations. The lowest rate is 112.2 for Kerala and the highest is 197.6 for Uttar Pradesh. The rural rates vary from 113.1 in Kerala to 203.6 in Uttar Pradesh whereas the urban rates vary from 106.6 in West Bengal to 170.1 in Uttar Pradesh. The states can be grouped as under on the basis of the rate for combined areas:

Range	States
100-150	Andhra Pradesh, Kerala, Maharashtra, Tamil Nadu
150-175	Gujarat, Haryana, Karnataka, Orissa, Punjab, Rajasthan, West Bengal
175-200	Assam, Bihar, Madhya Pradesh, Uttar Pradesh

STATEMENT 11

General marital fertility rates by residence,  
India and major States, 1990

India/States	Combined	Rural	Urban
INDIA*	162.4	170.0	135.7
Andhra Pradesh	133.8	134.7	130.1
Assam	184.2	187.8	138.1
Bihar	176.6	180.2	141.0
Gujarat	156.4	159.4	149.5
Haryana	170.7	177.1	148.2
Karnataka	154.2	159.4	139.6
Kerala	112.2	113.1	108.5
Madhya Pradesh	189.5	196.3	158.5
Maharashtra	142.4	150.1	127.4
Orissa	158.8	161.6	132.5
Punjab	155.6	161.9	139.8
Rajasthan	174.1	179.0	150.5
Tamil Nadu	115.4	117.4	111.7
Uttar Pradesh	197.6	203.6	170.1
West Bengal	156.3	174.7	106.6

\* Excludes Jammu & Kashmir

3.6 The age pattern of fertility is indicated by the age specific fertility rates. Statement 12 shows the age specific fertility rates for India by rural-urban break up. It is observed that fertility is relatively low in the age-group 15-19 years, but shoots up sharply to reach a peak in the age-group 20-24 years. It remains high in the age-group 25-29 years, but comes down significantly thereafter with the increase in age. The rural age-specific fertility rates are very much higher than the corresponding urban rates,

because the level of fertility in rural areas is higher than in urban areas. However, the age pattern of fertility is quite similar in both the areas.

STATEMENT 12

Age specific fertility rates by residence,  
India, 1990\*

Residence	Age-group						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Combined	83.1	237.0	198.5	121.6	72.5	31.2	12.9
Rural	92.6	249.8	209.7	135.0	82.2	36.0	14.7
Urban	49.6	197.8	165.5	81.8	40.7	15.7	6.2

\* Excludes Jammu & Kashmir

3.7 The age pattern of fertility in different states is broadly similar to the aforementioned pattern. Statement 13 shows that the peak age-group in all the states is 20-24 years except in Bihar for which there appears to be shift from the age-group 20-24 years to the age-group 25-29 years. Kerala having the lowest birth rate is found to have the lowest age specific fertility rates in almost all the age-groups.

## STATEMENT 13

Age specific fertility rates, India  
and major States, 1990

India/ Major States	Age-group						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
<b>INDIA*</b>	83.4	237.0	198.5	121.6	72.5	31.2	12.9
Andhra Pradesh	125.8	224.7	143.4	77.9	33.4	11.5	4.1
Assam	57.2	186.6	185.0	129.8	72.6	37.0	4.6
Bihar	98.8	232.8	239.9	175.0	125.4	62.5	24.2
Gujarat	40.9	255.0	209.7	103.7	43.1	17.8	6.0
Haryana	74.8	286.4	204.2	108.7	55.7	18.6	9.6
Karnataka	76.3	239.3	175.1	89.5	44.1	17.6	5.9
Kerala	27.1	151.7	132.5	49.9	15.5	5.9	1.1
Madhya Pradesh	136.8	304.4	240.1	143.4	79.2	39.0	13.4
Maharashtra	96.2	246.8	173.1	81.7	32.8	9.5	2.6
Orissa	70.0	223.0	200.1	121.9	61.5	21.1	8.1
Punjab	28.3	242.3	214.8	98.6	44.1	12.8	1.1
Rajasthan	93.8	277.3	226.7	153.3	94.5	43.2	20.8
Tamil Nadu	56.1	194.1	133.6	56.0	22.0	6.5	1.1
Uttar Pradesh	74.8	265.2	254.4	202.4	141.7	64.7	32.8
West Bengal	92.4	208.8	178.6	100.7	62.9	23.1	9.7

\* Excludes Jammu & Kashmir

3.8 Another measure of fertility computed for married women for different age groups is the age specific marital fertility rate. Statement 14 shows the age specific marital fertility rates for India. It is observed that fertility reaches its peak in the age group 20-24 and thereafter declines. A perceptible decline in the fertility is seen from the age-group 30-34 onwards.

STATEMENT 14  
Age specific marital fertility rates  
by residence, India, 1990\*

Residence	Age-group						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Combined	248.7	309.9	217.5	129.6	78.1	35.1	15.5
Rural	244.8	310.9	226.8	143.3	88.5	40.4	17.6
Urban	277.2	305.8	188.7	88.3	44.1	17.7	7.6

\* Excludes Jammu & Kashmir

3.9 Statement 15 presents age specific marital fertility rates. It is observed that the age pattern of marital fertility in different states (rural and urban combined) is almost similar to the aforementioned pattern. In Kerala and Tamil Nadu where age specific marital fertility rates are significantly lower for 30-34 and onwards age-groups.

STATEMENT 15  
Age specific marital fertility rates  
India and major States, 1990

India/ Major States	Age-group						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
INDIA*	248.7	309.9	217.5	129.6	78.1	35.1	15.5
Andhra Pradesh	286.5	273.2	155.1	83.7	36.9	13.3	5.1
Assam	346.2	332.2	244.8	151.8	82.6	43.8	6.1
Bihar	202.7	266.4	250.2	182.0	132.7	68.8	28.3
Gujarat	161.7	353.9	232.3	110.0	46.0	19.7	7.0
Haryana	242.9	344.8	211.4	110.6	58.0	19.9	10.7
Karnataka	292.3	340.5	199.8	97.4	48.7	20.6	7.5
Kerala	264.1	292.2	168.4	57.7	18.0	7.1	1.5
Madhya Pradesh	268.8	345.3	250.3	149.4	83.7	42.5	15.5
Maharashtra	262.7	317.9	190.7	88.3	35.6	10.7	3.1
Orissa	278.6	301.0	218.4	129.2	65.8	23.6	9.7
Punjab	267.8	362.3	237.9	105.6	46.9	13.7	1.2
Rajasthan	194.1	301.6	232.1	157.5	99.1	46.8	23.7
Tamil Nadu	335.8	297.1	152.7	61.0	24.4	7.5	1.4
Uttar Pradesh	211.2	311.2	263.5	208.2	148.3	70.1	37.4
West Bengal	307.0	292.0	204.0	110.1	69.5	26.8	12.6

\* Excludes Jammu & Kashmir

3.10 Marriage is an important aspect of social life. In the absence of compulsory registration of marriages in the country the data on age at marriage are collected through sample surveys by asking direct questions by the field investigator. Age at effective marriage is a key factor which influences the fertility pattern. Statement 16 gives the mean age at effective marriage for major states and all-India. The data on which age at effective marriage has been worked out relate to the women who got effectively married during the year 1990. At the national level the

mean age at effective marriage for rural and urban areas combined is 19.3 years. For rural areas the mean age at effective marriage is 19 years as compared to 20.6 years for urban areas. Among the major states Kerala (22.2) has the highest mean age at effective marriage and Andhra Pradesh (17.9) has the lowest.

STATEMENT 16  
Mean age at effective marriage, India and  
major States, 1990

India/Major States	(Years)		
	Combined	Rural	Urban
INDIA*	19.3	19.0	20.6
Andhra Pradesh	17.9	17.6	19.1
Assam	20.5	20.2	21.9
Bihar	18.3	18.2	19.2
Gujarat	20.2	20.1	20.5
Haryana	18.6	18.4	19.7
Karnataka	19.1	18.8	20.3
Kerala	22.2	22.1	22.4
Madhya Pradesh	18.6	18.3	20.1
Maharashtra	18.6	18.1	20.3
Orissa	19.5	19.4	20.3
Punjab	20.6	20.5	21.0
Rajasthan	18.4	18.0	20.0
Tamil Nadu	20.1	19.8	20.7
Uttar Pradesh	18.1	17.8	20.3
West Bengal	19.4	19.0	21.3

\* Excludes Jammu & Kashmir

3.11 Differences in the pattern of child bearing is measured in terms of the mean age of fertility. It describes the age pattern of fertility of a synthetic cohort of hypothetical group of women viewed as having in their life time fertility experience recorded in a calendar year. The mean age of fertility has been calculated from the age specific fertility rates. Statement 17 shows the mean age of fertility for India and different states. At the national level the mean age of fertility is found to be 27.6 years. Amongst the states it ranges from 29.4 for Uttar Pradesh to 25.2 for Andhra Pradesh.

## STATEMENT 17

Mean age of fertility, India  
and major States, 1990

India/Major States	Mean age of fertility (years)
<b>INDIA*</b>	27.6
Andhra Pradesh	25.2
Assam	28.3
Bihar	29.0
Gujarat	27.1
Haryana	26.7
Karnataka	26.4
Kerala	26.2
Madhya Pradesh	26.9
Maharashtra	25.5
Orissa	27.3
Punjab	27.0
Rajasthan	28.0
Tamil Nadu	25.6
Uttar Pradesh	29.4
West Bengal	27.1

\* Excludes Jammu & Kashmir

3.12 The cumulative value of the age specific fertility rates at the end of the reproductive period gives a measure of fertility known as Total Fertility Rate (TFR). This indicates the average number of children expected to be born per woman during the entire span of her reproductive period, if the age specific fertility rates continue to be the same and there is no mortality. The TFRs worked out on the basis of ASFRs of 1990 are given in statement 18. The TFR for India is found to be 3.8. Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh have values exceeding All-India. Uttar Pradesh (5.2) registered the highest TFR followed by Bihar and Madhya Pradesh (4.8). On the other extreme, Kerala (1.9) has the lowest TFR. Based on the levels of TFR the states have been categorised as under:-



TFRStates

Below 2	Kerala
2.0 - 3.0	Tamil Nadu
3.0 - 4.0	Andhra Pradesh, Assam, Gujarat, Haryana, Karnataka, Maharashtra, Orissa, Punjab and West Bengal
4.0 - 5.0	Bihar, Madhya Pradesh and Rajasthan
5.0 - 6.0	Uttar Pradesh

STATEMENT 18  
Total fertility rates by residence,  
India and major States, 1990

India/Major States	Combined	Rural	Urban
INDIA*	3.8	4.1	2.8
Andhra Pradesh	3.1	3.2	2.6
Assam	3.4	3.5	2.2
Bihar	4.8	4.9	3.4
Gujarat	3.4	3.5	3.1
Haryana	3.0	4.1	2.9
Karnataka	3.2	3.5	2.6
Kerala	1.9	1.9	1.9
Madhya Pradesh	4.8	5.1	3.4
Maharashtra	3.2	3.6	2.6
Orissa	3.5	3.6	2.6
Punjab	3.2	3.4	2.9
Rajasthan	4.5	4.8	3.5
Tamil Nadu	2.3	2.5	2.1
Uttar Pradesh	5.2	5.5	3.8
West Bengal	3.4	3.9	2.1

\* Excludes Jammu & Kashmir

3.13 A comparison of TFRs for the period 1981-83, and 1988-90 indicates decline in the TFRs in all states (Statement 19). The highest decline (28.6 per cent) is observed in Kerala. At national level, there is a decline of 13.3 per cent.

**STATEMENT 19**  
**Total fertility rates, India and major**  
**states, 1981-83 and 1988-90**

India/ Major States	1981-83	1988-90	Percentage change w.r.t. 1981-83
<b>INDIA*</b>	4.5	3.9	-13.3
Andhra Pradesh	3.9	3.1	-20.5
Assam	4.2	3.5	-16.7
Bihar	5.6	5.1	-8.9
Gujarat	4.2	3.4	-19.0
Haryana	4.9	4.1	-16.3
Karnataka	3.6	3.3	-8.3
Kerala	2.8	2.0	-28.6
Madhya Pradesh	5.2	4.7	-9.6
Maharashtra	3.7	3.4	-8.1
Orissa	4.4	3.6	-18.2
Punjab	4.0	3.3	-17.5
Rajasthan	5.5	4.6	-16.4
Tamil Nadu	3.3	2.4	-27.3
Uttar Pradesh	5.8	5.3	-8.6
West Bengal	4.1	3.4	-17.1

\* Excludes Jammu & Kashmir

3.14 The 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 age specific marital fertility rates continue to be the same and there is no mortality. The TMFRs worked out on the basis of ASMRs of 1990 are given in statement 20. The TMFR at the all-India level is found to be 5.2. Assam, Bihar, Madhya Pradesh, Rajasthan and Uttar Pradesh have values of TMFR exceeding the All-India level Kerala (4.0) registered the lowest TMFR. Whereas the highest (6.2) is for Uttar Pradesh. Based on different levels of TMFR the states have been categorized as under:-

TMFRStates

- 4-5 Andhra Pradesh, Gujarat, Kerala,  
Maharashtra, Tamil Nadu,
- 5-6 Bihar, Haryana, Karnataka, Madhya Pradesh,  
Orissa, Punjab, Rajasthan, West Bengal
- 6-7 Assam, Uttar Pradesh.

STATEMENT 20  
Total Marital fertility rates by residence,  
India and major States, 1990

India/Major States	Combined	Rural	Urban
INDIA*	5.2	5.4	4.6
Andhra Pradesh	4.3	4.3	4.4
Assam	6.0	6.1	5.3
Bihar	5.7	5.8	4.7
Gujarat	4.7	4.7	4.6
Haryana	5.0	5.2	4.3
Karnataka	5.0	5.1	4.9
Kerala	4.0	4.0	4.5
Madhya Pradesh	5.8	6.0	4.9
Maharashtra	4.5	4.6	4.6
Orissa	5.1	5.2	4.9
Punjab	5.2	5.3	5.0
Rajasthan	5.3	5.4	4.6
Tamil Nadu	4.4	4.5	4.3
Uttar Pradesh	6.2	6.4	5.6
West Bengal	5.1	5.5	4.1

\* Excludes Jammu & Kashmir

3.15 When the age specific fertility rates are calculated on the basis of female births only, then the cumulative value of these ASFRs at the end of the reproductive period gives the Gross Reproduction Rate (GRR). This would indicate the average number of female children expected to be born per woman during the entire reproductive span of 15-49 years if there is no mortality, and the fertility schedules represented by the age specific fertility rates continue to remain the same. This is also considered as the replacement index. The GRR for India is found as 1.8. Kerala (0.9) has the lowest GRR, whereas Uttar Pradesh have the highest GRR

(2.4). The rates for rural areas are in the range of 0.9 for Kerala to 2.6 for Uttar Pradesh while the rates for urban areas are in the range of 0.9 for Kerala to 1.8 for Uttar Pradesh. The states have been grouped according to the values of GRR as under:-

<u>Ranges of GRR</u>	<u>States</u>
0.9 - 1.5	Kerala, Tamil Nadu.
1.5 - 2.0	Andhra Pradesh, Assam, Gujarat, Haryana, Karnataka, Maharashtra, Orissa, Punjab and West Bengal
2.0 - 2.5	Bihar, Madhya Pradesh, Rajasthan, Uttar Pradesh

STATEMENT 21  
Gross reproduction rates (GRR) by residence,  
India and major States, 1990

India/Major States	Combined	Rural	Urban
INDIA*	1.8	2.0	1.3
Andhra Pradesh	1.5	1.5	1.3
Assam	1.7	1.7	1.0
Bihar	2.3	2.3	1.7
Gujarat	1.6	1.7	1.5
Haryana	1.7	1.9	1.4
Karnataka	1.5	1.6	1.3
Kerala	0.9	0.9	0.9
Madhya Pradesh	2.3	2.5	1.6
Maharashtra	1.6	1.7	1.3
Orissa	1.7	1.7	1.2
Punjab	1.5	1.6	1.4
Rajasthan	2.1	2.2	1.6
Tamil Nadu	1.1	1.2	1.0
Uttar Pradesh	2.4	2.6	1.8
West Bengal	1.6	1.9	1.0

\* Excludes Jammu & Kashmir

3.16 Information about the type of medical attention at birth is collected in respect of every birth recorded and, as such, this information is likely to be useful by way of indicating the extent of availability of institutional and professional medical help. Births are classified into four categories. All births which have taken place in hospitals

and nursing homes etc. are categorised as institutional. All domiciliary births are classified according to whether these are attended by (i) trained professionals, or (ii) untrained professionals and others. The percentage distribution of births according to the type of attention at birth at the national level is shown in statement 22. It is observed that institutional births comprise 22.9 per cent of the total births. Births attended by trained professionals account for 21.3 per cent and the remaining 55.8 per cent of births are found to have been attended by untrained professionals and others. So far as rural areas are concerned, institutional births comprise 16.2 per cent and births attended by trained professionals comprise 20.2 per cent of the total rural births. The percentage of births attended by untrained professionals and others is 63.5 in the rural areas. On the contrary the births attended to by untrained professionals and others, in urban areas, comprise only 21.2 per cent of the total urban births. The institutional births in urban areas comprise 52.8 per cent of the total urban births and the births attended by trained professionals comprise 26.1 per cent. These are much higher than the corresponding figures for the rural areas.

STATEMENT 22

Per cent distribution of births by type of medical attention at birth by residence, India, 1990\*

Residence	Type of medical attention at birth		
	Institutional	Attended by trained medical professionals	Attended by untrained professionals and others
Combined	22.9	21.3	55.9
Rural	16.2	20.2	63.5
Urban	52.8	26.1	21.2

\* Excludes Jammu & Kashmir

3.17 State-wise percentage distribution of births by type of attention at birth is shown in statement 23. In the case of institutional births, the highest percentage (89.8) has been registered by Kerala. The lowest percentage of institutional births is recorded in Uttar Pradesh (4.2). In the case of births attended by untrained professionals and others the highest percentage is recorded in Rajasthan (78.1) and the lowest in Kerala (3.9).

STATEMENT 23

Per cent distribution of births by type of medical attention at birth in major States, 1990

Major States	Type of medical attention at birth		
	Institutional	Attended by trained professionals	Attended by untrained professionals and others
Andhra Pradesh	34.9	17.5	47.6
Assam	17.6	9.6	72.8
Bihar	10.9	14.4	74.7
Gujarat	22.8	32.9	44.3
Haryana	18.6	63.9	17.5
Karnataka	33.8	28.1	38.1
Kerala	89.8	6.3	3.9
Madhya Pradesh	11.6	13.5	74.9
Maharashtra	33.6	14.7	51.7
Orissa	9.0	16.5	74.6
Punjab	7.4	82.4	10.3
Rajasthan	4.4	17.5	78.1
Tamil Nadu	52.4	20.7	26.9
Uttar Pradesh	4.2	25.1	70.7
West Bengal	29.7	8.5	61.8

3.18 Percentage distribution of births by type of medical attention at birth in rural areas of major states is shown in statement 24. The highest percentage of institutional births are found to be in Kerala (88.7). In most of the states, the percentage of births attended by trained professionals is generally low except in Punjab (82.4) and Haryana (64.9). In Kerala, the percentage of births attend-

ed by untrained professionals and others is the lowest (4.5). This is followed by Punjab (13.0), Haryana (18.4) and Tamil Nadu (33.9). In Madhya Pradesh, and Rajasthan over four-fifths of the births are attended by untrained professionals and others.

STATEMENT 24  
Per cent distribution of births by type of  
attention at birth in rural areas of  
major States, 1990

Major States	Type of attention at birth		
	Institutional	Attended by trained professionals	Attended by untrained professionals and others
Andhra Pradesh	18.9	21.3	59.8
Assam	12.2	8.8	79.0
Bihar	9.1	12.8	78.1
Gujarat	15.6	36.0	48.4
Haryana	16.7	64.9	18.4
Karnataka	22.4	31.6	46.0
Kerala	88.7	6.8	4.5
Madhya Pradesh	4.8	12.5	82.7
Maharashtra	20.4	13.8	65.8
Orissa	5.4	15.0	79.6
Punjab	4.5	82.4	13.0
Rajasthan	2.1	14.8	83.1
Tamil Nadu	41.0	25.1	33.9
Uttar Pradesh	2.5	19.1	78.4
West Bengal	22.7	8.1	69.2

3.19 In urban areas, percentages of institutional births are much higher than those in rural areas (statement 25). The percentages of births attended by trained professionals are also generally higher as compared to corresponding percentages for rural areas. Kerala (94.4) has recorded the highest percentage of institutional births followed by Tamil Nadu (87.7). The lowest percentage of births attended by untrained professionals and others is found to be 1.1 for Kerala and the highest percentage 51.7 for Rajasthan.

STATEMENT 25

Per cent distribution of births by type of attention at birth in urban areas of major States, 1990

Major States	Type of attention at birth		
	Institutional	Attended by trained professionals	Attended by untrained professionals and others
Andhra Pradesh	74.1	8.3	17.6
Assam	50.0	14.5	35.5
Bihar	27.5	28.5	44.0
Gujarat	62.7	15.9	21.4
Haryana	26.1	59.9	14.0
Karnataka	70.3	16.9	12.8
Kerala	94.4	4.5	1.1
Madhya Pradesh	49.1	18.9	32.0
Maharashtra	75.1	17.8	7.1
Orissa	33.0	26.6	40.4
Punjab	14.9	82.3	2.7
Rajasthan	16.4	31.9	51.7
Tamil Nadu	87.7	7.1	5.2
Uttar Pradesh	13.0	56.5	30.5
West Bengal	77.7	10.7	11.6



## CHAPTER - 4

### MEASURES OF MORTALITY

Crude death rate is the most commonly used measure of mortality level of people residing in that region. For the year 1990, the crude death rate for India is estimated to be 9.7. The rate for rural areas is 10.5 which is much higher than the rate of 6.8 for urban areas. From statement 26 it is seen that level of crude death rate varies from 6.0 in Kerala to 12.6 in Madhya Pradesh. There are ten states having death rate below the national level. The states having death rate higher than the national level (9.7) are Assam (10.5), Bihar (10.6), Madhya Pradesh (12.6), Orissa (11.7) and Uttar Pradesh (12.0).

STATEMENT 26  
Estimated crude death rates by residence,  
India and major States, 1990

India/Major States	Combined	Rural	Urban
INDIA*	9.7	10.5	6.8
Andhra Pradesh	9.1	9.7	6.8
Assam	10.5	10.8	7.6
Bihar	10.6	11.0	6.2
Gujarat	8.9	9.6	7.2
Haryana	8.4	8.9	6.9
Karnataka	8.1	8.8	6.1
Kerala	6.0	6.0	6.1
Madhya Pradesh	12.6	13.7	7.6
Maharashtra	7.4	8.5	5.4
Orissa	11.7	12.2	6.9
Punjab	7.8	8.5	5.8
Rajasthan	9.6	10.1	7.5
Tamil Nadu	8.5	9.6	6.5
Uttar Pradesh	12.0	12.8	8.8
West Bengal	8.4	9.0	7.0

\*Excludes Jammu & Kashmir

4.1 Based on figures of death rate in statement 26 the statewise grouping of states by death rates in rural/urban

by place of residence are given below. It is observed that Kerala has the lowest death rate both in the rural and urban areas.

Rural death rate	Urban death rate	
	Below 7.0	7.0-9.0
Below 7.0	Kerala	-
7.0 - 9.0	Haryana, Karnataka, Maharashtra, Punjab	-
9.0 - 11.0	Andhra Pradesh, Tamil Nadu	Assam, Gujarat, Rajasthan, West Bengal
11.0 - 13.0	Bihar, Orissa	Uttar Pradesh
13 & above	-	Madhya Pradesh

4.2 Statement 27 shows the average death rate for India and major states for the periods 1981-83 and 1988-90. Statewise comparison of the average death rates show decline in respect of all the major states. The extent of decline varies from 5.4 per cent in Orissa to 24.1 per cent in Tamil Nadu.

STATEMENT 27

Average estimated crude death rates, India  
and major States, 1981-83 and 1988-90

India/ Major States	1981-83	1988-90	Percentage change w.r.t. 1981-83
<b>INDIA*</b>	11.3	10.7	-5.3
Andhra Pradesh	11.1	9.9	-10.8
Assam	11.8	11.3	-4.2
Bihar	13.1	12.6	-3.8
Gujarat	12.6	10.2	-19.1
Haryana	10.7	9.0	-15.9
Karnataka	9.2	8.7	-5.4
Kerala	6.6	6.2	-6.1
Madhya Pradesh	15.3	13.5	-11.8
Maharashtra	9.2	8.4	-8.7
Orissa	12.9	12.7	-1.6
Punjab	9.1	8.2	-9.9
Rajasthan	13.3	12.1	-9.0
Tamil Nadu	11.6	9.3	-19.8
Uttar Pradesh	15.7	13.4	-14.6
West Bengal	10.6	8.7	-17.9

\*Excludes Jammu & Kashmir

4.3. Statement 28 gives estimated death rates at the national level by sex and residence. It is observed that both male and female have lower level of mortality in urban areas than rural areas. Male-female differentials do not exist in rural areas. In urban areas males have a higher level of mortality than females.

STATEMENT 28  
Estimated death rates by sex and residence  
India, 1990

Residence	Male	Female
Combined	9.7	9.6
Rural	10.5	10.5
Urban	7.1	6.5

4.4 Statewise male and female death rates are shown in statement 29. It is seen that in 10 states the female death rate is lower than male death rate. The position is reverse in the case of Bihar, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh.

STATEMENT 29

Estimated death rates by sex,  
major States, 1990

Major States	Male	Female
Andhra Pradesh	9.6	8.5
Assam	10.7	10.3
Bihar	10.1	11.0
Gujarat	9.3	8.5
Haryana	8.6	8.3
Karnataka	8.9	7.2
Kerala	6.9	5.1
Madhya Pradesh	12.1	13.1
Maharashtra	7.5	7.2
Orissa	11.5	11.8
Punjab	8.0	7.5
Rajasthan	9.5	9.7
Tamil Nadu	9.2	7.8
Uttar Pradesh	11.4	12.7
West Bengal	8.5	8.3

4.5 Statement 30 gives the estimates of Infant Mortality Rate (IMR) by residence for India and major states for the year 1990. It is observed that infant mortality rate for India for 1990 is 80 per thousand live births. The rural rate (86) is higher than the urban rate (50). Among the major States, the lowest rate is recorded for Kerala (17) and the highest rate is recorded for Orissa (122). The rural rates are higher than the urban rates in respect of all states. The states can be grouped according to the level of infant mortality as under:-

<u>Infant mortality</u>	<u>States</u>
Below 25	Kerala
25 - 50	--
50 - 75	Andhra Pradesh, Gujarat, Haryana, Karnataka, Maharashtra, Punjab, <del>Tamil Nadu</del> West Bengal
75 - 100	Assam, Bihar, Rajasthan, Uttar Pradesh, <del>West Bengal</del>
100 - 125	Madhya Pradesh, Orissa

STATEMENT 30

Estimated infant mortality rates by residence,  
India and major States, 1990

India/Major States	Combined	Rural	Urban
<b>INDIA*</b>	80	86	50
Andhra Pradesh	70	73	56
Assam	76	78	39
Bihar	75	77	46
Gujarat	72	79	54
Haryana	69	73	53
Karnataka	70	80	39
Kerala	17	17	15
Madhya Pradesh	111	120	61
Maharashtra	58	64	44
Orissa	122	127	68
Punjab	61	66	45
Rajasthan	84	88	59
Tamil Nadu	59	70	37
Uttar Pradesh	99	105	67
West Bengal	63	68	41

\*Excludes Jammu & Kashmir

4.6 The infant mortality rates by sex are presented in statement 31 for major states. The states having higher male infant mortality rate as compared to female infant mortality rate are Andhra Pradesh, Assam, Bihar, Gujarat Karnataka, Kerala, and West Bengal.

Estimated infant mortality rates by sex, India  
and major States, 1990

India/Major States	Male	Female
INDIA*	78	81
Andhra Pradesh	72	68
Assam	78	73
Bihar	75	74
Gujarat	73	70
Haryana	62	77
Karnataka	76	64
Kerala	19	14
Madhya Pradesh	115	112
Maharashtra	55	62
Orissa	121	123
Punjab	52	71
Rajasthan	80	88
Tamil Nadu	57	61
Uttar Pradesh	94	104
West Bengal	64	62

\*Excludes Jammu & Kashmir

4.7 Statement 32 presents state-wise average infant mortality rates for the periods 1981-83 and 1988-90. The average infant mortality rates among states for the period 1988-90 are found to be lower than those for the period 1981-83 except in Karnataka. The extent of decline is found to be maximum for Kerala (28.1).

## STATEMENT- 32

Average estimated infant mortality rates, India  
and major States, 1981-83 and 1988-90

India/Major States	1981-83	1988-90	Percentage change w.r.t. 1981-83
INDIA*	107	88	-13.1
Andhra Pradesh	79	78	-1.3
Assam	101	88	-12.6
Bihar	110	88	-20.3
Gujarat	112	83	-26.2
Haryana	99	80	-19.2
Karnataka	68	74	9.3
Kerala	31	22	-28.1
Madhya Pradesh	132	116	-12.1
Maharashtra	75	61	-18.3
Orissa	129	122	-5.7
Punjab	79	63	-20.6
Rajasthan	105	94	-10.5
Tamil Nadu	86	67	-21.7
Uttar Pradesh	153	114	-25.7
West Bengal	86	69	-19.4

\*Excludes Jammu & Kashmir

4.8 The contribution of infant deaths to total deaths is about 25 per cent at the national level (statement 33). Among major states, Kerala (5.5) is having the lowest percentage of infant deaths to total deaths while the highest percentage (32.8) is in Madhya Pradesh. For rural areas, the percentage of infant deaths is 26.1 as against 18.3 for urban areas at the national level. In the rural area more than 25 per cent of infant deaths are reported in the states of Haryana, Karnataka, Madhya Pradesh, Orissa, Rajasthan and

Uttar Pradesh In urban areas percentage of infant deaths to total deaths is below 25 per cent in all the major states the lowest percentage being (5.0) for Kerala and the highest (23.5) for Madhya Pradesh. The states can be categorised on the basis of the percentage of infant deaths as under:-

Percentage of infant deaths	States
Below 10	Kerala
10-15	Tamil Nadu
15-20	Tamil Nadu
20-25	Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Karnataka, Maharashtra, Punjab, West Bengal.
25+	Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh. Haryana

#### STATEMENT- 33

Percentage of infant deaths to total deaths by residence, India and major States, 1990

India/Major States	Combined	Rural	Urban
INDIA*	24.8	26.1	18.3
Andhra Pradesh	20.3	20.2	20.7
Assam	21.3	21.9	11.3
Bihar	23.3	23.6	18.3
Gujarat	23.8	24.7	21.0
Haryana	26.0	27.0	21.2
Karnataka	24.4	26.5	16.1
Kerala	5.5	5.6	5.0
Madhya Pradesh	32.8	34.0	23.5
Maharashtra	21.7	22.4	19.6
Orissa	31.4	31.9	23.4
Punjab	21.6	22.1	19.9
Rajasthan	29.2	30.4	22.4
Tamil Nadu	15.0	16.0	12.2
Uttar Pradesh	29.3	30.3	22.4
West Bengal	21.2	24.3	10.9

\*Excludes Jammu & Kashmir



4.9 Statement 34 presents the neo-natal and post neo-natal mortality rates for India for the year 1990. It may be seen that neo-natal mortality rates are much higher than post neo-natal mortality rates in respect of both rural and urban areas. Moreover the neo-natal mortality rates as well as the post neo-natal mortality rates for rural areas are higher than the corresponding rates for urban areas.

**STATEMENT 34**  
Neo-natal and post neo-natal mortality rates by residence, India, 1990

Residence	Neo-natal mortality	Post neo-natal mortality
Combined	52.5	27.2
Rural	57.4	28.9
Urban	30.9	19.5

4.10 Among the major states, the highest neo-natal mortality rate is 78.8 for Orissa (statement 35) and the lowest rate is 12.6 for Kerala. The highest post neo-natal mortality rate is 39.2 for Madhya Pradesh and the lowest is 4.2 for Kerala. The distribution of states on the basis of neo-natal and post neo-natal mortality rates is as below:-

Neo-natal mortality rate	Post neo-natal mortality rate	
	Below 25	25-50
Below 25	Kerala	-
25-50	Andhra Pradesh, Maharashtra, Tamil Nadu	Assam, Bihar, Haryana, Punjab, West Bengal
50-75	Gujarat, Karnataka	Madhya Pradesh, Rajasthan, Uttar Pradesh
75 & above	-	Orissa

**STATEMENT 35**  
**Neo-natal and post neo-natal mortality**  
**rates for major States, 1990**

Major States	Neo-natal	Post neo-natal
Andhra Pradesh	48.3	21.6
Assam	48.1	27.5
Bihar	48.9	25.9
Gujarat	50.0	21.5
Haryana	38.6	30.2
Karnataka	51.1	19.3
Kerala	12.6	4.2
Madhya Pradesh	71.9	39.2
Maharashtra	42.2	15.9
Orissa	78.8	43.2
Punjab	33.6	27.2
Rajasthan	52.3	31.5
Tamil Nadu	43.9	15.1
Uttar Pradesh	65.2	33.8
West Bengal	37.4	25.6

4.11 Percentages of neo-natal and post neo-natal infant deaths for major states are shown in statement 36. It is seen that neo-natal deaths account for 66 per cent of the infant deaths at the national level.

## STATEMENT 36

Percentages of neo-natal and post neo-natal  
deaths to total infant deaths, India  
and major States, 1990

India/ Major States	Neo-natal	Post neo-natal deaths
INDIA*	65.9	34.1
Andhra Pradesh	69.1	30.9
Assam	63.7	36.3
Bihar	65.4	34.6
Gujarat	69.9	30.1
Haryana	56.1	43.9
Karnataka	72.6	27.4
Kerala	75.0	25.0
Madhya Pradesh	64.7	35.3
Maharashtra	72.7	27.3
Orissa	64.6	35.4
Punjab	55.3	44.7
Rajasthan	62.4	37.6
Tamil Nadu	74.4	25.6
Uttar Pradesh	65.8	34.2
West Bengal	59.4	40.6

\*Excludes Jammu & Kashmir

4.12 Statement 37 shows the peri-natal mortality rates for rural and urban areas of India for 1990 along with corresponding still birth rates. The peri-natal mortality rate as well as the still birth rate for rural areas is found to be higher than that for urban areas. For rural and urban areas combined, the peri-natal mortality rate is found to be 48.4 and the still birth-rate 11.8.

STATEMENT 37  
Estimated peri-natal mortality rate and  
still birth rate by residence, India, 1990

Residence	Peri-natal mortality	Still birth rate
Combined	48.4	11.8
Rural	51.7	11.9
Urban	34.0	11.0

4.13 Statement 38 gives peri-natal mortality rates and still birth rates for major states. The highest peri-natal mortality rate is 73.1 for Orissa and the lowest rate is 20 for Kerala. As regards the still birth rate Punjab has the highest rate of 27.9 and Gujarat has the lower still birth rate of 6.5.

STATEMENT 38  
Estimated peri-natal mortality rates and  
still birth rates, major states, 1990

Major States	Peri-natal mortality rates	Still birth rate
Andhra Pradesh	52.3	13.2
Assam	40.9	11.4
Bihar	42.8	8.6
Gujarat	42.8	6.5
Haryana	42.1	19.7
Karnataka	57.6	18.0
Kerala	20.0	10.3
Madhya Pradesh	59.0	10.5
Maharashtra	44.7	13.8
Orissa	73.1	20.9
Punjab	49.0	27.9
Rajasthan	45.0	7.7
Tamil Nadu	47.1	11.1
Uttar Pradesh	51.6	8.3
West Bengal	42.1	16.8

4.14 Statement 39 presents sexwise death rate for children aged 0-4 years at the national level. It is seen that death rate among children aged 0-4 is 26.3 per 1000

child population. The rural rate (29.1) is almost twice the urban rate (15.1). Also the female death rate is higher than the male death rate both in rural and urban areas.

STATEMENT 39

Estimated death rates for children aged 0-4 years by residence and sex, India, 1990

Residence	Person	Male	Female
Combined	26.3	24.8	27.9
Rural	29.1	27.3	31.0
Urban	15.1	14.8	15.4

4.15 State-wise estimated death rates among children aged 0-4 years are shown in Statement 40. The lowest rate is found to be 4.6 for Kerala, while the highest is found to be 39.4 for Madhya Pradesh. The distribution of states according to rural and urban rates is as follows:

Rural rates	Urban rates	
	Below 15	15-30
Below 15	Kerala	-
15 - 30	Assam, Bihar, Haryana, Karnataka, Maharashtra, Punjab, Tamil Nadu, West Bengal	Andhra Pradesh, Gujarat, Punjab
30 - 45	-	Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh

STATEMENT 40

Estimated death rates for children aged 0-4 years by residence, major states, 1990.

Major States	Combined	Rural	Urban
Andhra Pradesh	20.7	22.1	15.3
Assam	28.5	29.3	14.0
Bihar	26.2	27.3	14.1
Gujarat	26.0	29.8	17.7
Haryana	21.8	23.7	14.6
Karnataka	21.1	24.4	11.2
Kerala	4.6	4.7	3.9
Madhya Pradesh	39.4	43.9	18.7
Maharashtra	16.5	18.4	12.2
Orissa	35.9	37.4	19.8
Punjab	18.3	20.0	13.4
Rajasthan	29.5	31.8	17.8
Tamil Nadu	17.0	20.5	9.7
Uttar Pradesh	36.6	39.4	22.8
West Bengal	19.7	21.5	12.4

4.16 Statement 41 presents the percentage of deaths among children aged 0-4 years. It is seen that the percentage of deaths in the age group 0-4 years is 36.1 per cent of the total deaths at the national level. The rural percentage (38.1) is much higher than the urban percentage (25.9). Amongst the major states for rural and urban areas combined Kerala (7.9) has the lowest percentage while Madhya Pradesh (45.7) has the highest percentage followed by Uttar Pradesh (44.6). The rural figures are higher than the urban figures both at the national and state level. The states are grouped on the basis of percentage of deaths among children 0-4 years as under :-

Percentage of deaths among children aged 0-4

States

Below 20	Kerala
20 - 30	Andhra Pradesh, Maharashtra, Punjab, Tamil Nadu
30 - 40	Assam, Bihar, Gujarat, Haryana, Karnataka, Punjab, West Bengal
40 and above	Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh

## STATEMENT 41

Percentages of deaths among children aged 0-4 years to total deaths by residence, India and major States, 1990

India/Major States	Combined	Rural	Urban
<b>INDIA*</b>	36.1	38.1	25.9
Andhra Pradesh	27.3	27.5	26.4
Assam	34.8	35.7	17.9
Bihar	39.1	39.6	31.0
Gujarat	33.3	34.5	29.4
Haryana	37.1	39.0	28.5
Karnataka	31.9	34.5	21.1
Kerala	7.9	8.2	6.7
Madhya Pradesh	45.7	47.3	33.5
Maharashtra	29.4	30.6	25.9
Orissa	40.0	40.4	32.4
Punjab	27.5	27.7	26.7
Rajasthan	43.4	45.5	30.4
Tamil Nadu	20.6	22.8	14.6
Uttar Pradesh	44.6	46.2	35.0
West Bengal	30.3	34.6	16.3

\*Excludes Jammu & Kashmir

4.17 From statement 42, it may be seen that death rate among children aged 5-14 years at the national level is 2.0 per thousand population. Urban areas have a much lower value (1.1) as compared to rural areas (2.2). Female death rate is found to be higher than male death rate both in the rural and urban areas.

## STATEMENT 42

Estimated death rate for children aged 5-14 years by residence and sex, India, 1990

Residence	Person	Male	Female
Combined	2.0	1.8	2.1
Rural	2.2	2.0	2.3
Urban	1.1	1.0	1.3

4.18 Statement 43 presents the estimated death rates among children aged 5-14 years for major states. Assam has the highest rate (3.8) followed by Bihar (2.6), Uttar

Pradesh (2.5), Madhya Pradesh (2.3), Orissa and Rajasthan (2.1) each. The lowest rate is recorded for Kerala (0.5). The highest urban rate is found to be 2 in Rajasthan as against 3.9 for rural areas for Assam, Bihar and Madhya Pradesh. The states can be grouped on the basis of death rates among children aged 5-14 years as under:-

Rate	States
Below 1.0	Kerala
1.0-2.0	Andhra Pradesh, Gujarat, Haryana, Karnataka, Maharashtra, Punjab, Tamil Nadu, West Bengal
2.0-3.0	Bihar, Madhya Pradesh, Orissa, Rajasthan, Uttar Pradesh
3.0-4.0	Assam

#### STATEMENT 43

Estimated death rates for children aged 5-14 years by residence, major states, 1990

Major States	Combined	Rural	Urban
Andhra Pradesh	1.6	1.8	1.0
Assam	3.8	3.9	1.3
Bihar	2.6	2.7	1.7
Gujarat	1.9	2.0	1.7
Haryana	1.2	1.3	0.8
Karnataka	1.3	1.5	1.0
Kerala	0.5	0.6	0.2
Madhya Pradesh	2.3	2.6	1.0
Maharashtra	1.3	1.6	0.8
Orissa	2.1	2.3	0.7
Punjab	1.2	1.3	0.9
Rajasthan	2.1	2.1	2.2
Tamil Nadu	1.4	1.6	0.9
Uttar Pradesh	2.5	2.7	1.5
West Bengal	1.8	2.1	1.1

4.19 Statement 44 presents death rate in the age group 15-34 years by sex and residence. It is seen that the death rate for the age-group 15-34 years at the national level is



2.6 per thousand population. Female death rate is higher than the male death rate both in rural areas whereas in urban areas male death rate is higher. The rural death rates are higher than the urban death rates.

STATEMENT 44

Estimated death rates for age-group 15-34 years by residence and sex, India, 1990

Residence	Person	Male	Female
Combined	2.6	2.3	2.8
Rural	2.8	2.5	3.2
Urban	1.8	1.9	1.7

4.20 Statement 45 gives death rate in the age group 15-34 years for major states. The lowest rate (1.2) is observed for Kerala, while the highest (3.9) is observed for Maharashtra followed by Assam and Orissa (3.2) each.

STATEMENT 45

Estimated death rates for age-group 15-34 years by residence, major states, 1990

Major States	Combined	Rural	Urban
Andhra Pradesh	2.5	2.7	1.8
Assam	3.2	3.4	1.7
Bihar	2.9	3.0	1.8
Gujarat	2.4	2.7	1.8
Haryana	2.6	3.0	1.3
Karnataka	2.1	2.3	1.7
Kerala	1.2	1.2	0.9
Madhya Pradesh	3.0	3.2	2.2
Maharashtra	3.9	4.1	3.4
Orissa	3.2	3.4	1.4
Punjab	2.3	2.7	1.2
Rajasthan	2.4	2.4	2.5
Tamil Nadu	2.5	3.1	1.4
Uttar Pradesh	3.0	3.2	2.4
West Bengal	2.5	2.6	1.7

4.21 The death rates in the age group 35-49 years are presented in statement 46 for rural and urban areas. It is seen that the death rate for the age-group 35-49 years is 5.3 which is double the death rate for the age-group 15-34 years. The male death rate in the age-group 35-49 years is found to be higher than female death rate for rural as well as urban areas.

**STATEMENT 46**  
Estimated death rate for age-group 35-49  
years by residence and sex, India, 1990

Residence	Person	Male	Female
Combined	5.3	6.0	4.5
Rural	5.6	6.2	4.9
Urban	4.3	5.2	3.3

4.22 Statement 47 gives the death rate in the age group 35-49 years by residence for major states. The lowest death rate for the age-group 35-49 years is found to be 3.7 for Kerala while the highest death rate is found to be 6.6 for Assam.

**STATEMENT 47**  
Estimated death rates for age-group 35-49  
years by residence, major states, 1990

Major States	Combined	Rural	Urban
Andhra Pradesh	5.6	6.0	4.1
Assam	6.6	6.8	4.4
Bihar	5.9	6.2	3.2
Gujarat	5.7	5.9	5.2
Haryana	5.3	5.6	4.5
Karnataka	4.8	5.0	4.3
Kerala	3.7	3.5	4.8
Madhya Pradesh	5.2	5.6	3.5
Maharashtra	3.9	4.1	3.4
Orissa	5.7	5.8	4.6
Punjab	5.1	5.9	3.3
Rajasthan	4.7	4.9	4.0
Tamil Nadu	5.2	5.6	4.3
Uttar Pradesh	6.0	6.2	5.3
West Bengal	4.9	4.7	5.3

4.23 The estimated death rates for persons aged 50 years and above at the national level is presented in Statement 48 by sex and residence. Male death rate is higher than female death rate in respect of rural as well as urban areas. Also, the rural rates are higher than the urban death rates.

STATEMENT 48  
Estimated death rate for age group 50 years and above  
by residence and sex, India, 1990

Residence	Person	Male	Female
Combined	31.4	34.0	28.6
Rural	32.0	34.8	29.2
Urban	28.9	31.1	26.6

4.24 Statement 49 gives the death rates in the age group 50 years and over for major states by rural and urban. It is observed that Maharashtra and Punjab (26.6) have the lowest and Assam (37.5) has the highest death rate. The rural death rates are generally higher than the urban rates except for Haryana, Kerala and Uttar Pradesh.

STATEMENT 49  
Estimated death rates for age group 50 years  
and above by residence, major States, 1990

Major States	Combined	Rural	Urban
Andhra Pradesh	31.1	31.3	30.2
Assam	37.5	37.5	37.0
Bihar	32.9	34.2	27.2
Gujarat	30.0	30.9	27.6
Haryana	29.8	29.0	32.5
Karnataka	29.1	29.2	28.7
Kerala	28.7	28.5	29.5
Madhya Pradesh	35.0	35.6	31.8
Maharashtra	26.6	28.5	22.4
Orissa	33.9	34.4	28.7
Punjab	26.6	27.6	23.7
Rajasthan	29.4	29.8	27.7
Tamil Nadu	31.4	31.8	30.5
Uttar Pradesh	33.6	33.6	33.8
West Bengal	31.8	32.9	29.7

4.25 Information about type of medical attention received before death was recorded in respect of all deaths. Such information is classified as (i) institutional (ii) attended by qualified medical practitioners (iii) attended by unqualified medical practitioners and (iv) not attended by professional doctor/hakim/vaidya. From statement 50, it is observed that the percentage of deaths under the category "attended by unqualified medical practitioners and others" is 49.5 at the national level. Institutional deaths comprise only 15.1 per cent of the total deaths, while deaths included under the category "attended by qualified medical practitioners" comprise 35.4 per cent of the total deaths. In respect of rural areas, institutional deaths comprise only 12.5 per cent of the total deaths, as against 28.7 per cent for urban areas.

#### STATEMENT 50

Per cent distribution of deaths by type of medical attention received before death, India, 1990

Residence	Institutional	Attended by qualified medical practitioners	Attended by unqualified medical practitioners and others
Combined	15.1	35.4	49.5
Rural	12.5	32.9	54.6
Urban	28.7	48.3	23.0

4.26 The percentage distribution of deaths by type of medical attention received before death in major states is presented in statement 51. The highest percentage of institutional deaths (46.8) is recorded for Kerala and the lowest (6.3) for Uttar Pradesh. Nearly three-fourth of deaths in Orissa and about three-fifth of deaths in Bihar, Madhya Pradesh, Rajasthan and Tamil Nadu are attended by the unqualified medical practitioners and others.

## STATEMENT 51

Per cent distribution of deaths by type of  
medical attention received before death  
major States, 1990

Major States	Institutional	Attended by qualified medical practitioners	Attended by unqualified medical practitioners and others
Andhra Pradesh	18.4	25.6	56.0
Assam	8.1	59.7	32.2
Bihar	12.6	26.5	60.9
Gujarat	14.2	36.6	49.2
Haryana	11.7	51.6	36.7
Karnataka	18.0	28.6	53.4
Kerala	46.8	32.8	20.4
Madhya Pradesh	7.9	27.2	64.9
Maharashtra	29.8	34.5	35.7
Orissa	9.1	19.5	71.4
Punjab	10.5	69.3	20.2
Rajasthan	9.4	33.0	57.6
Tamil Nadu	17.8	23.7	58.5
Uttar Pradesh	6.3	62.8	30.9
West Bengal	14.6	39.1	46.3

4.27 Statement 52 gives the percentage of deaths in the rural areas classified by type of medical attention received before death. Among major states, Kerala (46.1) has the highest percentage of institutional deaths in rural areas followed by Maharashtra where the percentage of institutional deaths is 26.3. More than three-fifth of the deaths in Bihar, Madhya Pradesh, Orissa Rajasthan and Tamil Nadu are attended by untrained medical practitioners and others. The lowest percentage of deaths attended by untrained medical practitioners and others is recorded for Punjab (21.1). In a majority of states, over one-half of the deaths is attended by untrained medical practitioners and others.

## STATEMENT 52

Per cent distribution of deaths by type of medical attention received before death for rural areas of major States, 1990

Major States	Institutional	Attended by qualified medical practitioners	Attended by unqualified medical practitioners and others
Andhra Pradesh	14.3	19.6	66.1
Assam	5.9	58.3	35.8
Bihar	10.1	24.7	65.2
Gujarat	11.3	36.7	52.0
Haryana	8.4	53.7	37.9
Karnataka	13.9	27.6	58.5
Kerala	46.1	30.8	23.1
Madhya Pradesh	5.4	23.7	70.9
Maharashtra	26.3	29.4	44.3
Orissa	8.2	18.1	73.7
Punjab	9.1	69.8	21.1
Rajasthan	7.3	31.0	61.7
Tamil Nadu	13.3	20.7	66.0
Uttar Pradesh	5.9	59.7	34.4
West Bengal	9.6	36.2	54.2

4.28 The percentage distribution of deaths in the urban areas classified by type of attention received before death is presented in statement 53. It is seen that the highest percentage of institutional deaths is found to be 49.7 for Kerala, closely followed by Maharashtra (43.8) and Bihar (40.7). The percentage of deaths attended by unqualified medical practitioners and others are in the range of 0.8 per cent in Maharashtra to 54.7 per cent in Orissa.

## STATEMENT 53

Per cent distribution of deaths by type of medical attention received before death for urban areas of major States, 1990

<i>Major States</i> Residence	Institutional	Attended by qualified medical practitioners	Attended by unqualified medical practitioners and others
Andhra Pradesh	31.9	45.6	22.5
Assam	21.7	68.1	10.1
Bihar	40.7	46.3	13.0
Gujarat	34.3	36.2	29.5
Haryana	25.5	42.8	31.7
Karnataka	34.1	32.6	33.3
Kerala	49.7	41.7	8.6
Madhya Pradesh	26.7	53.2	20.1
Maharashtra	43.8	55.4	0.8
Orissa	17.1	32.2	<del>50.7</del>
Punjab	15.2	67.3	17.5
Rajasthan	21.0	44.9	34.1
Tamil Nadu	37.5	37.1	25.4
Uttar Pradesh	8.8	81.9	9.3
West Bengal	39.6	53.6	6.8

## CHAPTER - 5

### ZONAL PATTERNS OF FERTILITY AND MORTALITY

5.1 In this chapter an attempt has been made to provide demographic profile of groups of States/UTs, termed here as "zones" based on the Sample Registration data on fertility and mortality for the year 1990. This chapter aims at studying the zonal differences in the levels of fertility and mortality. The constitution of the six zones in which the country is divided are:-

<u>Zone</u>	<u>States/Union Territories</u>
1. North	Haryana, Chandigarh, Delhi, Himachal Pradesh, Jammu & Kashmir, Punjab and Rajasthan
2. North Eastern	Arunachal Pradesh, Assam, Manipur, Meghalaya, Nagaland, Sikkim & Tripura
3. East	Andaman & Nicobar Islands, Bihar Orissa and West Bengal
4. South	Andhra Pradesh, Karnataka, Kerala Lakshdweep, Pondicherry and Tamil Nadu
5. West	Goa, Daman & Diu, Dadra & Nagar Haveli, Gujarat & Maharashtra
6. Central	Madhya Pradesh and Uttar Pradesh

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5.2 Statement 54 gives zonewise figures of sample population covered number of sample units and average sample size of the Sample Registration System areas for the year 1990.



## STATEMENT 54

Sample population, Number of Sample Units  
and average sample size, India and zones, 1990

Zones	Sample Population			No. of Sample Unit			Average Sample Size		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
INDIA*	5943616	4624293	1319323	6022	4149	1873	1009	1138	722
North*	805815	568882	236933	1061	657	404	900	1021	701
North- East	637567	518586	116934	664	527	137	960	984	868
East	1258204	1045544	212660	1298	978	320	993	1094	682
South	1478177	1095084	383093	1260	797	463	1185	1386	838
West	707121	553664	153457	709	440	269	1009	1274	575
Central	948358	765483	182875	1030	750	280	942	1044	669

\*Excludes Jammu & Kashmir

5.3 Percentage distribution of population by broad age groups and residence at the zonal level are given in statement 55. It is observed that population (0-14 years) in rural areas at the national and zonal level, is higher than the corresponding population in urban areas. However, in case of population aged 15-49 years this trend is generally reversed which may mainly be attributed to higher fertility in rural areas and migration of population from rural to urban areas. Amongst the zones central zone registered highest percentage of child population (0-14 years) both in rural and urban areas whereas lowest percentage was registered in south zone for rural areas and in North-East zone for urban areas.

## STATEMENT 55

Percent distribution of population by broad  
age groups and residence, India and zones, 1990

Zones	Combined			Rural			Urban		
	0-14	15-49	50+	0-14	15-49	50+	0-14	15-49	50+
INDIA*	36.9	50.3	12.8	37.7	49.2	13.1	34.0	54.2	11.8
North*	37.6	50.2	12.2	38.6	59.1	12.3	34.8	53.4	11.8
North-East	37.2	52.6	10.2	37.8	52.1	10.1	31.4	57.5	11.1
East	38.0	49.8	12.2	39.2	48.6	12.2	32.3	55.4	12.3
South	33.5	52.3	14.2	33.9	51.3	14.8	32.4	55.1	12.5
West	35.0	51.9	13.1	35.9	50.3	13.8	33.3	55.1	11.6
Central	39.4	48.1	12.5	39.8	47.3	12.9	36.6	51.5	10.9

\*Excludes Jammu & Kashmir

5.4 Indicators of fertility for the years 1989 and 1990 at the zone level by residence are presented in Statement 56.

## STATEMENT 56

Fertility Indicators by residence  
India and zones, 1989-90

Zones	Year	Birth Rate			General Fertility Rate			Total Fertility Rate		
		Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
INDIA*	1990	30.2	31.7	24.7	123.9	132.6	96.1	3.8	4.1	2.8
	1989	30.6	32.2	25.2	126.5	135.7	97.6	3.9	4.2	2.8
North*	1990	30.8	30.6	25.9	129.8	139.6	104.0	3.9	4.2	2.9
	1989	32.0	33.5	27.5	133.8	142.5	110.4	4.0	4.3	3.2
North-East	1990	28.5	29.4	19.6	110.8	115.2	71.6	3.3	3.5	2.0
	1989	28.9	29.8	20.1	113.5	119.2	67.9	3.4	3.6	1.9
East	1990	30.6	32.6	20.7	128.0	137.9	82.2	4.0	4.3	2.5
	1989	30.9	32.9	21.4	132.0	141.9	86.5	4.1	4.5	2.6
South	1990	24.2	24.7	22.9	92.8	96.0	84.2	2.7	2.8	2.3
	1989	24.7	25.1	23.4	95.0	98.5	85.8	2.8	2.9	2.4
West	1990	28.2	29.7	25.1	111.6	119.3	96.6	3.3	3.5	2.7
	1989	28.4	30.1	25.2	114.9	122.4	100.3	3.4	3.7	2.9
Central	1990	36.0	37.6	29.3	158.9	168.8	120.1	5.1	5.4	3.7
	1989	36.5	38.1	29.6	158.8	171.2	113.4	5.1	5.5	3.5

\*Excludes Jammu & Kashmir

5.5 Statement 57 gives estimates of some of the important indicators of mortality for the years 1989 and 1990 separately for rural and urban areas of the zones.

## STATEMENT 57

Mortality Indicators by residence zones  
and India, 1989-90.

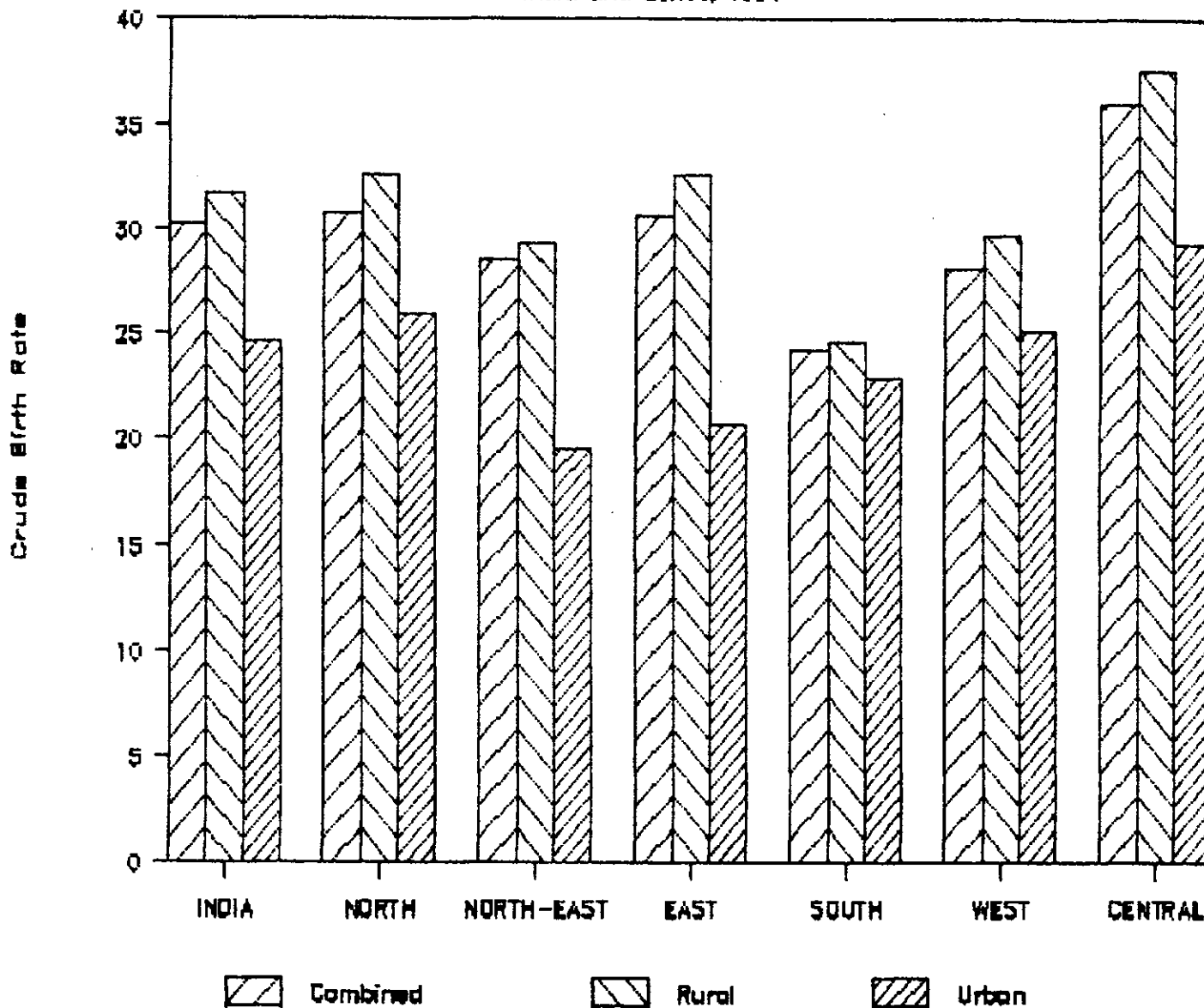
Zones	Year	Death Rate			Infant Mortality Rate			% Child Death (0-4 years)		
		Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
INDIA*	1990	9.7	10.5	6.8	80	86	50	36.1	38.1	25.9
	1989	10.3	11.1	7.2	91	98	58	38.8	40.9	27.9
North*	1990	8.7	9.4	6.5	73	80	51	37.3	39.8	27.2
	1989	9.2	10.0	6.9	83	91	54	41.1	43.4	31.3
North-East	1990	9.6	10.0	6.1	68	71	38	33.8	34.8	18.0
	1989	10.0	10.4	6.4	82	84	48	36.1	37.1	21.1
East	1990	9.9	10.5	6.8	78	83	46	36.4	38.4	21.5
	1989	10.9	11.6	7.3	91	95	59	38.8	40.6	25.4
South	1990	8.2	8.8	6.4	60	67	41	24.0	25.8	18.5
	1989	8.6	9.2	6.6	69	77	46	27.3	28.9	20.7
West	1990	7.9	8.9	6.0	63	69	47	30.7	31.7	27.0
	1989	8.5	9.3	7.1	68	75	52	31.9	34.1	26.3
Cent-ral	1990	12.2	13.1	8.4	103	110	65	45.0	46.5	34.6
	1989	12.7	13.7	8.3	118	125	76	47.6	49.1	36.9

\*Excludes Jammu & Kashmir

5.6 Figures 1 and 2 and 3 provide a pictorial view of the levels of fertility and mortality in the year 1990 in term of birth rate, and death rate and infant mortality rates at the zonal level separately for rural and urban areas.

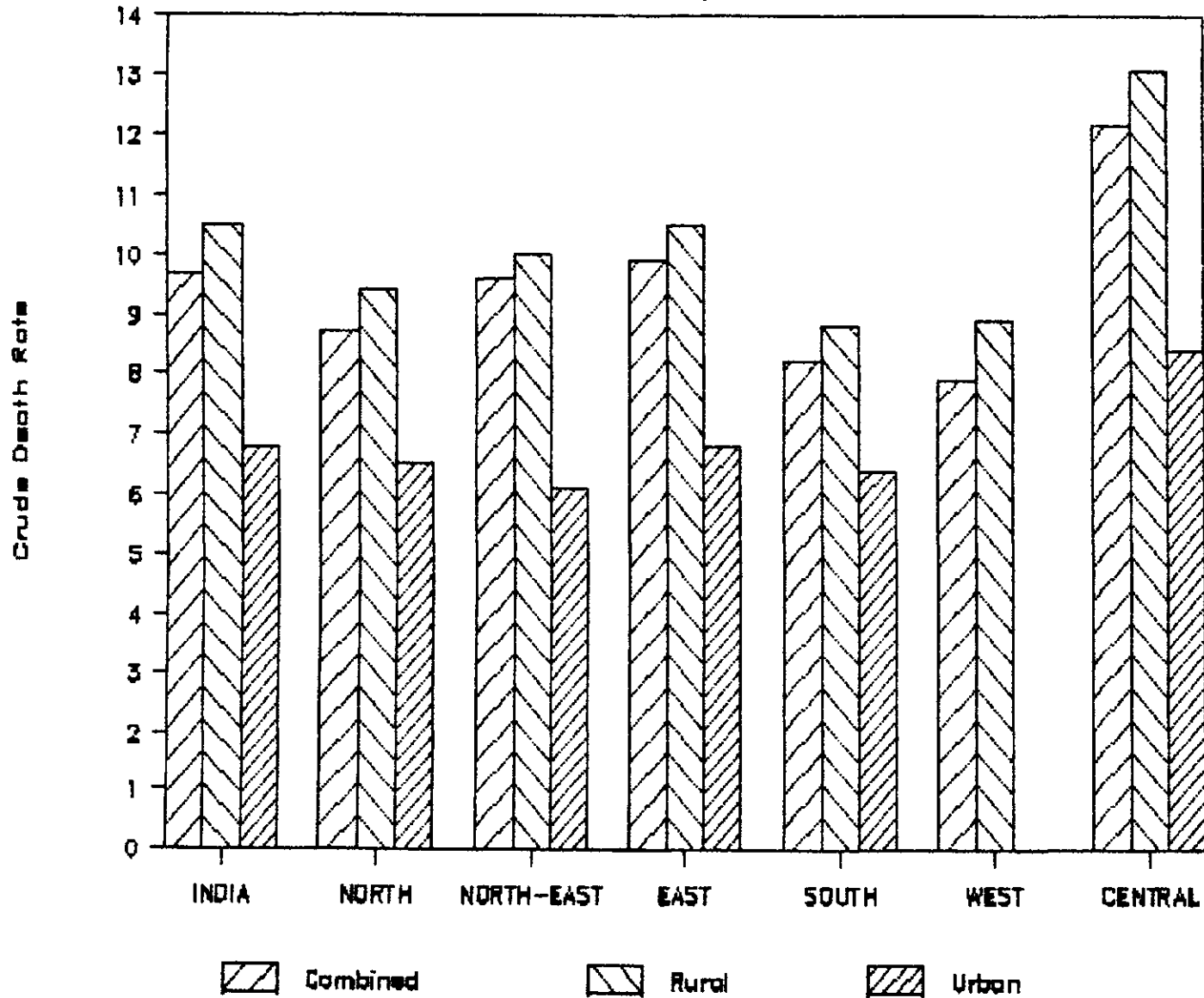
# CRUDE BIRTH RATE BY PLACE OF RESIDENCE

India and Zones, 1990



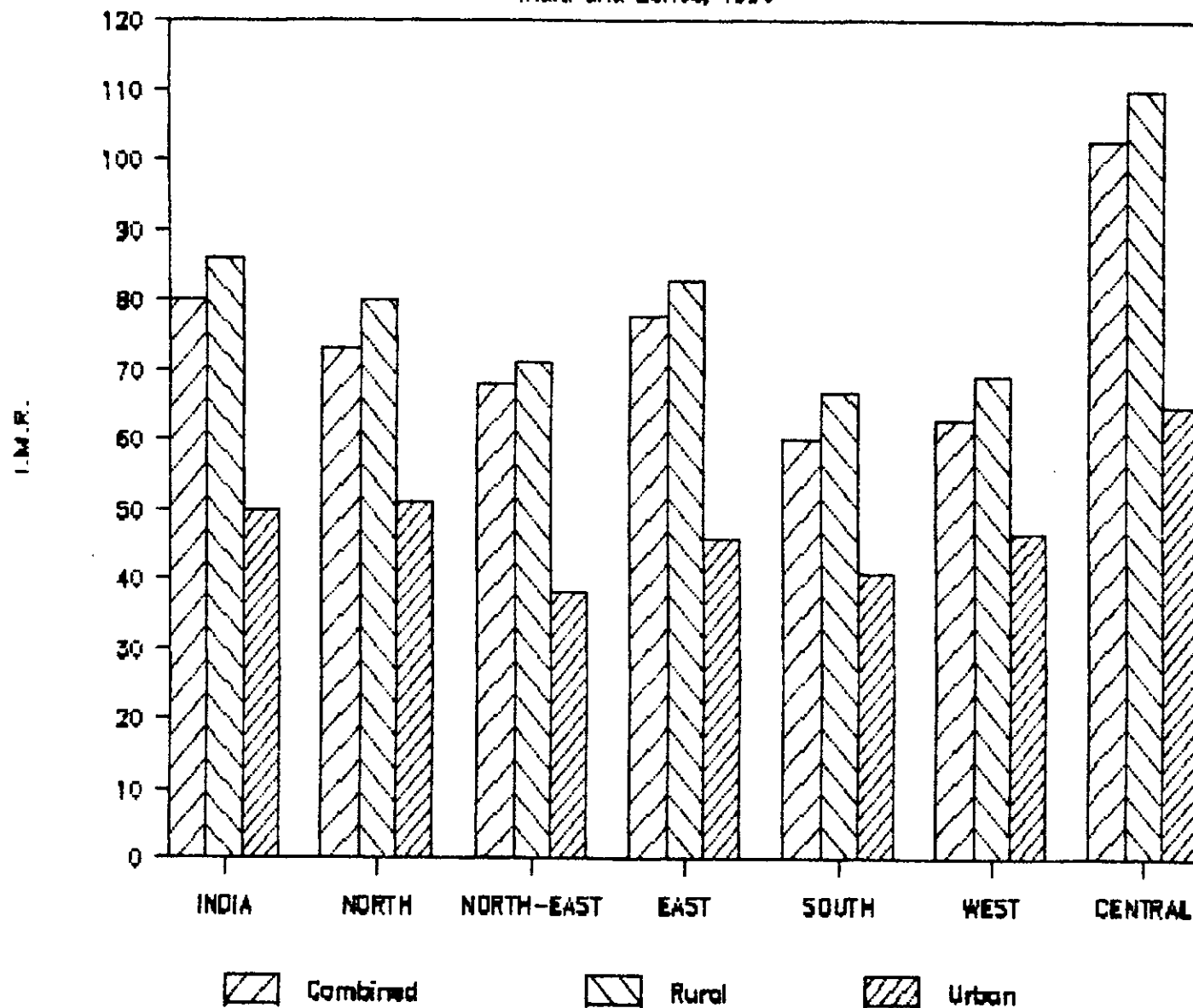
# CRUDE DEATH RATE BY PLACE OF RESIDENCE

India and Zones, 1990



# I.M.R. BY PLACE OF RESIDENCE

India and Zones, 1990



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D E T A I L E D   T A B L E S

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Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Age-Group	INDIA								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	13.3	13.3	13.2	13.7	13.8	13.7	11.7	11.6	11.8
5-9	11.7	11.7	11.7	11.9	11.9	11.8	11.2	11.2	11.3
10-14	11.9	12.1	11.6	12.1	12.3	11.8	11.1	11.1	11.1
15-19	10.6	11.0	10.2	10.7	11.2	10.2	10.3	10.4	10.2
20-24	9.5	9.4	9.6	9.3	9.2	9.3	10.3	9.9	10.7
25-29	8.0	7.9	8.1	7.6	7.5	7.8	9.2	9.1	9.2
30-34	7.0	7.0	7.0	6.7	6.6	6.7	8.1	8.3	7.9
35-39	5.9	5.8	5.9	5.7	5.5	5.8	6.5	6.7	6.2
40-44	5.0	5.0	5.0	4.9	4.8	5.0	5.5	5.7	5.3
45-49	4.4	4.3	4.4	4.4	4.2	4.5	4.4	4.5	4.2
50-54	3.7	3.7	3.7	3.7	3.7	3.7	3.7	3.8	3.5
55-59	3.1	3.1	3.0	3.1	3.2	3.1	2.8	2.8	2.8
60-64	2.2	2.1	2.3	2.2	2.2	2.3	2.0	1.9	2.1
65-69	1.9	1.8	2.0	1.9	1.9	2.0	1.6	1.5	1.7
70 +	2.0	1.8	2.2	2.1	1.9	2.2	1.8	1.6	2.0

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

India			
Age-group	Combined	Rural	Urban
15-19	83.1	92.6	49.6
20-24	237.0	249.8	197.8
25-29	198.5	209.7	165.5
30-34	121.6	135.0	81.8
35-39	72.5	82.2	40.7
40-44	31.2	36.0	15.7
45-49	12.9	14.7	6.2
Crude birth rate	30.2	31.7	24.7
General fertility rate	123.9	132.6	96.1
Total fertility rate	3.8	4.1	2.8
Gross reproduction rate	1.8	2.0	1.3

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

India			
Age-group	Combined	Rural	Urban
15-19	248.7	244.8	277.2
20-24	309.9	310.9	305.8
25-29	217.5	226.8	188.7
30-34	129.6	143.3	88.3
35-39	78.1	88.5	44.1
40-44	35.1	40.4	17.7
45-49	15.5	17.6	7.6
General marital fertility rate	162.4	170.0	135.7
Total marital fertility rate	5.2	5.4	4.6

T A B L E 4

Percentage distribution of live births by order of birth.1990

	India								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	32.2	32.1	32.4	31.9	31.7	32.0	34.0	34.0	34.1
2	25.6	25.8	25.4	25.1	25.2	24.9	27.8	28.1	27.4
3	18.1	18.3	18.0	18.3	18.4	18.1	17.6	17.5	17.7
4	11.0	10.9	11.1	11.3	11.2	11.5	9.6	9.7	9.5
5	6.3	6.3	6.3	6.5	6.6	6.5	5.2	5.2	5.2
6	3.4	3.4	3.5	3.6	3.6	3.6	2.8	2.5	3.0
7	1.8	1.8	1.8	1.9	1.8	1.9	1.6	1.6	1.5
8	0.8	0.8	0.9	0.9	0.8	0.9	0.8	0.7	0.9
9	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4
10+	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.3

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	India		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	4.7	4.7	4.8
12-18	9.1	8.8	10.6
18-24	24.7	25.0	23.3
24-30	14.4	14.2	15.2
30-36	18.3	18.8	15.9
36+	28.8	28.5	30.2

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

		India					
Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	4.7	9.1	24.7	14.4	18.3	28.8
2	37.3	2.1	4.0	9.5	5.3	6.1	10.2
3	26.4	1.1	2.2	6.3	3.8	5.3	7.7
4	16.4	0.6	1.3	3.9	2.4	3.1	5.0
5	9.6	0.4	0.7	2.3	1.4	1.9	2.9
6	5.4	0.2	0.4	1.3	0.7	1.0	1.6
7	2.8	0.1	0.2	0.7	0.4	0.5	0.8
8	1.3	0.1	0.1	0.4	0.2	0.2	0.4
9	0.6	0.0	0.1	0.1	0.1	0.1	0.1
10+	0.4	0.1	0.0	0.1	0.1	0.1	0.1
R U R A L							
Total	100.0	4.7	8.8	25.0	14.2	18.8	28.5
2	36.3	2.1	3.7	9.5	5.2	6.2	9.6
3	26.4	1.1	2.2	6.4	3.8	5.4	7.6
4	16.8	0.7	1.3	4.0	2.4	3.3	5.2
5	9.9	0.4	0.7	2.4	1.4	1.9	3.0
6	5.5	0.2	0.4	1.4	0.8	1.1	1.7
7	2.9	0.1	0.2	0.7	0.4	0.6	0.8
8	1.3	0.1	0.1	0.4	0.2	0.2	0.4
9	0.5	0.0	0.1	0.1	0.1	0.1	0.1
10+	0.4	0.0	0.0	0.1	0.1	0.1	0.1
U R B A N							
Total	100.0	4.8	10.6	23.3	15.2	15.9	30.2
2	41.6	2.4	5.1	9.6	5.9	5.9	12.6
3	26.3	1.1	2.4	5.8	4.1	4.7	8.3
4	14.5	0.5	1.3	3.4	2.3	2.4	4.5
5	8.1	0.3	0.7	1.9	1.4	1.5	2.3
6	4.5	0.2	0.5	1.2	0.7	0.7	1.2
7	2.5	0.1	0.2	0.6	0.4	0.4	0.7
8	1.3	0.1	0.1	0.3	0.2	0.2	0.3
9	0.6	0.0	0.1	0.1	0.1	0.1	0.2
10+	0.6	0.1	0.1	0.2	0.1	0.0	0.1

TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	India								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	26.3	24.8	27.9	29.1	27.3	31.0	15.1	14.8	15.4
5-9	2.5	2.3	2.8	2.9	2.6	3.1	1.4	1.3	1.5
10-14	1.4	1.4	1.4	1.5	1.5	1.6	0.9	0.8	1.0
15-19	2.1	1.7	2.5	2.2	1.8	2.8	1.4	1.4	1.4
20-24	2.7	2.4	3.1	3.0	2.6	3.4	1.8	1.6	2.1
25-29	2.6	2.5	2.8	2.9	2.7	3.1	2.0	2.2	1.7
30-34	3.0	3.1	2.9	3.3	3.3	3.3	2.0	2.4	1.5
35-39	3.6	3.9	3.2	3.9	4.2	3.6	2.6	3.2	1.8
40-44	5.1	5.7	4.4	5.4	6.0	4.9	4.1	5.0	2.9
45-49	7.7	9.0	6.3	7.8	9.2	6.4	7.3	8.3	6.1
50-54	11.2	13.2	9.0	11.5	13.4	9.6	9.9	12.3	7.1
55-59	17.8	20.9	14.4	18.1	21.3	14.7	16.6	19.4	13.6
60-64	25.9	28.9	23.0	26.2	29.0	23.4	24.8	28.3	21.4
65-69	42.5	47.3	37.8	42.9	47.5	38.4	40.7	46.2	35.6
70+	85.1	91.4	79.4	86.1	92.6	80.2	81.1	86.7	76.4
All ages	9.7	9.7	9.6	10.5	10.5	10.5	6.8	7.1	6.5

TABLE 8

Mortality indicators, 1990

Indicators	India		
	Combined	Rural	Urban
Crude death rate	9.7	10.5	6.8
Infant mortality rate	80	86	50
Neo-natal mortality rate	52.5	57.4	30.9
Post-natal mortality rate	27.2	28.9	19.5
Peri-natal mortality rate	48.4	51.7	34.0
Still birth rate	11.8	11.9	11.0

TABLE 9

Percent distribution of sample births by  
type of medical attention at birth, 1990

India				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	22.9	21.3	54.4	1.4
Rural	16.2	20.2	62.0	1.5
Urban	52.8	26.1	20.6	0.6

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
 T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
 U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
 O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type  
of medical attention received before death, 1990

India				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	15.1	35.4	26.0	23.5
Rural	12.5	32.9	29.1	25.5
Urban	28.7	48.3	9.5	13.5

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
 M- If the death occurred at home but was attended by a qualified practitioner.  
 U- If the death occurred at home and was attended by an unqualified practitioner.  
 N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Age-Group	North zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	13.4	13.5	13.4	13.8	13.9	13.7	12.3	12.3	12.4
5-9	12.5	12.5	12.5	12.8	12.8	12.9	11.6	11.5	11.7
10-14	11.7	11.9	11.5	12.0	12.2	11.7	10.9	10.9	10.8
15-19	10.8	11.3	10.3	11.1	11.6	10.5	10.1	10.4	9.8
20-24	9.6	9.5	9.7	9.3	9.3	9.4	10.3	10.1	10.6
25-29	8.4	8.3	8.5	8.0	7.9	8.2	9.4	9.4	9.4
30-34	6.9	6.9	6.9	6.4	6.4	6.5	8.2	8.3	8.0
35-39	5.8	5.7	5.9	5.7	5.5	5.9	6.2	6.4	6.0
40-44	4.6	4.6	4.6	4.4	4.4	4.5	5.1	5.1	5.0
45-49	4.1	4.1	4.1	4.1	4.0	4.1	4.1	4.2	4.0
50-54	3.3	3.2	3.4	3.3	3.2	3.4	3.4	3.4	3.5
55-59	2.9	2.9	2.9	3.0	3.0	2.9	2.7	2.7	2.8
60-64	2.0	1.9	2.2	2.1	1.9	2.2	2.0	1.9	2.2
65-59	1.9	1.8	1.9	1.9	1.9	2.0	1.7	1.5	1.8
70 +	2.0	1.9	2.2	2.1	2.0	2.2	2.0	1.8	2.1

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Age-group	North Zone		
	Combined	Rural	Urban
15-19	70.5	79.9	42.1
20-24	264.8	283.0	219.4
25-29	210.9	222.4	182.9
30-34	120.8	134.5	89.1
35-39	67.7	77.9	39.1
40-44	26.5	32.2	12.0
45-49	12.2	14.8	4.4
Crude birth rate	30.8	32.6	25.9
General fertility rate	129.8	139.6	104.0
Total fertility rate	3.9	4.2	2.9
Gross reproduction rate	1.8	1.9	1.4

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Age-group	North Zone		
	Combined	Rural	Urban
15-19	212.9	209.9	231.6
20-24	327.4	330.8	317.0
25-29	222.2	230.9	199.8
30-34	125.3	139.0	93.4
35-39	71.3	82.1	41.1
40-44	28.7	34.8	13.1
45-49	13.8	16.7	5.0
General marital fertility rate	164.5	173.0	140.2
Total marital fertility rate	5.0	5.2	4.5



T A B L E 4

Percentage distribution of live births by order of birth, 1990.

	North Zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	30.9	30.8	31.0	30.4	30.4	30.5	32.2	31.8	32.7
2	26.3	26.3	26.3	25.5	25.7	25.3	28.7	28.1	29.4
3	18.9	19.3	18.5	18.9	19.1	18.6	18.9	19.7	18.1
4	11.0	11.0	11.0	11.5	11.3	11.6	9.6	9.8	9.3
5	6.4	6.2	6.6	6.8	6.7	7.0	5.1	4.9	5.3
6	3.4	3.5	3.3	3.6	3.7	3.5	2.8	2.8	2.7
7	1.8	1.7	2.0	1.9	1.8	2.1	1.5	1.6	1.4
8	0.7	0.7	0.7	0.8	0.7	0.8	0.6	0.6	0.7
9	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.4
10+	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.5	0.1

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	North zone		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	6.6	7.0	5.5
12-18	12.2	12.3	12.0
18-24	27.7	29.2	22.7
24-30	13.3	13.1	14.0
30-36	17.6	18.1	16.2
36+	22.5	20.3	29.5

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

North zone

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+

C O M B I N E D

Total	100.0	6.6	12.2	27.7	13.3	17.6	22.5
2	38.1	3.0	5.4	10.8	5.2	5.8	7.9
3	27.3	1.5	3.1	7.4	3.6	5.4	6.2
4	15.9	0.9	1.8	4.4	2.1	2.8	4.0
5	9.2	0.5	1.0	2.4	1.2	1.8	2.2
6	4.9	0.3	0.5	1.3	0.6	1.0	1.1
7	2.7	0.2	0.3	0.8	0.3	0.5	0.6
8	1.0	0.1	0.1	0.3	0.1	0.2	0.2
9	0.5	0.1	0.1	0.1	0.0	0.1	0.1
10+	0.3	0.1	0.0	0.1	0.0	0.1	0.1

R U R A L

Total	100.0	7.0	12.3	29.2	13.1	18.1	20.3
2	36.7	3.0	5.1	11.4	4.9	5.7	6.7
3	27.1	1.7	3.3	7.7	3.6	5.6	5.3
4	16.5	1.0	1.8	4.7	2.2	2.9	4.0
5	9.8	0.6	1.0	2.7	1.3	1.9	2.2
6	5.2	0.3	0.6	1.4	0.7	1.1	1.2
7	2.8	0.2	0.3	0.8	0.3	0.6	0.6
8	1.1	0.1	0.1	0.3	0.1	0.2	0.3
9	0.5	0.1	0.1	0.1	0.0	0.1	0.1
10+	0.3	0.1	0.1	0.1	0.0	0.1	0.0

U R B A N

Total	100.0	5.5	12.1	22.7	14.0	16.3	29.5
2	42.4	3.0	6.3	9.2	6.2	6.0	11.8
3	27.9	1.2	2.6	6.3	3.9	4.8	9.1
4	14.1	0.5	1.6	3.3	1.9	2.5	4.2
5	7.5	0.3	0.7	1.5	1.1	1.6	2.3
6	4.1	0.1	0.4	1.3	0.5	0.7	1.0
7	2.2	0.1	0.2	0.6	0.2	0.4	0.7
8	0.9	0.0	0.1	0.2	0.1	0.2	0.2
9	0.4	0.1	0.1	0.1	0.0	0.1	0.1
10+	0.4	0.0	0.0	0.2	0.0	0.1	0.1

TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	North Zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	24.0	21.1	27.3	27.1	23.9	30.8	14.4	12.6	16.4
5-9	2.2	1.8	2.6	2.2	1.8	2.7	1.9	1.6	2.2
10-14	1.1	1.1	1.1	1.2	1.2	1.2	0.7	0.6	0.8
15-19	1.9	1.8	2.1	2.1	1.8	2.3	1.4	1.5	1.4
20-24	2.6	2.4	2.7	3.0	2.8	3.1	1.7	1.5	1.8
25-29	2.4	2.6	2.3	2.7	2.8	2.6	1.9	2.1	1.6
30-34	2.7	3.2	2.1	3.0	3.6	2.4	2.0	2.4	1.5
35-39	3.5	4.3	2.7	4.0	4.6	3.3	2.4	3.4	1.2
40-44	4.3	6.0	2.4	4.7	6.5	2.7	3.3	4.7	1.7
45-49	7.4	9.1	5.5	7.7	9.6	5.7	6.4	7.7	4.9
50-54	9.5	11.5	7.3	9.3	11.3	7.2	10.0	12.1	7.7
55-59	14.8	16.8	12.5	14.8	16.6	12.8	14.8	17.6	11.7
60-64	21.9	24.5	19.3	22.8	25.7	20.0	19.3	21.1	17.6
65-69	37.7	45.9	29.2	37.8	45.2	29.9	37.4	48.4	27.1
70+	77.6	85.3	70.0	78.7	88.4	69.0	74.4	75.9	73.1
All ages	8.7	8.8	8.5	9.4	9.5	9.3	6.5	6.7	6.4

TABLE 8

Mortality indicators, 1990

Indicators	North Zone		
	Combined	Rural	Urban
Crude death rate	8.7	9.4	6.5
Infant mortality rate	73	80	51
Neo-natal mortality rate	44.2	49.6	24.9
Post-natal mortality rate	29.2	30.1	25.7
Peri-natal mortality rate	43.7	49.0	25.0
Still birth rate	13.8	15.5	7.8

TABLE 9

Percent distribution of sample births by  
type of medical attention at birth, 1990

North Zone				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	13.5	41.7	44.2	0.5
Rural	7.6	40.2	51.6	0.5
Urban	31.6	46.6	21.5	0.4

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
 T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
 U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
 O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type  
of medical attention received before death, 1990

North Zone				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	11.8	47.2	15.0	26.0
Rural	8.0	46.3	17.9	27.9
Urban	24.9	50.4	5.3	19.4

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
 M- If the death occurred at home but was attended by a qualified practitioner.  
 U- If the death occurred at home and was attended by an unqualified practitioner.  
 N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

North-East zone

Age-Group	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	13.1	13.0	13.1	13.4	13.3	13.4	10.1	10.0	10.1
5-9	12.7	12.6	12.8	12.9	12.8	12.9	10.9	10.6	11.2
10-14	11.4	11.3	11.5	11.5	11.4	11.6	10.5	10.3	10.7
15-19	10.8	10.7	11.0	10.9	10.7	11.1	10.0	9.7	10.4
20-24	10.9	10.0	11.8	10.9	10.1	11.7	11.0	9.7	12.4
25-29	9.2	9.2	9.3	9.1	9.1	9.1	10.6	10.3	10.9
30-34	7.2	7.5	6.9	7.0	7.3	6.8	8.9	9.3	8.4
35-39	5.8	6.0	5.5	5.6	5.8	5.4	7.2	7.9	6.5
40-44	4.7	4.8	4.7	4.7	4.7	4.6	5.5	6.0	4.9
45-49	3.9	4.1	3.8	3.9	4.0	3.8	4.3	4.7	3.9
50-54	3.3	3.5	3.1	3.3	3.4	3.1	3.5	3.8	3.2
55-59	2.5	2.7	2.3	2.5	2.6	2.3	2.7	2.8	2.7
60-64	1.8	1.9	1.7	1.8	1.9	1.7	1.9	2.0	1.8
65-59	1.2	1.3	1.1	1.2	1.3	1.1	1.4	1.4	1.4
70 +	1.4	1.4	1.3	1.4	1.4	1.3	1.6	1.5	1.7

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Age-group	North East Zone		
	Combined	Rural	Urban
15-19	53.0	55.8	25.0
20-24	174.6	181.7	110.5
25-29	179.6	185.3	133.6
30-34	129.4	135.6	81.7
35-39	79.3	84.7	37.0
40-44	39.4	41.9	16.3
45-49	10.2	11.0	2.8
Crude birth rate	28.5	29.4	19.6
General fertility rate	110.8	115.2	71.6
Total fertility rate	3.3	3.5	2.0
Gross reproduction rate	1.7	1.7	1.0

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Age-group	North East Zone		
	Combined	Rural	Urban
15-19	346.1	346.7	334.8
20-24	323.1	327.6	268.4
25-29	239.2	243.6	199.1
30-34	151.0	157.3	99.6
35-39	90.0	95.7	43.0
40-44	46.4	49.3	19.3
45-49	13.3	14.3	3.6
General marital fertility rate	179.6	185.4	124.8
Total marital fertility rate	6.0	6.2	4.8

T A B L E 4

Percentage distribution of live births by order of birth, 1990

	North-East zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	37.2	37.2	37.1	37.1	37.3	37.0	37.2	36.4	38.0
2	20.9	20.9	20.8	20.1	20.1	20.2	26.0	27.1	24.8
3	15.6	16.0	15.2	15.3	15.9	14.7	17.6	17.0	18.3
4	10.7	10.5	10.8	11.0	10.8	11.1	8.7	8.7	8.8
5	6.7	6.7	6.7	6.9	6.9	6.9	5.2	5.3	5.1
6	4.4	4.4	4.4	4.7	4.6	4.7	2.5	2.9	2.2
7	2.3	2.2	2.5	2.5	2.3	2.7	1.2	1.1	1.3
8	1.4	1.2	1.6	1.4	1.2	1.7	0.8	0.8	0.9
9	0.6	0.5	0.6	0.6	0.6	0.6	0.3	0.2	0.4
10+	0.3	0.4	0.3	0.3	0.4	0.3	0.3	0.3	0.2

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	North-East zone		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	4.3	4.2	4.9
12-18	7.9	8.0	7.6
18-24	22.7	22.7	22.6
24-30	15.4	15.1	17.7
30-36	18.6	19.1	15.3
36+	31.0	30.9	31.8

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

North-East zone

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	4.3	7.9	22.7	15.4	18.6	31.0
2	34.1	1.9	3.1	8.0	5.2	6.2	9.7
3	25.0	0.9	1.7	5.8	3.9	4.7	7.9
4	16.8	0.5	1.2	3.5	2.6	3.2	5.7
5	10.4	0.4	0.8	2.3	1.5	2.0	3.3
6	6.7	0.3	0.4	1.5	1.1	1.3	2.2
7	3.7	0.1	0.3	0.8	0.5	0.7	1.2
8	2.0	0.1	0.2	0.4	0.3	0.3	0.6
9	0.8	0.0	0.1	0.2	0.1	0.1	0.2
10+	0.5	0.1	0.0	0.2	0.1	0.1	0.1
R U R A L							
Total	100.0	4.2	8.0	22.7	15.1	19.1	30.9
2	32.8	1.8	3.0	7.8	4.9	6.1	9.1
3	24.7	0.9	1.7	5.8	3.8	4.7	7.8
4	17.3	0.5	1.3	3.7	2.5	3.4	5.9
5	10.6	0.4	0.8	2.3	1.6	2.1	3.4
6	7.2	0.3	0.5	1.6	1.1	1.4	2.4
7	4.0	0.1	0.4	0.8	0.6	0.8	1.3
8	2.0	0.1	0.1	0.5	0.4	0.4	0.6
9	0.8	0.0	0.1	0.2	0.1	0.1	0.2
10+	0.6	0.1	0.0	0.2	0.1	0.1	0.1
U R B A N							
Total	100.0	4.9	7.6	22.6	17.7	15.3	31.8
2	42.8	2.7	3.5	9.7	7.3	6.3	13.3
3	26.9	1.2	2.0	5.9	4.5	4.8	8.5
4	13.2	0.4	0.9	2.3	3.1	1.8	4.8
5	8.7	0.2	0.5	2.5	1.1	1.5	2.9
6	3.9	0.3	0.1	1.1	0.9	0.5	0.9
7	1.9	0.0	0.1	0.5	0.4	0.2	0.7
8	1.5	0.0	0.3	0.2	0.2	0.2	0.7
9	0.5	0.0	0.1	0.3	0.1	0.0	0.1
10+	0.4	0.1	0.1	0.1	0.0	0.0	0.1



TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	North East Zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	24.9	24.1	25.7	26.0	25.2	26.8	10.9	11.2	10.6
5-9	4.5	4.1	4.9	4.8	4.4	5.3	1.1	1.3	0.9
10-14	2.0	1.9	2.1	2.1	2.0	2.2	0.5	0.5	0.5
15-19	1.8	1.8	1.8	1.9	1.8	1.9	0.9	1.3	0.5
20-24	3.4	2.8	3.8	3.6	3.0	4.1	1.2	0.9	1.5
25-29	3.2	3.0	3.4	3.4	3.1	3.7	1.5	2.0	0.8
30-34	3.7	4.3	3.0	3.9	4.6	3.2	1.8	1.9	1.8
35-39	5.0	4.8	5.3	5.3	5.1	5.6	3.2	3.4	2.9
40-44	5.7	5.3	6.2	5.9	5.3	6.6	4.3	5.2	3.1
45-49	9.2	10.0	8.4	9.6	10.3	8.8	6.2	7.4	4.6
50-54	15.4	16.8	13.8	16.0	17.7	14.0	10.5	9.1	12.3
55-59	21.1	23.9	17.7	21.3	24.3	17.7	19.3	20.5	18.0
60-64	34.4	38.8	28.9	35.8	40.3	30.3	21.6	25.7	16.6
65-69	49.8	52.6	46.4	51.2	53.5	48.3	38.4	44.7	31.4
70+	90.0	95.0	84.3	87.8	92.8	82.0	107.5	114.2	101.0
All ages	9.6	9.9	9.3	10.0	10.3	9.7	6.1	6.6	5.6

TABLE 8

Mortality indicators, 1990

Indicators	North East Zone		
	Combined	Rural	Urban
Crude death rate	9.6	10.0	6.1
Infant mortality rate	68	71	38
Neo-natal mortality rate	43.4	44.5	27.9
Post-natal mortality rate	25.0	26.0	10.4
Peri-natal mortality rate	37.7	38.5	25.5
Still birth rate	10.3	10.7	5.6

TABLE 9

Percent distribution of sample births by type of medical attention at birth, 1990

## North East zone

Sector	Type of medical attention at birth			
	I	T	U	O
Combined	15.7	14.8	68.3	1.3
Rural	10.9	14.1	73.6	1.4
Urban	45.3	19.3	34.7	0.7

I- Institutions like hospitals, maternity/nursing homes, health centres etc.

T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.

U- Delivery conducted at home by untrained village dai or other untrained professional functionary.

O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type of medical attention received before death, 1990

## North East zone

Sector	Type of medical attention at death			
	I	M	U	N
Combined	17.6	16.4	51.5	14.4
Rural	18.8	14.9	50.6	15.7
Urban	10.4	25.7	57.6	6.3

I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.

M- If the death occurred at home but was attended by a qualified practitioner.

U- If the death occurred at home and was attended by an unqualified practitioner.

N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Age-Group	East zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	14.2	14.2	14.3	15.0	15.0	14.9	10.6	10.2	11.0
5-9	11.5	11.4	11.6	11.6	11.6	11.7	10.6	10.2	11.0
10-14	12.4	12.5	12.2	12.6	12.9	12.4	11.1	10.8	11.5
15-19	10.6	10.9	10.2	10.7	11.1	10.2	10.1	10.1	10.2
20-24	9.1	9.0	9.2	8.9	8.9	9.0	9.8	9.5	10.2
25-29	7.6	7.4	7.8	7.3	7.1	7.5	9.0	8.9	9.1
30-34	7.2	7.2	7.2	7.0	6.9	7.0	8.6	8.7	8.4
35-39	5.9	5.9	5.9	5.7	5.6	5.7	6.9	7.2	6.5
40-44	5.1	5.2	5.0	4.9	4.9	4.9	6.1	6.5	5.7
45-49	4.3	4.3	4.2	4.1	4.1	4.2	4.9	5.3	4.4
50-54	3.5	3.6	3.5	3.5	3.4	3.5	4.0	4.3	3.6
55-59	2.9	2.9	2.9	2.9	2.9	2.9	2.9	3.1	2.7
60-64	2.1	2.1	2.1	2.1	2.1	2.1	2.0	2.0	2.0
65-59	1.8	1.7	1.9	1.8	1.7	1.9	1.6	1.5	1.7
70 +	1.9	1.7	2.0	1.9	1.8	2.0	1.8	1.6	2.1

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Age-group	East Zone		
	Combined	Rural	Urban
15-19	90.8	98.4	51.2
20-24	220.7	233.4	162.7
25-29	207.6	222.9	142.2
30-34	134.6	149.1	72.0
35-39	90.6	101.1	42.7
40-44	40.4	45.9	16.0
45-49	15.9	17.6	7.2
Crude birth rate	30.6	32.6	20.7
General fertility rate	128.0	137.9	82.2
Total fertility rate	4.0	4.3	2.5
Gross reproduction rate	1.9	2.1	1.2

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Age-group	East Zone		
	Combined	Rural	Urban
15-19	245.7	244.1	262.5
20-24	282.8	284.7	270.9
25-29	226.4	238.4	169.2
30-34	143.4	157.6	79.4
35-39	97.6	108.6	46.5
40-44	45.5	51.6	18.1
45-49	19.4	21.4	8.9
General marital fertility rate	165.8	174.9	118.2
Total marital fertility rate	5.3	5.5	4.3

T A B L E 4

Percentage distribution of live births by order of birt,1990.

	East zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	27.8	27.6	28.0	27.2	26.8	27.6	32.1	33.1	31.0
2	23.6	24.0	23.1	23.5	23.7	23.2	24.5	26.2	22.7
3	18.4	18.6	18.2	18.5	18.9	18.2	17.4	16.6	18.3
4	12.9	12.5	13.2	13.1	12.8	13.4	11.3	10.3	12.4
5	8.0	8.2	7.8	8.2	8.4	7.9	6.8	6.4	7.2
6	4.7	4.5	5.0	4.8	4.6	5.0	3.9	3.4	4.4
7	2.6	2.6	2.6	2.7	2.7	2.6	2.0	1.9	2.1
8	1.2	1.1	1.2	1.2	1.2	1.2	1.1	1.0	1.1
9	0.5	0.5	0.5	0.5	0.5	0.5	0.5	0.3	0.6
10+	0.4	0.4	0.4	0.4	0.4	0.4	0.6	0.9	0.3

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	East zone		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	4.0	4.0	4.0
12-18	8.2	8.0	10.3
18-24	24.9	25.1	23.1
24-30	14.6	14.6	15.1
30-36	18.3	18.7	15.0
36+	29.9	29.6	32.5

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

East zone

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	4.0	8.3	24.9	14.6	18.3	29.9
2	32.7	1.6	3.2	8.3	4.6	5.7	9.3
3	25.5	0.8	2.0	6.2	3.8	4.9	7.8
4	17.8	0.6	1.2	4.4	2.5	3.5	5.5
5	11.1	0.3	0.8	2.7	1.7	2.0	3.5
6	6.5	0.2	0.5	1.7	0.9	1.1	2.1
7	3.6	0.1	0.2	0.9	0.6	0.7	1.0
8	1.6	0.1	0.1	0.4	0.3	0.3	0.4
9	0.7	0.0	0.1	0.2	0.1	0.1	0.2
10+	0.5	0.1	0.0	0.1	0.1	0.1	0.2
R U R A L							
Total	100.0	4.0	8.0	25.1	14.6	18.7	29.6
2	32.3	1.6	3.1	8.2	4.6	5.8	8.9
3	25.5	0.8	1.9	6.3	3.7	5.0	7.7
4	17.9	0.6	1.2	4.5	2.6	3.6	5.5
5	11.2	0.4	0.8	2.8	1.7	2.1	3.5
6	6.6	0.2	0.5	1.7	0.9	1.2	2.1
7	3.7	0.2	0.2	0.9	0.6	0.7	1.0
8	1.6	0.1	0.1	0.5	0.3	0.3	0.4
9	0.7	0.0	0.1	0.2	0.1	0.1	0.2
10+	0.4	0.0	0.0	0.1	0.1	0.1	0.1
U R B A N							
Total	100.0	4.0	10.3	23.1	15.2	15.0	32.5
2	36.1	1.6	4.2	8.7	4.1	5.0	12.3
3	25.6	1.1	2.2	5.4	4.2	4.1	8.6
4	16.6	0.7	1.4	4.2	2.4	2.5	5.4
5	10.0	0.3	1.2	2.0	1.8	1.7	3.0
6	5.7	0.1	0.7	1.5	1.0	0.8	1.6
7	2.9	0.1	0.3	0.8	0.6	0.4	0.8
8	1.6	0.0	0.2	0.2	0.5	0.3	0.3
9	0.7	0.0	0.1	0.1	0.2	0.1	0.2
10+	0.9	0.1	0.1	0.2	0.2	0.1	0.3

TABLE 7

## Estimated age-specific death rate by sex, 1990

Age-group	East Zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	25.4	24.7	26.1	27.1	26.3	27.8	13.8	13.5	14.1
5-9	2.8	2.5	3.1	3.0	2.7	3.3	1.6	1.3	2.0
10-14	1.7	1.7	1.7	1.9	1.9	1.9	0.9	0.8	1.0
15-19	2.4	1.8	3.1	2.6	1.9	3.4	1.6	1.6	1.6
20-24	2.9	2.4	3.4	3.2	2.6	3.8	1.7	1.5	2.0
25-29	2.7	2.4	3.0	3.0	2.6	3.3	1.5	1.5	1.4
30-34	3.1	2.7	3.6	3.4	2.9	3.8	2.1	1.6	2.6
35-39	3.7	3.6	3.8	3.9	3.7	4.1	2.8	3.2	2.3
40-44	4.9	4.5	5.3	5.2	4.7	5.7	3.6	3.8	3.4
45-49	8.6	9.5	7.5	8.5	9.6	7.4	8.8	9.2	8.2
50-54	11.3	12.0	10.5	12.0	12.7	11.3	8.1	9.1	6.5
55-59	20.0	21.2	18.6	20.5	21.8	19.2	17.3	18.7	15.3
60-64	26.5	27.5	25.4	26.6	26.8	26.4	26.0	31.1	19.9
65-69	46.0	49.4	42.7	46.3	49.2	43.6	44.0	50.4	37.4
70+	86.9	95.0	79.5	87.3	94.8	80.4	84.8	96.2	74.8
All ages	9.9	9.7	10.1	10.5	10.3	10.8	6.8	7.0	6.5

TABLE 8

## Mortality indicators, 1990

Indicators	East Zone		
	Combined	Rural	Urban
Crude death rate	9.9	10.5	6.8
Infant mortality rate	78	83	46
Neo-natal mortality rate	49.7	52.9	25.5
Post-natal mortality rate	28.6	29.7	20.3
Peri-natal mortality rate	47.5	49.8	30.0
Still birth rate	13.6	14.0	10.0

TABLE 9

Percent distribution of sample births by  
type of medical attention at birth, 1990

East Zone				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	18.2	12.3	68.3	1.2
Rural	13.8	11.3	73.7	1.2
Urban	50.8	20.0	28.5	0.7

I- Institutions like hospitals, maternity/nursing homes, health centres etc.

T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.

U- Delivery conducted at home by untrained village dai or other untrained professional functionary.

O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type  
of medical attention received before death, 1990

East Zone				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	13.0	29.1	36.8	21.1
Rural	9.9	26.8	41.1	22.2
Urban	36.7	46.0	4.8	12.4

I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.

M- If the death occurred at home but was attended by a qualified practitioner.

U- If the death occurred at home and was attended by an unqualified practitioner.

N- No professional doctor/hakim/vaidya attended.



Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Age-Group	South zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	11.3	11.4	11.1	11.4	11.6	11.3	10.7	10.8	10.6
5-9	11.1	11.2	10.9	11.1	11.2	11.0	10.9	11.1	10.7
10-14	11.2	11.4	11.0	11.3	11.6	11.0	10.8	10.9	10.7
15-19	10.5	10.6	10.3	10.5	10.8	10.3	10.4	10.2	10.6
20-24	9.8	9.4	10.2	9.6	9.2	9.9	10.5	9.9	11.1
25-29	8.4	8.4	8.4	8.0	8.0	8.0	9.5	9.4	9.6
30-34	7.3	7.3	7.2	6.9	6.9	7.0	8.1	8.3	7.9
35-39	6.2	6.2	6.1	6.0	5.9	6.2	6.6	7.0	6.1
40-44	5.4	5.3	5.4	5.3	5.2	5.4	5.6	5.7	5.5
45-49	4.7	4.8	4.7	4.9	4.8	4.9	4.4	4.5	4.2
50-54	4.1	4.1	4.0	4.2	4.2	4.1	3.8	3.9	3.7
55-59	3.4	3.4	3.5	3.6	3.6	3.6	2.9	2.8	3.0
60-64	2.5	2.4	2.5	2.5	2.5	2.6	2.2	2.1	2.4
65-59	2.1	2.0	2.2	2.2	2.1	2.3	1.7	1.5	1.8
70 +	2.2	2.0	2.4	2.3	2.1	2.5	1.9	1.7	2.1

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

South Zone			
Age-group	Combined	Rural	Urban
15-19	77.6	84.8	57.2
20-24	205.0	211.1	189.3
25-29	145.3	149.8	134.6
30-34	68.9	73.1	58.3
35-39	29.5	32.6	20.5
40-44	10.2	11.3	6.9
45-49	3.1	3.5	1.6
Crude birth rate	24.2	24.7	22.9
General fertility rate	92.8	96.0	84.2
Total fertility rate	2.7	2.8	2.3
Gross reproduction rate	1.3	1.4	1.1

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

South Zone			
Age-group	Combined	Rural	Urban
15-19	295.5	286.6	339.5
20-24	297.9	297.4	299.5
25-29	166.4	170.8	155.6
30-34	75.5	80.2	63.6
35-39	32.9	36.4	22.8
40-44	11.9	13.2	8.1
45-49	3.9	4.4	2.1
General marital fertility rate	129.6	132.0	122.5
Total marital fertility rate	4.4	4.4	4.5

T A B L E 4

Percentage distribution of live births by order of birth, 1990.

	South zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	37.0	37.0	37.1	36.9	37.0	36.7	37.5	37.0	38.1
2	30.0	30.0	30.0	29.7	29.6	29.9	30.7	31.1	30.3
3	17.3	17.2	17.4	17.7	17.5	17.8	16.3	16.4	16.2
4	8.1	8.2	8.0	8.4	8.4	8.3	7.4	7.5	7.2
5	3.7	3.8	3.6	3.8	3.9	3.7	3.6	3.7	3.5
6	1.8	1.7	1.8	1.7	1.7	1.8	1.9	1.7	2.1
7	0.9	0.9	0.9	0.8	0.8	0.8	1.3	1.3	1.2
8	0.5	0.5	0.5	0.5	0.5	0.5	0.6	0.5	0.7
9	0.3	0.3	0.2	0.2	0.2	0.2	0.3	0.4	0.3
10+	0.3	0.3	0.3	0.3	0.3	0.3	0.4	0.4	0.4

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

South zone

Birth Interval in months	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	4.3	4.3	4.3
12-18	9.0	8.3	11.3
18-24	22.3	22.9	20.7
24-30	14.9	14.8	15.1
30-36	17.3	17.9	15.6
36+	32.2	31.9	33.0

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

South zone

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	4.3	9.0	22.4	14.9	17.3	32.1
2	47.8	2.3	5.0	11.1	7.0	7.5	14.9
3	27.5	1.0	2.1	5.8	4.1	5.5	9.0
4	12.9	0.4	1.0	2.7	2.0	2.3	4.5
5	5.9	0.2	0.4	1.3	0.9	1.1	1.9
6	2.8	0.1	0.3	0.7	0.4	0.5	0.9
7	1.5	0.1	0.1	0.4	0.3	0.2	0.5
8	0.8	0.0	0.1	0.2	0.1	0.1	0.2
9	0.4	0.0	0.1	0.1	0.0	0.1	0.1
10+	0.4	0.1	0.0	0.1	0.1	0.1	0.1
R U R A L							
Total	100.0	4.3	8.3	22.9	14.8	17.9	31.8
2	47.3	2.4	4.6	11.4	6.9	7.6	14.4
3	28.0	1.0	2.0	6.0	4.2	5.7	9.0
4	13.3	0.4	0.9	2.8	2.0	2.6	4.7
5	6.0	0.2	0.4	1.4	0.8	1.1	2.0
6	2.7	0.1	0.2	0.7	0.4	0.5	0.9
7	1.3	0.1	0.1	0.3	0.2	0.1	0.4
8	0.8	0.0	0.0	0.3	0.1	0.1	0.2
9	0.4	0.0	0.0	0.1	0.0	0.1	0.1
10+	0.4	0.1	0.0	0.0	0.1	0.1	0.1
U R B A N							
Total	100.0	4.3	11.3	20.7	15.1	15.6	32.9
2	49.3	2.2	6.2	10.2	7.2	7.0	16.4
3	26.1	1.0	2.4	5.2	3.7	4.8	8.9
4	11.8	0.3	1.2	2.4	2.1	1.7	4.1
5	5.7	0.2	0.5	1.3	1.1	1.1	1.6
6	3.0	0.1	0.5	0.8	0.5	0.4	0.8
7	2.0	0.2	0.1	0.4	0.3	0.3	0.6
8	0.9	0.1	0.1	0.2	0.1	0.2	0.3
9	0.6	0.0	0.1	0.1	0.0	0.1	0.2
10+	0.5	0.2	0.1	0.1	0.1	0.0	0.1

TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	South Zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	17.5	17.9	17.0	19.6	19.7	19.4	11.0	12.4	9.6
5-9	1.6	1.7	1.5	1.8	1.9	1.7	1.0	1.0	1.0
10-14	1.0	1.0	1.0	1.1	1.2	1.0	0.7	0.5	1.0
15-19	1.7	1.4	2.0	1.8	1.4	2.3	1.3	1.5	1.2
20-24	2.1	2.1	2.2	2.5	2.5	2.5	1.2	1.0	1.4
25-29	2.2	2.2	2.2	2.5	2.4	2.5	1.5	1.6	1.5
30-34	2.9	3.7	2.0	3.2	3.9	2.4	2.2	3.2	1.1
35-39	3.2	4.3	2.2	3.6	4.8	2.4	2.3	3.0	1.4
40-44	5.2	6.4	4.0	5.6	7.0	4.3	4.0	4.9	3.1
45-49	7.2	8.4	5.9	7.0	8.1	5.8	7.8	9.4	6.0
50-54	10.6	13.2	7.8	10.4	12.8	7.8	11.1	14.4	7.6
55-59	15.3	19.1	11.6	15.1	18.6	11.6	16.0	20.9	11.2
60-64	25.7	29.6	21.8	25.4	29.1	21.8	26.5	31.5	22.0
65-69	39.5	45.9	33.7	39.4	46.5	32.8	40.0	43.3	37.1
70+	87.5	96.5	79.8	88.2	98.4	79.4	84.9	89.3	81.4
All ages	8.2	8.9	7.4	8.8	9.6	8.0	6.4	7.1	5.7

TABLE 8

Mortality indicators, 1990

Indicators	South Zone		
	Combined	Rural	Urban
Crude death rate	8.2	8.8	6.4
Infant mortality rate	60	67	41
Neo-natal mortality rate	43.3	47.8	29.3
Post-natal mortality rate	17.0	18.8	11.6
Peri-natal mortality rate	48.2	51.5	38.0
Still birth rate	13.6	13.0	15.3

TABLE 9

Percent distribution of sample births by type of medical attention at birth, 1990

South zone				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	49.1	19.6	30.0	1.3
Rural	39.2	22.7	36.5	1.6
Urban	78.7	10.5	10.3	0.4

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
 T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
 U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
 O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type of medical attention received before death, 1990

South zone				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	23.2	27.2	11.2	38.4
Rural	19.5	24.2	13.2	43.1
Urban	37.1	39.0	3.7	20.2

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
 M- If the death occurred at home but was attended by a qualified practitioner.  
 U- If the death occurred at home and was attended by an unqualified practitioner.  
 N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Age-Group	West zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	12.5	12.6	12.4	12.9	13.2	12.7	11.5	11.3	11.8
5-9	11.5	11.6	11.3	11.6	11.9	11.4	11.1	11.1	11.1
10-14	11.1	11.3	10.9	11.3	11.6	11.0	10.7	10.8	10.6
15-19	10.4	10.7	10.1	10.7	11.0	10.4	10.0	10.2	9.7
20-24	9.9	9.7	10.1	9.6	9.5	9.7	10.4	10.1	10.9
25-29	8.4	8.5	8.3	7.9	7.9	7.8	9.5	9.7	9.2
30-34	7.3	7.4	7.3	6.8	6.7	6.8	8.4	8.6	8.3
35-39	6.1	6.0	6.1	5.8	5.7	5.9	6.7	6.7	6.6
40-44	5.2	5.3	5.2	5.0	5.0	5.0	5.6	5.8	5.4
45-49	4.5	4.3	4.6	4.5	4.2	4.8	4.4	4.6	4.3
50-54	3.9	3.9	3.9	4.0	4.0	4.1	3.6	3.8	3.5
55-59	3.1	3.1	3.1	3.3	3.3	3.3	2.8	2.8	2.7
60-64	2.3	2.2	2.4	2.4	2.3	2.5	2.0	1.9	2.2
65-59	1.8	1.6	2.0	1.9	1.8	2.1	1.6	1.4	1.8
70 +	2.0	1.7	2.3	2.2	1.9	2.5	1.7	1.3	2.0

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Age-group	West Zone		
	Combined	Rural	Urban
15-19	76.1	88.7	48.1
20-24	247.8	263.9	218.0
25-29	186.4	190.7	178.8
30-34	89.3	101.2	68.9
35-39	36.3	43.2	23.3
40-44	12.2	14.7	7.5
45-49	3.7	4.7	1.5
Crude birth rate	28.2	29.7	25.1
General fertility rate	111.6	119.3	96.6
Total fertility rate	3.3	3.5	2.7
Gross reproduction rate	1.6	1.7	1.3

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Age-group	West Zone		
	Combined	Rural	Urban
15-19	235.4	226.9	277.9
20-24	330.4	333.1	324.5
25-29	206.3	208.4	202.6
30-34	95.9	108.2	74.6
35-39	39.2	46.4	25.4
40-44	13.7	16.5	8.4
45-49	4.5	5.6	1.9
General marital fertility rate	146.9	153.1	134.1
Total marital fertility rate	4.6	4.7	4.6



T A B L E 4

Percentage distribution of live births by order of birth.1990

	West zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	33.1	33.1	33.0	32.7	32.8	32.6	34.6	34.6	34.5
2	27.2	27.3	27.1	27.0	27.2	26.8	28.1	27.7	28.6
3	19.5	19.4	19.7	19.8	19.7	19.9	18.4	17.9	19.0
4	10.7	10.7	10.8	10.8	10.6	11.1	10.4	11.2	9.5
5	5.2	5.1	5.3	5.4	5.3	5.5	4.5	4.6	4.3
6	2.3	2.4	2.2	2.4	2.5	2.2	2.0	1.8	2.1
7	1.1	1.0	1.2	1.1	1.0	1.2	1.2	1.2	1.3
8	0.5	0.6	0.4	0.4	0.5	0.4	0.5	0.7	0.3
9	0.2	0.2	0.2	0.2	0.3	0.2	0.2	0.1	0.2
10+	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.2

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	West zone		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	2.9	2.9	3.2
12-18	8.6	8.2	10.2
18-24	23.3	23.1	24.1
24-30	18.9	18.5	20.6
30-36	18.0	18.7	15.0
36+	28.3	28.7	26.8

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

							West zone
Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	2.9	8.6	23.3	18.9	18.0	28.3
2	40.8	1.5	4.2	10.0	7.5	6.5	11.1
3	29.2	0.7	2.2	6.6	5.5	5.9	8.3
4	16.0	0.3	1.1	3.7	3.1	3.0	4.8
5	7.8	0.2	0.6	1.7	1.4	1.6	2.3
6	3.4	0.1	0.3	0.7	0.7	0.5	1.1
7	1.6	0.1	0.1	0.4	0.3	0.3	0.4
8	0.7	0.0	0.0	0.2	0.1	0.1	0.2
9	0.3	0.0	0.0	0.1	0.1	0.1	0.1
10+	0.2	0.0	0.0	0.0	0.0	0.1	0.1
R U R A L							
Total	100.0	2.9	8.2	23.1	18.5	18.7	28.6
2	40.3	1.4	4.0	10.0	7.5	6.6	10.8
3	29.4	0.7	2.1	6.6	5.4	6.1	8.4
4	16.1	0.3	1.1	3.6	3.0	3.1	5.0
5	8.0	0.2	0.6	1.7	1.3	1.7	2.5
6	3.5	0.1	0.3	0.7	0.7	0.6	1.2
7	1.6	0.1	0.1	0.4	0.3	0.3	0.4
8	0.7	0.0	0.0	0.1	0.1	0.1	0.2
9	0.3	0.0	0.0	0.1	0.1	0.1	0.1
10+	0.2	0.0	0.0	0.0	0.0	0.1	0.0
U R B A N							
Total	100.0	3.2	10.2	24.1	20.6	15.0	26.8
2	43.0	2.0	5.1	10.1	7.5	5.9	12.4
3	28.2	0.8	2.4	6.5	5.9	4.7	7.8
4	15.9	0.2	1.2	4.3	3.7	2.7	3.7
5	6.8	0.1	0.7	1.6	1.8	0.9	1.6
6	3.0	0.1	0.3	0.8	0.9	0.3	0.6
7	1.9	0.0	0.3	0.5	0.5	0.3	0.3
8	0.8	0.0	0.0	0.2	0.2	0.0	0.2
9	0.2	0.0	0.0	0.0	0.0	0.1	0.0
10+	0.2	0.0	0.0	0.0	0.0	0.0	0.1

TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	West Zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	19.5	18.9	20.1	21.9	21.0	22.9	13.9	14.0	13.9
5-9	1.9	2.0	1.9	2.2	2.1	2.3	1.3	1.7	0.9
10-14	1.1	1.0	1.3	1.3	1.1	1.5	0.8	0.8	0.8
15-19	1.5	1.4	1.6	1.7	1.5	1.9	0.9	1.1	0.8
20-24	2.3	2.1	2.5	2.5	2.2	2.9	1.8	1.8	1.7
25-29	2.7	2.9	2.5	2.9	2.8	3.0	2.4	3.1	1.7
30-34	2.3	2.5	2.0	2.6	2.6	2.6	1.7	2.3	1.0
35-39	3.1	3.3	3.0	3.3	3.1	3.5	2.8	3.7	1.9
40-44	4.7	5.5	3.9	5.4	5.7	5.1	3.5	5.2	1.5
45-49	6.1	7.3	4.9	6.1	7.7	4.6	6.1	6.5	5.6
50-54	10.4	13.5	7.2	11.2	14.4	7.8	8.8	11.4	5.8
55-59	15.8	19.2	12.2	17.2	22.1	12.2	12.3	12.4	12.2
60-64	22.5	25.7	19.5	23.7	29.2	18.5	19.5	17.0	21.8
65-69	36.7	41.3	32.7	37.1	41.8	33.1	35.6	40.2	31.6
70+	78.6	88.1	71.4	81.1	88.7	75.1	72.3	86.4	62.0
All ages	7.9	8.2	7.6	8.9	9.1	8.6	6.0	6.3	5.6

TABLE 8

Mortality indicators, 1990

Indicators	West Zone		
	Combined	Rural	Urban
Crude death rate	7.9	8.9	6.0
Infant mortality rate	63	69	47
Neo-natal mortality rate	44.9	51.1	30.4
Post-natal mortality rate	17.9	18.3	17.0
Peri-natal mortality rate	43.8	46.5	37.3
Still birth rate	11.1	9.9	13.9

TABLE 9

Percent distribution of sample births by  
type of medical attention at birth, 1990

West zone				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	30.8	22.9	42.6	3.8
Rural	21.0	24.5	50.3	4.2
Urban	72.0	15.9	9.9	2.1

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
 T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
 U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
 O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type  
of medical attention received before death, 1990

West zone				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	21.3	37.5	24.2	16.9
Rural	18.0	35.5	27.0	19.6
Urban	39.1	48.2	9.7	3.0

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
 M- If the death occurred at home but was attended by a qualified practitioner.  
 U- If the death occurred at home and was attended by an unqualified practitioner.  
 N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Age-Group	Central zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	14.7	14.6	14.7	14.9	14.8	15.0	13.5	13.5	13.6
5-9	12.3	12.2	12.4	12.3	12.2	12.4	12.0	11.9	12.1
10-14	12.5	12.8	12.2	12.6	12.9	12.3	12.0	12.1	11.9
15-19	10.7	11.4	10.0	10.7	11.5	9.8	10.7	11.0	10.4
20-24	9.2	9.3	9.0	8.9	9.2	8.6	10.3	10.2	10.4
25-29	7.4	7.2	7.6	7.2	7.0	7.4	8.3	8.1	8.6
30-34	6.4	6.3	6.4	6.2	6.1	6.3	7.4	7.5	7.2
35-39	5.5	5.2	5.7	5.4	5.1	5.7	5.9	5.8	5.9
40-44	4.8	4.7	4.8	4.7	4.6	4.8	5.0	5.1	4.8
45-49	4.2	4.1	4.3	4.2	4.1	4.5	4.0	4.1	3.9
50-54	3.6	3.5	3.6	3.6	3.5	3.7	3.4	3.5	3.2
55-59	3.0	3.1	2.9	3.1	3.2	3.0	2.5	2.5	2.6
60-64	2.1	2.0	2.2	2.2	2.1	2.3	1.8	1.8	1.9
65-59	1.9	1.8	2.0	1.9	1.9	2.0	1.6	1.4	1.7
70 +	2.0	1.8	2.1	2.1	1.9	2.2	1.7	1.5	1.8

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Age-group	Central Zone		
	Combined	Rural	Urban
15-19	95.4	107.6	46.0
20-24	277.7	296.8	210.1
25-29	249.6	261.5	206.1
30-34	183.0	196.1	133.6
35-39	121.8	130.9	84.9
40-44	56.9	61.1	39.1
45-49	26.5	28.2	17.9
Crude birth rate	36.0	37.6	29.3
General fertility rate	158.9	168.8	120.1
Total fertility rate	5.1	5.4	3.7
Gross reproduction rate	2.4	2.6	1.8

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Age-group	Central Zone		
	Combined	Rural	Urban
15-19	235.2	234.7	240.0
20-24	322.3	324.1	314.0
25-29	259.1	267.6	225.9
30-34	188.9	201.9	139.7
35-39	127.8	137.1	89.8
40-44	61.8	66.3	42.5
45-49	30.3	32.2	21.0
General marital fertility rate	194.9	201.2	166.2
Total marital fertility rate	6.1	6.3	5.4

T A B L E 4

Percentage distribution of live births by order of birth.1990

	Central zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	29.5	29.1	29.9	29.6	29.0	30.2	29.2	29.9	28.5
2	24.4	24.8	24.0	24.4	24.8	23.9	24.7	24.7	24.7
3	19.0	19.1	19.0	19.2	19.3	19.1	17.9	17.7	18.1
4	12.5	12.6	12.4	12.6	12.6	12.5	12.2	12.7	11.7
5	7.6	7.5	7.6	7.5	7.5	7.6	7.6	7.7	7.6
6	3.9	3.8	3.9	3.8	3.9	3.7	4.1	3.3	4.9
7	1.9	1.9	1.9	1.8	1.8	1.8	2.2	2.2	2.1
8	0.8	0.7	0.8	0.7	0.7	0.6	1.2	0.8	1.5
9	0.4	0.4	0.3	0.3	0.3	0.3	0.8	0.8	0.7
10+	0.1	0.0	0.2	0.1	0.0	0.1	0.2	0.1	0.2

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	Central zone		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	5.9	5.8	6.2
12-18	8.8	8.6	9.9
18-24	26.2	26.0	27.4
24-30	11.5	11.3	12.4
30-36	19.6	20.0	17.6
36+	28.0	28.3	26.6

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

Central zone							
Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	5.9	8.8	26.2	11.5	19.6	28.0
2	32.1	2.3	3.2	9.2	3.5	5.6	8.2
3	25.0	1.3	2.1	6.2	2.9	5.3	7.1
4	18.1	0.9	1.5	4.4	2.1	3.7	5.5
5	11.8	0.6	0.9	3.0	1.4	2.4	3.6
6	7.0	0.4	0.6	1.8	0.8	1.5	2.0
7	3.4	0.2	0.3	0.9	0.4	0.7	0.9
8	1.6	0.1	0.1	0.5	0.2	0.3	0.4
9	0.6	0.0	0.1	0.2	0.1	0.1	0.2
10+	0.4	0.0	0.0	0.1	0.0	0.1	0.1
R U R A L							
Total	100.0	5.8	8.6	26.0	11.3	20.0	28.3
2	32.0	2.3	3.1	9.1	3.5	5.7	8.2
3	25.1	1.3	2.1	6.2	2.9	5.4	7.2
4	18.4	1.0	1.5	4.5	2.1	3.8	5.6
5	11.9	0.6	0.8	2.9	1.4	2.5	3.7
6	6.9	0.3	0.5	1.8	0.8	1.5	2.0
7	3.3	0.2	0.3	0.9	0.4	0.7	0.9
8	1.5	0.1	0.1	0.4	0.2	0.3	0.4
9	0.6	0.0	0.1	0.1	0.1	0.1	0.2
10+	0.3	0.0	0.0	0.1	0.0	0.1	0.1
U R B A N							
Total	100.0	6.2	9.9	27.4	12.4	17.6	26.6
2	32.8	2.6	3.8	9.8	3.9	4.6	8.1
3	24.4	1.4	2.2	6.0	3.4	4.9	6.5
4	16.5	0.7	1.5	4.2	2.0	3.1	5.1
5	11.3	0.6	0.9	3.0	1.5	2.3	2.9
6	7.2	0.4	0.7	2.0	0.8	1.4	1.9
7	3.7	0.1	0.3	0.9	0.5	0.8	1.1
8	2.3	0.1	0.2	0.9	0.1	0.4	0.5
9	0.9	0.0	0.1	0.3	0.1	0.1	0.2
10+	0.9	0.1	0.1	0.3	0.0	0.1	0.2



TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	Central Zone								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	37.4	33.8	41.4	40.8	36.7	45.3	21.5	20.0	23.0
5-9	3.2	2.8	3.8	3.7	3.2	4.2	1.4	0.9	1.9
10-14	1.6	1.5	1.7	1.7	1.6	1.7	1.3	1.3	1.3
15-19	2.4	1.9	3.1	2.6	2.0	3.4	1.6	1.4	2.0
20-24	3.4	2.7	4.2	3.5	2.8	4.3	2.9	2.1	3.9
25-29	3.0	2.8	3.3	3.1	2.7	3.6	2.6	2.9	2.4
30-34	3.4	3.0	4.0	3.8	3.2	4.6	2.0	2.3	1.7
35-39	3.9	3.8	3.9	4.2	4.1	4.3	2.4	2.6	2.3
40-44	5.7	6.4	5.0	5.8	6.4	5.1	5.6	6.5	4.6
45-49	8.3	9.8	6.7	8.6	10.3	6.9	6.9	8.0	5.5
50-54	12.3	14.2	10.2	12.5	14.2	10.8	11.1	14.2	7.4
55-59	20.4	24.5	15.7	20.0	24.0	15.3	22.5	26.8	17.8
60-64	28.5	31.6	25.4	28.1	30.5	25.5	30.9	37.3	24.4
65-69	46.9	49.9	43.8	47.0	49.8	44.1	46.3	50.7	42.1
70+	87.6	87.8	87.3	88.2	89.0	87.5	84.2	81.6	86.6
All ages	12.2	11.6	12.9	13.1	12.4	13.9	8.4	8.3	8.5

TABLE 8

Mortality indicators, 1990

Indicators	Central Zone		
	Combined	Rural	Urban
Crude death rate	12.2	13.1	8.4
Infant mortality rate	103	110	65
Neo-natal mortality rate	67.3	72.4	39.3
Post-natal mortality rate	35.6	37.3	25.7
Peri-natal mortality rate	54.0	57.5	34.7
Still birth rate	9.0	9.4	7.0

TABLE 9

Percent distribution of sample births by  
type of medical attention at birth, 1990

Central Zone				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	6.7	21.2	71.2	0.9
Rural	3.3	16.9	78.8	1.1
Urban	24.9	44.1	30.9	0.1

I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type  
of medical attention received before death, 1990

Central Zone				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	6.9	50.8	25.0	17.3
Rural	5.8	47.3	28.1	18.8
Urban	14.1	73.3	4.8	7.8

I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
M- If the death occurred at home but was attended by a qualified practitioner.  
U- If the death occurred at home and was attended by an unqualified practitioner.  
N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Andhra Pradesh

Age-Group	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	12.0	12.1	11.8	12.0	12.1	11.9	11.7	11.9	11.6
5-9	11.5	11.6	11.5	11.5	11.5	11.5	11.7	11.8	11.6
10-14	11.7	12.0	11.4	11.8	12.0	11.5	11.5	11.6	11.4
15-19	10.4	10.6	10.1	10.3	10.7	9.9	10.6	10.5	10.7
20-24	9.2	9.0	9.4	8.9	8.8	9.0	10.1	9.4	10.8
25-29	7.8	7.8	7.7	7.4	7.4	7.4	9.1	9.2	8.9
30-34	7.2	7.3	7.1	7.0	7.0	7.0	7.9	8.2	7.7
35-39	5.9	5.9	5.9	5.8	5.7	5.9	6.3	6.8	5.8
40-44	5.4	5.3	5.4	5.4	5.3	5.4	5.3	5.3	5.3
45-49	4.8	4.7	4.8	4.8	4.8	4.9	4.5	4.6	4.3
50-54	4.2	4.2	4.2	4.3	4.3	4.3	3.7	3.8	3.6
55-59	3.5	3.4	3.5	3.6	3.6	3.7	2.8	2.7	2.9
60-64	2.5	2.4	2.6	2.7	2.6	2.7	1.9	1.8	2.1
65-59	2.1	2.0	2.3	2.3	2.2	2.5	1.5	1.3	1.6
70 +	2.0	1.8	2.2	2.2	2.0	2.4	1.4	1.1	1.8

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Andhra Pradesh			
Age-group	Combined	Rural	Urban
15-19	125.8	136.6	88.8
20-24	224.7	228.9	211.5
25-29	143.4	147.8	129.8
30-34	77.9	80.9	67.7
35-39	33.4	37.3	18.9
40-44	11.5	12.5	7.5
45-49	4.1	4.4	2.7
Crude birth rate	26.3	26.6	25.1
General fertility rate	105.5	108.6	94.8
Total fertility rate	3.1	3.2	2.6
Gross reproduction rate	1.5	1.5	1.3

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Andhra Pradesh			
Age-group	Combined	Rural	Urban
15-19	286.5	279.9	327.2
20-24	273.2	267.4	294.4
25-29	155.1	159.0	142.6
30-34	83.7	87.1	72.6
35-39	36.9	41.1	20.8
40-44	13.3	14.4	8.9
45-49	5.1	5.5	3.5
General marital fertility rate	133.8	134.7	130.1
Total marital fertility rate	4.3	4.3	4.4

T A B L E 4

Percentage distribution of live births by order of birth.1990

	Andhra Pradesh								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	35.7	35.6	35.8	36.7	36.7	36.8	33.2	33.0	33.3
2	28.7	28.5	28.9	28.2	28.0	28.5	29.8	29.7	29.8
3	18.9	18.8	19.1	19.5	19.4	19.6	17.6	17.5	17.7
4	8.8	9.0	8.6	8.9	9.0	8.7	8.7	8.8	8.6
5	3.8	3.9	3.6	3.5	3.7	3.3	4.4	4.5	4.4
6	2.0	2.1	1.9	1.7	1.8	1.6	2.8	2.9	2.7
7	1.0	1.0	1.1	0.8	0.7	1.0	1.5	1.6	1.5
8	0.4	0.4	0.4	0.3	0.3	0.2	0.8	0.6	0.9
9	0.2	0.2	0.2	0.1	0.1	0.2	0.3	0.5	0.2
10+	0.5	0.5	0.4	0.3	0.3	0.2	0.9	1.0	0.9

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	Andhra Pradesh		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	4.0	4.4	3.3
12-18	10.5	8.3	15.5
18-24	18.6	19.4	16.9
24-30	15.9	14.8	18.5
30-36	17.0	18.9	12.5
36+	33.9	34.2	33.2

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

Andhra Pradesh

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	4.0	10.5	18.7	16.0	17.0	33.8
2	44.9	2.2	5.0	8.4	7.2	6.8	15.3
3	29.5	1.1	2.8	5.7	4.3	5.6	10.0
4	13.7	0.3	1.3	2.2	2.5	2.6	4.9
5	5.8	0.2	0.6	1.3	0.8	1.0	1.8
6	3.1	0.0	0.4	0.5	0.6	0.7	0.9
7	1.6	0.1	0.2	0.3	0.3	0.2	0.6
8	0.6	0.0	0.0	0.2	0.1	0.1	0.2
9	0.3	0.0	0.1	0.0	0.0	0.0	0.1
10+	0.5	0.0	0.1	0.1	0.1	0.0	0.1
R U R A L							
Total	100.0	4.3	8.3	19.4	14.8	18.9	34.2
2	44.9	2.4	4.2	8.8	6.8	7.5	15.2
3	30.8	1.2	2.5	6.6	4.1	6.1	10.2
4	14.0	0.4	0.9	2.1	2.4	3.2	5.1
5	5.5	0.2	0.4	1.2	0.6	1.2	1.9
6	2.7	0.1	0.1	0.4	0.5	0.6	1.0
7	1.3	0.1	0.1	0.2	0.3	0.2	0.5
8	0.4	0.0	0.0	0.1	0.1	0.0	0.2
9	0.2	0.0	0.0	0.0	0.0	0.0	0.1
10+	0.2	0.0	0.0	0.0	0.0	0.0	0.1
U R B A N							
Total	100.0	3.3	15.5	17.0	18.6	12.5	33.0
2	44.9	1.7	6.8	7.5	8.2	5.0	15.6
3	26.4	0.8	3.6	3.7	4.7	4.4	9.3
4	13.0	0.1	2.3	2.3	2.7	1.3	4.3
5	6.6	0.4	1.0	1.5	1.4	0.7	1.7
6	4.2	0.0	1.0	0.9	0.8	0.7	0.8
7	2.3	0.2	0.3	0.6	0.4	0.1	0.8
8	1.1	0.1	0.1	0.3	0.1	0.3	0.3
9	0.5	0.0	0.2	0.1	0.1	0.0	0.1
10+	1.0	0.2	0.2	0.2	0.2	0.1	0.2

TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	Andhra Pradesh								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	20.7	20.8	20.6	22.1	21.7	22.6	15.3	17.4	13.0
5-9	1.8	2.1	1.5	2.0	2.4	1.6	1.1	1.4	0.8
10-14	1.4	1.3	1.5	1.5	1.6	1.5	0.9	0.4	1.3
15-19	1.9	1.2	2.7	2.0	1.1	3.0	1.6	1.6	1.5
20-24	2.6	2.7	2.6	2.9	3.1	2.8	1.6	1.2	1.9
25-29	2.2	1.9	2.4	2.4	2.1	2.7	1.6	1.6	1.6
30-34	3.6	4.4	2.8	3.8	4.7	2.9	2.9	3.4	2.2
35-39	3.4	4.3	2.6	3.9	4.8	3.0	1.9	2.7	0.8
40-44	<del>6.0</del>	<del>7.7</del>	<del>4.2</del>	<del>6.9</del>	<del>9.0</del>	<del>4.9</del>	<del>2.4</del>	<del>3.0</del>	<del>1.8</del>
45-49	7.9	9.4	6.4	7.6	9.1	6.2	9.3	10.8	7.6
50-54	11.6	13.5	9.6	11.6	13.2	10.0	11.4	14.6	7.9
55-59	16.4	20.9	12.0	16.5	20.8	12.2	16.1	21.1	11.4
60-64	28.2	32.7	24.0	28.2	31.3	25.1	28.5	40.0	18.3
65-69	45.3	52.1	39.1	44.3	50.4	38.8	50.6	62.6	40.8
70+	85.5	92.9	79.4	85.0	94.7	76.7	88.0	80.3	92.9
All ages	9.1	9.6	8.5	9.7	10.3	9.1	6.8	7.4	6.2

TABLE 8

Mortality indicators, 1990

Indicators	Andhra Pradesh		
	Combined	Rural	Urban
Crude death rate	9.1	9.7	6.8
Infant mortality rate	70	73	56
Neo-natal mortality rate	48.3	51.0	37.7
Post-natal mortality rate	21.6	22.4	18.4
Peri-natal mortality rate	52.3	53.5	47.5
Still birth rate	13.2	12.1	17.7

TABLE 9

Percent distribution of sample births by type of medical attention at birth, 1990

Andhra Pradesh				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	34.9	17.5	46.9	0.7
Rural	18.9	21.3	58.9	0.9
Urban	74.1	8.3	17.6	0.0

I- Institutions like hospitals, maternity/nursing homes, health centres etc.

T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.

U- Delivery conducted at home by untrained village dai or other untrained professional functionary.

O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type of medical attention received before death, 1990

Andhra Pradesh				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	18.4	25.6	9.0	47.0
Rural	14.3	19.6	11.4	54.7
Urban	31.9	45.6	1.0	21.5

I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.

M- If the death occurred at home but was attended by a qualified practitioner.

U- If the death occurred at home and was attended by an unqualified practitioner.

N- No professional doctor/hakim/vaidya attended.



Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Age-Group	Assam								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	12.9	12.8	13.0	13.1	13.0	13.2	9.7	9.7	9.7
5-9	12.8	12.7	12.9	13.0	13.0	13.1	10.2	10.0	10.5
10-14	11.1	11.0	11.3	11.2	11.1	11.4	9.7	9.6	9.9
15-19	10.9	10.6	11.2	11.0	10.7	11.3	9.5	9.3	9.8
20-24	11.2	10.3	12.2	11.3	10.4	12.2	11.1	9.5	12.7
25-29	9.5	9.5	9.5	9.4	9.5	9.4	10.8	10.4	11.2
30-34	7.0	7.3	6.7	6.9	7.2	6.6	8.9	9.3	8.5
35-39	5.7	6.1	5.4	5.6	5.9	5.3	7.5	8.3	6.6
40-44	4.7	4.7	4.7	4.7	4.6	4.7	5.7	6.2	5.3
45-49	4.0	4.2	3.8	4.0	4.1	3.8	4.6	5.0	4.3
50-54	3.4	3.6	3.2	3.3	3.5	3.2	4.0	4.3	3.7
55-59	2.5	2.7	2.3	2.4	2.7	2.2	3.1	3.2	3.1
60-64	1.8	1.9	1.7	1.8	1.9	1.6	2.1	2.3	1.9
65-59	1.1	1.3	1.0	1.1	1.2	1.0	1.4	1.5	1.4
70 +	1.2	1.2	1.1	1.1	1.2	1.1	1.5	1.5	1.6

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Age-group	Assam		
	Combined	Rural	Urban
15-19	57.2	59.0	30.4
20-24	186.6	191.5	124.4
25-29	185.0	188.2	149.9
30-34	129.8	133.8	89.0
35-39	72.6	75.9	36.8
40-44	37.0	39.0	13.0
45-49	4.6	4.8	2.2
Crude birth rate	29.7	30.3	22.1
General fertility rate	114.5	117.3	79.5
Total fertility rate	3.4	3.5	2.2
Gross reproduction rate	1.7	1.7	1.0

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Age-group	Assam		
	Combined	Rural	Urban
15-19	346.2	345.8	359.0
20-24	332.2	334.6	290.4
25-29	244.8	246.1	228.4
30-34	151.8	155.3	112.4
35-39	82.6	86.0	43.7
40-44	43.8	46.1	15.6
45-49	6.1	6.4	2.8
General marital fertility rate	184.3	187.8	138.1
Total marital fertility rate	6.0	6.1	5.3

T A B L E 4

Percentage distribution of live births by order of birth.1990

	Assam								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	30.5	31.0	30.0	29.5	29.9	29.2	36.4	37.1	35.6
2	24.4	24.2	24.7	23.8	23.3	24.2	28.4	28.8	27.8
3	17.7	18.4	16.9	17.7	18.8	16.7	17.4	16.4	18.5
4	11.7	11.2	12.2	12.2	11.7	12.6	8.9	8.5	9.3
5	6.8	6.6	7.0	7.1	7.0	7.3	4.5	4.0	5.0
6	4.6	4.4	4.7	4.9	4.8	5.1	2.3	2.3	2.2
7	2.4	2.2	2.6	2.6	2.4	2.8	0.9	0.9	0.9
8	1.1	1.1	1.1	1.2	1.2	1.3	0.6	0.8	0.4
9	0.5	0.6	0.4	0.5	0.6	0.5	0.3	0.5	0.0
10+	0.4	0.4	0.3	0.4	0.4	0.3	0.4	0.6	0.2

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	Assam		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	4.5	4.4	5.0
12-18	8.5	8.5	8.2
18-24	20.3	20.2	21.0
24-30	15.6	15.3	17.0
30-36	18.9	19.3	16.5
36+	32.3	32.2	32.4

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

Assam

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	4.5	8.5	20.3	15.6	18.9	32.3
2	35.3	2.0	3.5	7.4	5.5	6.1	10.8
3	25.4	1.0	2.0	5.3	4.0	4.7	8.3
4	16.8	0.5	1.4	3.2	2.4	3.5	5.8
5	9.7	0.3	0.8	1.8	1.5	2.1	3.1
6	6.5	0.2	0.3	1.3	1.0	1.4	2.2
7	3.4	0.1	0.3	0.6	0.5	0.6	1.3
8	1.6	0.1	0.1	0.4	0.3	0.3	0.5
9	0.7	0.0	0.0	0.2	0.1	0.1	0.2
10+	0.5	0.2	0.1	0.1	0.1	0.0	0.1
R U R A L							
Total	100.0	4.4	8.5	20.2	15.3	19.3	32.2
2	33.9	1.9	3.5	7.2	5.3	6.0	10.2
3	25.1	1.0	2.0	5.2	3.9	4.7	8.3
4	17.2	0.6	1.4	3.4	2.3	3.7	5.9
5	10.1	0.3	0.8	1.8	1.7	2.2	3.3
6	7.0	0.2	0.4	1.3	1.1	1.6	2.4
7	3.7	0.1	0.3	0.6	0.6	0.7	1.4
8	1.7	0.1	0.0	0.5	0.3	0.3	0.5
9	0.8	0.0	0.0	0.2	0.1	0.1	0.2
10+	0.5	0.2	0.0	0.1	0.1	0.0	0.1
U R B A N							
Total	100.0	5.0	8.2	21.0	17.0	16.5	32.4
2	44.6	2.7	3.9	9.1	7.2	7.0	14.7
3	27.3	1.1	2.3	5.9	4.7	4.6	8.8
4	13.9	0.3	0.9	2.1	3.2	2.3	5.1
5	7.1	0.3	0.7	1.7	0.8	1.7	1.9
6	3.6	0.4	0.0	1.2	0.7	0.5	0.8
7	1.5	0.0	0.1	0.4	0.1	0.3	0.5
8	0.9	0.0	0.1	0.1	0.0	0.1	0.5
9	0.4	0.0	0.0	0.1	0.3	0.0	0.0
10+	0.7	0.3	0.1	0.3	0.0	0.0	0.0

TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	Assam								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	28.5	27.3	29.8	29.3	28.1	30.6	14.0	13.9	14.1
5-9	5.2	4.5	5.9	5.4	4.6	6.2	1.6	2.0	1.1
10-14	2.1	2.0	2.3	2.2	2.0	2.4	0.9	1.1	0.8
15-19	1.7	1.5	1.9	1.7	1.6	1.9	1.1	1.1	1.1
20-24	3.8	3.1	4.5	4.0	3.3	4.6	1.5	0.8	2.1
25-29	3.6	3.1	4.1	3.7	3.0	4.4	2.2	3.5	0.9
30-34	4.3	5.2	3.3	4.6	5.5	3.5	1.8	2.1	1.5
35-39	5.0	4.9	5.2	5.2	5.1	5.4	3.1	2.9	3.3
40-44	6.2	5.7	6.7	6.4	5.7	7.1	4.3	5.7	2.4
45-49	9.4	9.8	9.0	9.6	10.0	9.3	6.8	7.7	5.7
50-54	17.2	18.5	15.7	17.6	19.0	15.9	13.1	12.8	13.4
55-59	24.1	27.0	20.4	24.4	27.6	20.4	20.4	20.4	20.4
60-64	40.0	45.3	33.3	41.2	46.8	34.2	26.7	29.3	23.2
65-69	56.9	58.7	54.5	58.0	58.8	56.9	45.9	58.0	31.7
70+	101.5	105.0	97.3	97.8	100.8	94.0	137.8	148.0	127.0
All ages	10.5	10.7	10.3	10.8	10.9	10.6	7.6	8.3	6.7

TABLE 8

Mortality indicators, 1990

Indicators	Assam		
	Combined	Rural	Urban
Crude death rate	10.5	10.8	7.6
Infant mortality rate	76	78	39
Neo-natal mortality rate	48.1	49.3	28.0
Post-natal mortality rate	27.5	28.4	10.9
Peri-natal mortality rate	40.9	41.8	23.6
Still birth rate	11.4	11.6	6.5

TABLE 9

Percent distribution of sample births by type of medical attention at birth, 1990

Assam				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	17.6	9.6	72.8	0.0
Rural	12.2	8.8	79.0	0.0
Urban	50.0	14.5	35.5	0.0

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
 T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
 U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
 O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type of medical attention received before death, 1990

Assam				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	8.1	59.7	7.6	24.6
Rural	5.9	58.3	8.2	27.6
Urban	21.7	68.1	4.1	6.0

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
 M- If the death occurred at home but was attended by a qualified practitioner.  
 U- If the death occurred at home and was attended by an unqualified practitioner.  
 N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Age-Group	Bihar								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	15.8	15.8	15.7	16.0	16.1	15.9	13.6	13.2	14.1
5-9	12.5	12.4	12.5	12.4	12.4	12.5	12.8	12.6	13.2
10-14	13.2	13.5	12.8	13.2	13.6	12.7	13.1	12.9	13.4
15-19	10.4	11.1	9.6	10.3	11.1	9.5	10.9	11.3	10.5
20-24	8.1	8.3	7.9	8.0	8.2	7.8	8.9	9.2	8.7
25-29	6.9	6.7	7.2	6.9	6.6	7.1	7.6	7.7	7.4
30-34	6.3	6.0	6.6	6.3	6.0	6.6	6.8	6.6	7.1
35-39	5.6	5.4	5.9	5.5	5.3	5.8	6.2	6.0	6.4
40-44	4.9	4.8	5.1	4.8	4.7	5.0	5.6	5.7	5.5
45-49	4.2	4.2	4.2	4.2	4.1	4.3	4.4	4.7	4.0
50-54	3.3	3.3	3.3	3.3	3.3	3.3	3.3	3.5	3.0
55-59	2.8	2.8	2.8	2.8	2.8	2.8	2.3	2.5	2.2
60-64	2.1	2.0	2.2	2.1	2.0	2.2	1.7	1.6	1.8
65-59	2.0	1.8	2.1	2.0	1.9	2.2	1.4	1.3	1.4
70 +	2.0	1.9	2.1	2.1	1.9	2.2	1.4	1.2	1.6

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Age-group	Bihar		
	Combined	Rural	Urban
15-19	98.8	103.9	55.2
20-24	232.8	237.8	190.2
25-29	239.9	244.8	195.2
30-34	175.0	181.8	115.5
35-39	125.4	130.9	78.2
40-44	62.5	65.3	38.2
45-49	24.2	25.2	14.4
Crude birth rate	32.9	33.8	24.6
General fertility rate	146.7	151.3	106.2
Total fertility rate	4.8	4.9	3.4
Gross reproduction rate	2.3	2.3	1.7

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Age-group	Bihar		
	Combined	Rural	Urban
15-19	202.7	202.9	199.5
20-24	266.4	266.7	263.3
25-29	250.2	254.4	210.1
30-34	182.0	188.9	120.6
35-39	132.7	138.5	82.5
40-44	68.8	71.9	42.3
45-49	28.3	29.4	16.8
General marital fertility rate	176.6	180.2	141.0
Total marital fertility rate	5.7	5.8	4.7



T A B L E 4

Percentage distribution of live births by order of birth.1990

	Bihar								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	25.4	25.4	25.4	25.4	25.2	25.7	25.0	26.9	23.0
2	21.1	22.0	20.1	21.1	21.8	20.3	21.7	24.3	19.0
3	18.8	18.8	18.7	18.8	19.0	18.6	18.3	16.6	20.0
4	14.6	13.9	15.4	14.7	14.1	15.4	13.6	12.1	15.1
5	9.7	9.8	9.5	9.7	9.8	9.5	9.9	10.0	9.9
6	5.6	5.3	6.0	5.6	5.4	6.0	5.5	4.6	6.3
7	2.9	3.0	2.8	2.9	3.0	2.7	3.2	2.9	3.6
8	1.2	1.2	1.3	1.2	1.2	1.2	1.5	1.2	1.8
9	0.5	0.4	0.5	0.4	0.4	0.4	0.9	0.6	1.3
10+	0.2	0.2	0.2	0.2	0.2	0.2	0.5	0.8	0.1

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	Bihar		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	4.2	4.2	4.2
12-18	7.7	7.4	10.3
18-24	27.5	27.5	28.1
24-30	13.5	13.2	15.8
30-36	18.8	19.2	15.4
36+	28.3	28.5	26.2

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

Bihar

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	4.2	7.7	27.5	13.5	18.8	28.2
2	28.3	1.6	2.4	8.3	3.9	4.9	7.2
3	25.1	0.8	1.9	6.7	3.5	5.1	7.2
4	19.6	0.8	1.3	5.2	2.5	3.9	5.8
5	13.0	0.5	1.0	3.4	1.7	2.4	4.0
6	7.5	0.3	0.7	2.0	0.9	1.3	2.4
7	3.9	0.1	0.3	1.1	0.7	0.7	1.1
8	1.6	0.1	0.1	0.6	0.3	0.3	0.3
9	0.7	0.0	0.1	0.2	0.1	0.1	0.2
10+	0.2	0.0	0.0	0.1	0.1	0.0	0.1
R U R A L							
Total	100.0	4.2	7.5	27.5	13.2	19.2	28.5
2	28.3	1.6	2.3	8.2	3.8	5.1	7.2
3	25.2	0.8	1.9	6.8	3.4	5.2	7.2
4	19.7	0.8	1.3	5.3	2.5	4.0	5.9
5	13.0	0.5	0.9	3.4	1.7	2.4	4.1
6	7.6	0.3	0.6	2.0	0.9	1.4	2.4
7	3.9	0.1	0.3	1.1	0.6	0.7	1.1
8	1.6	0.1	0.1	0.6	0.2	0.3	0.3
9	0.6	0.0	0.1	0.2	0.1	0.1	0.2
10+	0.2	0.0	0.0	0.1	0.0	0.0	0.1
U R B A N							
Total	100.0	4.2	10.3	28.1	15.8	15.4	26.2
2	28.9	1.5	3.1	9.8	3.9	3.8	6.8
3	24.4	1.0	2.0	5.9	4.5	4.1	6.9
4	18.1	1.1	1.8	4.9	2.3	2.9	5.2
5	13.2	0.4	1.6	3.1	2.0	2.3	3.8
6	7.3	0.1	1.0	2.3	1.0	1.2	1.7
7	4.3	0.0	0.4	1.4	1.0	0.7	0.8
8	2.0	0.1	0.2	0.4	0.6	0.2	0.5
9	1.3	0.0	0.2	0.2	0.2	0.2	0.5
10+	0.6	0.0	0.0	0.2	0.3	0.0	0.1

TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	Bihar								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	26.2	25.2	27.2	27.3	26.5	28.2	14.1	11.2	17.3
5-9	3.2	2.7	3.7	3.3	2.7	3.8	2.5	1.9	3.1
10-14	2.0	2.1	2.0	2.2	2.1	2.2	1.0	1.5	0.5
15-19	2.3	1.6	3.1	2.4	1.6	3.3	1.6	1.9	1.2
20-24	3.2	2.5	4.0	3.4	2.7	4.2	1.9	1.5	2.5
25-29	2.9	2.7	3.1	3.0	2.9	3.2	1.7	1.1	2.5
30-34	3.3	2.7	3.8	3.4	2.9	4.0	1.9	1.2	2.6
35-39	4.2	3.6	4.7	4.5	3.8	5.2	1.6	2.3	1.0
40-44	5.7	4.8	6.6	6.0	5.2	6.8	3.4	2.4	4.6
45-49	8.4	9.7	7.0	8.7	10.2	7.2	5.2	5.7	4.5
50-54	11.9	12.2	11.4	11.9	12.0	11.8	11.2	14.2	7.2
55-59	20.2	20.9	19.4	20.0	20.8	19.1	22.1	21.7	22.6
60-64	26.9	24.2	29.5	26.8	23.9	29.6	28.2	28.3	28.1
65-69	42.8	46.9	39.1	43.5	48.1	39.2	34.1	31.2	37.0
70+	82.0	89.0	75.4	83.1	90.8	75.9	66.4	63.0	69.2
All ages	10.6	10.1	11.0	11.0	10.6	11.4	6.2	5.6	6.9

TABLE 8

Mortality indicators, 1990

Indicators	Bihar		
	Combined	Rural	Urban
Crude death rate	10.6	11.0	6.2
Infant mortality rate	75	77	46
Neo-natal mortality rate	48.9	50.3	31.1
Post-natal mortality rate	25.9	26.7	15.2
Peri-natal mortality rate	42.8	43.8	29.3
Still birth rate	8.6	8.9	5.3

TABLE 9

Percent distribution of sample births by  
type of medical attention at birth, 1990

Bihar

Sector	Type of medical attention at birth			
	I	T	U	O
Combined	10.9	14.4	74.7	0.0
Rural	9.1	12.8	78.1	0.0
Urban	27.5	28.5	44.0	0.0

I- Institutions like hospitals, maternity/nursing homes, health centres etc.

T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.

U- Delivery conducted at home by untrained village dai or other untrained professional functionary.

O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type  
of medical attention received before death, 1990

Bihar

Sector	Type of medical attention at death			
	I	M	U	N
Combined	12.6	26.5	58.4	2.5
Rural	10.1	24.7	62.6	2.6
Urban	40.7	46.3	11.6	1.4

I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.

M- If the death occurred at home but was attended by a qualified practitioner.

U- If the death occurred at home and was attended by an unqualified practitioner.

N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Gujarat

Age-Group	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	11.4	11.6	11.2	11.1	11.4	10.9	12.1	12.2	11.9
5-9	11.7	11.8	11.6	11.8	11.9	11.7	11.5	11.7	11.3
10-14	11.7	11.9	11.5	12.0	12.2	11.8	11.0	11.2	10.8
15-19	10.6	11.0	10.1	10.8	11.3	10.3	10.0	10.3	9.6
20-24	10.5	10.3	10.6	10.5	10.5	10.6	10.3	10.0	10.7
25-29	8.9	8.8	8.9	8.6	8.6	8.7	9.4	9.5	9.4
30-34	7.5	7.7	7.3	7.2	7.4	7.1	8.2	8.4	8.0
35-39	6.0	5.9	6.1	5.8	5.6	6.0	6.3	6.4	6.1
40-44	5.0	5.1	4.9	4.9	4.9	4.8	5.3	5.4	5.2
45-49	4.3	4.2	4.5	4.4	4.2	4.7	4.2	4.2	4.1
50-54	3.7	3.7	3.7	3.8	3.8	3.8	3.5	3.4	3.5
55-59	3.0	2.9	3.0	3.0	3.0	3.1	2.8	2.7	2.9
60-64	2.1	2.0	2.2	2.1	2.1	2.2	2.1	1.9	2.3
65-59	1.7	1.5	2.0	1.8	1.6	2.0	1.6	1.4	1.9
70 +	2.0	1.6	2.3	2.1	1.7	2.4	1.7	1.4	2.1

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Gujarat			
Age-group	Combined	Rural	Urban
15-19	40.9	39.9	43.7
20-24	255.0	258.3	247.3
25-29	209.7	213.6	201.3
30-34	103.7	113.3	83.8
35-39	43.1	49.9	27.4
40-44	17.8	20.7	11.5
45-49	6.0	6.8	3.8
Crude birth rate	29.6	30.2	28.3
General fertility rate	116.7	119.6	110.1
Total fertility rate	3.4	3.5	3.1
Gross reproduction rate	1.6	1.7	1.5

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Gujarat			
Age-group	Combined	Rural	Urban
15-19	161.7	144.7	222.1
20-24	353.9	360.9	337.8
25-29	232.3	236.7	222.8
30-34	110.0	119.2	90.4
35-39	46.0	52.7	29.8
40-44	19.7	22.7	13.2
45-49	7.0	7.8	4.7
General marital fertility rate	156.4	159.4	149.5
Total marital fertility rate	4.7	4.7	4.6

T A B L E 4

Percentage distribution of live births by order of birth.1990

	Gujarat								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	35.8	35.9	35.8	36.0	36.1	35.8	34.9	34.5	35.4
2	25.3	25.5	25.2	25.3	25.5	25.0	25.9	25.5	26.3
3	18.5	18.5	18.6	18.6	18.3	18.8	18.4	19.5	17.1
4	10.6	10.6	10.6	10.6	10.5	10.8	10.3	11.1	9.4
5	5.2	5.4	4.9	5.2	5.5	5.0	4.8	4.8	4.7
6	2.3	2.2	2.5	2.2	2.2	2.3	2.8	2.0	3.7
7	1.2	1.0	1.4	1.1	0.9	1.4	1.7	1.8	1.5
8	0.6	0.6	0.5	0.5	0.6	0.4	0.8	0.7	0.9
9	0.3	0.3	0.3	0.3	0.3	0.2	0.3	0.1	0.6
10+	0.1	0.1	0.2	0.1	0.1	0.2	0.2	0.0	0.4

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	Gujarat		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	3.0	3.1	2.8
12-18	9.1	8.5	12.4
18-24	23.8	23.1	27.9
24-30	13.7	13.2	16.5
30-36	20.2	21.0	15.9
36+	30.1	31.1	24.4

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

Gujarat

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	3.0	9.1	23.8	13.7	20.3	30.1
2	39.6	1.5	3.8	10.4	5.8	6.6	11.5
3	28.9	0.8	2.6	6.6	3.7	7.0	8.2
4	16.5	0.3	1.2	4.0	2.2	3.7	5.2
5	8.0	0.2	0.9	1.6	1.0	1.7	2.7
6	3.6	0.1	0.4	0.6	0.5	0.5	1.5
7	1.9	0.1	0.1	0.4	0.3	0.4	0.6
8	0.9	0.0	0.1	0.2	0.1	0.1	0.3
9	0.5	0.0	0.0	0.1	0.1	0.2	0.1
10+	0.2	0.0	0.0	0.0	0.0	0.1	0.1
R U R A L							
Total	100.0	3.1	8.5	23.1	13.2	21.0	31.1
2	39.6	1.5	3.6	10.1	5.8	6.9	11.7
3	29.0	0.8	2.4	6.3	3.5	7.3	8.5
4	16.6	0.4	1.1	3.9	2.1	3.7	5.4
5	8.2	0.2	0.8	1.6	0.9	1.9	2.9
6	3.5	0.1	0.3	0.6	0.4	0.5	1.5
7	1.7	0.1	0.1	0.4	0.3	0.3	0.6
8	0.8	0.1	0.1	0.2	0.1	0.2	0.3
9	0.4	0.0	0.0	0.1	0.1	0.1	0.1
10+	0.2	0.0	0.0	0.0	0.0	0.1	0.1
U R B A N							
Total	100.0	2.8	12.4	27.9	16.5	15.9	24.4
2	39.7	1.9	5.1	11.9	5.6	4.7	10.5
3	28.3	0.6	3.3	8.0	4.8	5.4	6.2
4	15.8	0.0	1.3	4.5	2.4	3.6	4.0
5	7.3	0.1	1.5	1.8	1.7	0.9	1.4
6	4.3	0.0	0.7	0.9	0.9	0.4	1.4
7	2.6	0.1	0.2	0.5	0.6	0.6	0.4
8	1.2	0.0	0.1	0.2	0.4	0.0	0.4
9	0.5	0.0	0.1	0.1	0.0	0.3	0.0
10+	0.3	0.0	0.1	0.1	0.0	0.0	0.1



TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	Gujarat								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	26.0	25.9	26.1	29.8	29.1	30.6	17.7	19.0	16.3
5-9	2.6	2.6	2.6	2.8	2.7	3.0	2.1	2.6	1.5
10-14	1.2	1.4	0.9	1.2	1.4	1.0	1.2	1.6	0.8
15-19	1.6	1.8	1.4	1.9	2.0	1.8	0.8	1.1	0.4
20-24	2.6	1.8	3.3	2.7	2.0	3.5	2.3	1.5	3.0
25-29	3.2	3.2	3.2	3.5	3.2	3.7	2.7	3.2	2.2
30-34	2.4	2.2	2.6	2.9	2.8	2.9	1.5	1.0	2.0
35-39	3.7	4.4	2.9	3.6	3.9	3.3	3.8	5.3	2.1
40-44	5.8	7.2	4.3	6.3	7.6	5.0	4.8	6.3	3.0
45-49	8.3	10.2	6.5	8.5	10.7	6.3	7.9	8.9	6.8
50-54	10.7	14.8	6.4	11.7	17.9	5.1	8.1	6.7	9.5
55-59	16.5	20.2	12.6	18.6	24.3	12.6	11.1	9.6	12.5
60-64	26.4	27.1	25.8	24.9	29.0	20.8	29.9	22.1	36.8
65-69	43.9	53.1	36.3	41.4	50.5	33.6	50.5	60.2	43.0
70+	78.2	87.5	71.4	81.4	89.0	75.7	69.1	83.1	59.5
All ages	8.9	9.3	8.5	9.6	10.1	9.2	7.2	7.4	7.1

TABLE 8

Mortality indicators, 1990

Indicators	Gujarat		
	Combined	Rural	Urban
Crude death rate	8.9	9.6	7.2
Infant mortality rate	72	79	54
Neo-natal mortality rate	50.0	55.2	37.1
Post-natal mortality rate	21.5	23.5	16.6
Peri-natal mortality rate	42.8	44.6	38.3
Still birth rate	6.5	5.5	9.0

TABLE 9

Percent distribution of sample births by type of medical attention at birth, 1990

Gujarat				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	22.8	32.9	43.2	1.1
Rural	15.6	36.0	47.2	1.2
Urban	62.7	15.9	21.0	0.4

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
 T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
 U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
 O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type of medical attention received before death, 1990

Gujarat				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	14.2	36.6	27.5	21.7
Rural	11.3	36.7	28.1	23.9
Urban	34.3	36.2	23.3	6.2

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
 M- If the death occurred at home but was attended by a qualified practitioner.  
 U- If the death occurred at home and was attended by an unqualified practitioner.  
 N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Age-Group	Haryana								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	14.4	14.4	14.3	14.6	14.7	14.6	13.3	13.4	13.3
5-9	12.1	12.0	12.1	12.2	12.2	12.3	11.5	11.5	11.6
10-14	11.6	11.8	11.4	11.8	12.1	11.6	10.7	10.8	10.5
15-19	11.6	11.9	11.3	12.0	12.3	11.7	10.3	10.4	10.1
20-24	10.6	10.3	10.8	10.4	10.4	10.4	11.2	10.2	12.4
25-29	8.5	8.7	8.3	8.1	8.2	8.0	10.0	10.6	9.3
30-34	6.6	6.5	6.8	6.2	6.0	6.5	8.1	8.4	7.8
35-39	5.4	5.4	5.4	5.3	5.2	5.5	5.6	6.0	5.2
40-44	4.2	4.0	4.5	4.2	3.9	4.4	4.4	4.4	4.5
45-49	3.7	3.7	3.7	3.7	3.7	3.7	3.8	3.9	3.6
50-54	2.9	2.8	3.0	2.9	2.8	3.0	3.1	3.1	3.2
55-59	2.7	2.6	2.9	2.8	2.7	2.9	2.5	2.3	2.8
60-64	1.8	1.8	1.9	1.9	1.8	1.9	1.8	1.7	2.0
65-59	1.8	1.8	1.8	1.9	1.9	1.8	1.6	1.5	1.7
70 +	2.0	2.1	1.8	2.0	2.1	1.8	1.9	1.9	2.0

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Age-group	Haryana		
	Combined	Rural	Urban
15-19	74.8	83.9	38.6
20-24	286.4	308.5	222.4
25-29	204.2	208.0	193.1
30-34	108.7	118.7	79.9
35-39	55.7	60.1	39.6
40-44	18.6	20.4	12.3
45-49	9.6	11.9	1.4
Crude birth rate	31.9	33.1	27.5
General fertility rate	133.8	141.1	110.1
Total fertility rate	3.8	4.1	2.9
Gross reproduction rate	1.7	1.9	1.4

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Age-group	Haryana		
	Combined	Rural	Urban
15-19	242.9	247.9	206.4
20-24	344.8	354.5	310.4
25-29	211.4	213.1	206.2
30-34	110.6	120.4	82.1
35-39	58.0	62.5	41.7
40-44	19.9	21.8	13.3
45-49	10.7	13.2	1.6
General marital fertility rate	170.7	177.1	148.2
Total marital fertility rate	5.0	5.2	4.3

T A B L E 4

Percentage distribution of live births by order of birth.1990

	Haryana								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	28.9	28.5	29.4	29.2	29.0	29.5	27.8	26.6	29.2
2	27.5	26.7	28.4	26.9	26.5	27.3	29.7	27.6	32.2
3	19.5	20.4	18.5	19.1	19.7	18.4	21.1	22.9	19.1
4	10.5	10.4	10.6	10.4	10.1	10.8	10.8	11.5	9.9
5	6.4	6.6	6.2	6.7	6.9	6.5	5.3	5.5	5.1
6	3.5	3.7	3.3	3.8	3.9	3.7	2.3	3.1	1.5
7	2.0	2.0	2.1	2.2	2.0	2.3	1.6	1.8	1.5
8	0.9	0.9	0.8	1.0	1.0	0.9	0.3	0.2	0.6
9	0.4	0.4	0.4	0.4	0.5	0.3	0.5	0.3	0.7
10+	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.6	0.2

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	Haryana		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	6.0	6.1	5.7
12-18	13.5	13.7	12.8
18-24	26.0	27.5	20.3
24-30	18.0	18.1	17.6
30-36	13.5	13.4	14.2
36+	22.9	21.2	29.4

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

Haryana

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	6.0	13.5	26.0	18.0	13.6	22.9
2	38.8	2.5	6.3	10.2	7.2	5.0	7.7
3	27.4	1.4	3.3	6.9	4.6	4.2	6.8
4	14.7	0.7	1.8	4.3	2.8	1.6	3.6
5	9.0	0.5	1.0	2.4	1.6	1.3	2.2
6	4.9	0.3	0.6	0.9	1.1	0.7	1.3
7	2.9	0.2	0.2	0.9	0.5	0.4	0.6
8	1.2	0.1	0.1	0.2	0.1	0.2	0.4
9	0.6	0.1	0.1	0.1	0.0	0.1	0.1
10+	0.4	0.1	0.1	0.1	0.1	0.0	0.0
R U R A L							
Total	100.0	6.1	13.7	27.5	18.1	13.4	21.2
2	38.2	2.5	6.0	10.5	7.2	4.8	7.1
3	26.9	1.4	3.6	7.2	4.5	4.2	6.0
4	14.7	0.8	1.7	4.6	2.7	1.5	3.5
5	9.4	0.5	1.1	2.7	1.7	1.3	2.1
6	5.4	0.4	0.7	1.1	1.2	0.8	1.3
7	3.0	0.3	0.3	0.9	0.5	0.4	0.6
8	1.4	0.2	0.1	0.2	0.2	0.3	0.5
9	0.6	0.0	0.2	0.2	0.0	0.1	0.1
10+	0.4	0.1	0.1	0.1	0.1	0.0	0.0
U R B A N							
Total	100.0	5.7	12.8	20.3	17.7	14.2	29.4
2	41.3	2.6	7.3	8.7	7.2	5.5	10.0
3	29.2	1.6	2.3	6.1	4.9	4.4	10.0
4	14.9	0.5	1.9	3.1	3.5	2.0	3.9
5	7.4	0.5	0.6	1.4	1.1	1.2	2.6
6	3.2	0.1	0.5	0.0	0.7	0.6	1.3
7	2.3	0.0	0.1	0.6	0.4	0.2	1.0
8	0.5	0.1	0.1	0.0	0.0	0.0	0.2
9	0.7	0.4	0.0	0.1	0.0	0.1	0.1
10+	0.5	0.0	0.0	0.2	0.0	0.1	0.1

TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	Haryana								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	21.8	18.3	25.8	23.7	19.5	28.5	14.6	13.8	15.7
5-9	1.2	1.5	0.9	1.3	1.5	1.1	0.8	1.6	0.0
10-14	1.1	1.0	1.3	1.2	1.2	1.3	0.7	0.4	1.0
15-19	2.3	2.2	2.4	2.6	2.4	2.9	0.9	1.2	0.5
20-24	2.7	2.7	2.7	3.1	3.2	2.9	1.5	0.9	2.0
25-29	2.8	3.0	2.6	3.4	3.8	3.0	1.1	0.8	1.6
30-34	2.8	3.3	2.2	3.1	3.7	2.5	1.7	2.1	1.2
35-39	4.6	6.0	3.0	5.1	6.5	3.6	2.8	4.3	0.9
40-44	3.7	4.8	2.6	4.0	5.0	3.0	2.6	4.0	1.0
45-49	8.2	7.6	9.0	7.9	6.4	9.6	9.4	11.5	7.0
50-54	8.8	10.2	7.2	7.8	8.0	7.5	11.9	16.9	6.3
55-59	12.9	17.4	8.2	11.3	16.1	6.0	19.2	22.9	15.7
60-64	24.9	25.9	23.8	25.3	26.5	23.9	23.5	23.9	23.2
65-69	37.7	44.7	29.3	35.3	39.3	30.2	47.4	69.1	26.3
70+	81.8	88.1	73.9	82.6	90.7	71.9	79.2	78.1	80.5
All ages	8.4	8.6	8.3	8.9	8.9	8.9	6.9	7.4	6.2

TABLE 8

Mortality indicators, 1990

Indicators	Haryana		
	Combined	Rural	Urban
Crude death rate	8.4	8.9	6.9
Infant mortality rate	69	73	53
Neo-natal mortality rate	38.6	39.9	32.9
Post-natal mortality rate	30.2	32.7	20.0
Peri-natal mortality rate	42.1	44.8	30.7
Still birth rate	19.7	21.4	12.8

TABLE 9

Percent distribution of sample births by type of medical attention at birth, 1990

Haryana				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	18.6	63.9	17.2	0.3
Rural	16.7	64.9	18.2	0.2
Urban	26.1	59.9	13.3	0.7

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
 T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
 U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
 O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type of medical attention received before death, 1990

Haryana				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	11.7	51.6	6.4	30.3
Rural	8.4	53.7	7.4	30.5
Urban	25.5	42.8	2.4	29.3

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
 M- If the death occurred at home but was attended by a qualified practitioner.  
 U- If the death occurred at home and was attended by an unqualified practitioner.  
 N- No professional doctor/hakim/vaidya attended.



Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Age-Group	Karnataka								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	12.2	12.3	12.1	12.5	12.6	12.4	11.3	11.5	11.2
5-9	11.8	11.9	11.7	12.0	12.1	11.9	11.5	11.6	11.3
10-14	11.9	12.0	11.8	12.0	12.1	11.9	11.7	11.8	11.6
15-19	11.1	11.2	11.0	11.2	11.5	11.0	10.8	10.5	11.2
20-24	9.6	9.2	9.9	9.3	9.1	9.6	10.2	9.6	10.8
25-29	8.2	8.2	8.3	7.9	8.0	7.8	9.2	8.9	9.6
30-34	6.9	6.9	6.8	6.4	6.4	6.5	8.1	8.3	7.9
35-39	6.2	6.1	6.3	6.1	5.8	6.4	6.6	7.1	6.1
40-44	4.9	5.0	4.8	4.8	4.8	4.7	5.4	5.5	5.2
45-49	4.5	4.6	4.4	4.7	4.8	4.7	4.0	4.2	3.7
50-54	3.4	3.6	3.2	3.4	3.6	3.3	3.4	3.7	3.2
55-59	3.2	3.2	3.2	3.5	3.5	3.4	2.5	2.5	2.6
60-64	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.8	2.0
65-59	2.0	1.9	2.2	2.2	2.0	2.3	1.6	1.4	1.7
70 +	2.1	1.9	2.2	2.2	2.0	2.3	1.8	1.6	1.9

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Age-group	Karnataka		
	Combined	Rural	Urban
15-19	76.3	86.5	48.4
20-24	239.3	257.1	195.4
25-29	175.1	179.8	164.5
30-34	89.5	95.9	74.8
35-39	44.1	48.4	31.3
40-44	17.6	20.2	11.0
45-49	5.9	7.0	1.9
Crude birth rate	28.9	29.0	25.0
General fertility rate	109.7	116.0	93.4
Total fertility rate	3.2	3.5	2.6
Gross reproduction rate	1.5	1.6	1.3

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Age-group	Karnataka		
	Combined	Rural	Urban
15-19	292.3	284.6	337.1
20-24	340.5	345.5	325.2
25-29	199.8	202.5	193.5
30-34	97.4	104.5	81.3
35-39	48.7	53.6	34.4
40-44	20.6	23.7	12.8
45-49	7.5	8.9	2.5
General marital fertility rate	154.2	159.4	139.6
Total marital fertility rate	5.0	5.1	4.9

T A B L E 4

Percentage distribution of live births by order of birth, 1990

	Karnataka								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	32.2	32.7	31.7	31.8	32.5	31.0	33.8	33.5	34.1
2	27.6	27.3	28.0	27.2	26.6	27.9	28.9	29.7	28.1
3	18.5	18.6	18.4	18.7	18.8	18.6	17.8	18.0	17.6
4	10.4	10.5	10.4	10.7	10.9	10.6	9.5	9.1	9.9
5	5.5	5.6	5.3	5.8	5.8	5.7	4.6	5.0	4.2
6	2.5	2.2	2.9	2.6	2.3	3.0	2.2	1.8	2.7
7	1.4	1.4	1.4	1.3	1.3	1.3	1.7	1.6	1.8
8	0.9	0.8	1.1	1.0	0.9	1.1	0.7	0.5	0.9
9	0.4	0.5	0.4	0.4	0.5	0.4	0.5	0.5	0.5
10+	0.4	0.4	0.4	0.4	0.4	0.5	0.3	0.4	0.2

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	Karnataka		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	3.8	3.7	4.2
12-18	8.3	8.5	7.6
18-24	27.4	27.6	26.7
24-30	15.6	16.6	12.3
30-36	19.5	19.1	21.1
36+	25.4	24.6	28.0

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

Karnataka

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	3.8	8.3	27.4	15.6	19.5	25.4
2	41.0	1.9	4.1	12.1	5.9	7.2	9.8
3	27.2	0.7	1.9	6.9	4.5	6.2	7.0
4	15.4	0.4	1.2	3.8	2.5	3.2	4.3
5	8.1	0.3	0.5	2.1	1.4	1.7	2.1
6	3.7	0.1	0.3	1.3	0.5	0.5	1.0
7	2.0	0.2	0.1	0.6	0.4	0.3	0.5
8	1.4	0.1	0.1	0.5	0.2	0.2	0.3
9	0.7	0.1	0.0	0.2	0.1	0.2	0.2
10+	0.6	0.2	0.0	0.1	0.1	0.1	0.1
R U R A L							
Total	100.0	3.7	8.5	27.6	16.6	19.1	24.6
2	40.1	1.9	4.1	12.1	6.2	6.9	8.9
3	27.3	0.7	2.0	6.8	5.0	6.2	6.7
4	15.7	0.3	1.3	3.8	2.6	3.3	4.4
5	8.4	0.3	0.6	2.2	1.4	1.6	2.3
6	3.8	0.1	0.3	1.3	0.6	0.6	1.0
7	1.9	0.1	0.1	0.6	0.4	0.2	0.5
8	1.5	0.1	0.1	0.6	0.2	0.2	0.3
9	0.6	0.1	0.0	0.2	0.1	0.1	0.2
10+	0.6	0.2	0.0	0.1	0.1	0.1	0.2
U R B A N							
Total	100.0	4.2	7.6	26.7	12.3	21.1	28.0
2	43.9	1.9	4.2	12.0	4.8	8.5	12.5
3	26.7	0.6	1.7	7.1	3.1	6.2	7.9
4	14.3	0.6	0.9	3.7	2.0	3.1	4.0
5	7.0	0.2	0.3	1.8	1.2	2.1	1.5
6	3.3	0.1	0.2	1.2	0.5	0.4	1.0
7	2.6	0.4	0.1	0.6	0.5	0.5	0.5
8	1.0	0.1	0.2	0.1	0.2	0.1	0.3
9	0.7	0.0	0.1	0.2	0.0	0.3	0.2
10+	0.5	0.3	0.0	0.1	0.1	0.0	0.0

TABLE 7

## Estimated age-specific death rate by sex, 1990

Karnataka									
Age-group	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	21.1	22.9	19.3	24.4	26.1	22.5	11.2	13.1	9.3
5-9	1.7	1.4	2.1	1.9	1.6	2.1	1.3	0.8	1.8
10-14	1.0	0.9	1.0	1.1	1.2	1.0	0.6	0.2	1.1
15-19	1.9	1.6	2.3	2.0	1.6	2.5	1.6	1.5	1.7
20-24	2.2	2.0	2.3	2.5	2.2	2.8	1.3	1.7	0.9
25-29	2.3	2.0	2.5	2.3	1.9	2.8	2.1	2.2	1.9
30-34	2.2	3.0	1.3	2.3	2.9	1.6	1.9	3.2	0.4
35-39	2.9	4.1	1.8	2.8	4.0	1.7	3.1	4.1	2.0
40-44	4.8	5.7	3.9	5.2	6.1	4.3	3.8	4.6	2.9
45-49	7.4	8.4	6.2	7.5	8.9	6.1	6.9	7.2	6.7
50-54	8.9	12.1	5.2	9.2	12.5	5.4	8.1	10.9	4.6
55-59	16.0	19.4	12.5	15.3	18.1	12.5	18.6	24.4	12.6
60-64	24.3	27.4	21.2	23.9	26.6	21.2	25.5	29.9	21.4
65-69	34.2	43.6	26.0	33.3	43.7	24.2	38.0	43.1	33.4
70+	82.2	91.4	74.1	83.4	93.4	74.4	78.4	84.5	73.1
All ages	8.1	8.9	7.2	8.8	9.6	7.9	6.1	6.8	5.3

TABLE 8

## Mortality indicators, 1990

Karnataka			
Indicators	Combined	Rural	Urban
Crude death rate	8.1	8.8	6.1
Infant mortality rate	70	80	39
Neo-natal mortality rate	51.1	57.7	29.8
Post-natal mortality rate	19.3	22.5	9.1
Peri-natal mortality rate	57.6	64.7	34.6
Still birth rate	18.0	20.3	10.8

TABLE 9

Percent distribution of sample births by  
type of medical attention at birth, 1990

Karnataka				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	33.8	28.1	35.5	2.6
Rural	22.4	31.6	43.0	3.0
Urban	70.3	16.9	11.5	1.3

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
 T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
 U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
 O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type  
of medical attention received before death, 1990

Karnataka				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	18.0	28.6	13.9	39.5
Rural	13.9	27.6	15.6	42.9
Urban	34.1	32.6	7.2	26.1

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
 M- If the death occurred at home but was attended by a qualified practitioner.  
 U- If the death occurred at home and was attended by an unqualified practitioner.  
 N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Age-Group	Kerala								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	10.3	10.8	9.9	10.3	10.8	9.8	10.4	10.8	10.0
5-9	9.9	10.3	9.6	10.0	10.4	9.7	9.4	9.8	8.9
10-14	10.2	10.7	9.8	10.5	10.9	10.0	9.2	9.7	8.7
15-19	10.7	10.9	10.4	10.8	11.1	10.5	10.0	10.0	10.0
20-24	11.0	10.3	11.7	11.0	10.2	11.7	11.1	10.5	11.6
25-29	9.3	9.1	9.5	9.2	9.0	9.3	9.9	9.5	10.3
30-34	7.6	7.6	7.7	7.5	7.5	7.6	8.3	8.4	8.2
35-39	6.2	6.2	6.2	6.1	6.1	6.1	6.7	6.8	6.6
40-44	5.2	5.2	5.2	5.1	5.0	5.2	5.7	5.9	5.5
45-49	4.3	4.2	4.3	4.2	4.2	4.2	4.4	4.4	4.4
50-54	4.0	3.9	4.1	4.0	3.9	4.1	4.0	3.9	4.2
55-59	3.4	3.3	3.5	3.4	3.3	3.5	3.4	3.3	3.5
60-64	2.7	2.7	2.8	2.7	2.7	2.8	2.7	2.6	2.9
65-59	2.2	2.1	2.3	2.2	2.1	2.3	2.1	2.0	2.1
70 +	3.0	2.7	3.3	3.0	2.8	3.3	2.8	2.4	3.2

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Age-group	Kerala		
	Combined	Rural	Urban
15-19	27.1	26.2	31.7
20-24	151.7	152.1	149.9
25-29	132.5	135.7	118.9
30-34	49.9	49.3	52.3
35-39	15.5	14.7	19.1
40-44	5.9	5.8	6.3
45-49	1.1	1.2	0.9
Crude birth rate	19.6	19.6	19.8
General fertility rate	69.7	69.9	68.6
Total fertility rate	1.9	1.9	1.9
Gross reproduction rate	0.9	0.9	0.9

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Age-group	Kerala		
	Combined	Rural	Urban
15-19	264.1	247.7	360.4
20-24	292.2	289.4	306.3
25-29	168.4	172.9	149.7
30-34	57.7	57.3	59.3
35-39	18.0	17.1	21.7
40-44	7.1	7.0	7.4
45-49	1.5	1.6	1.2
General marital fertility rate	112.2	113.1	108.5
Total marital fertility rate	4.0	4.0	4.5



T A B L E 4

Percentage distribution of live births by order of birth.1990

	Kerala								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	43.0	43.0	43.1	42.6	42.5	42.8	44.8	45.3	44.3
2	35.6	36.0	35.2	35.7	36.3	35.1	35.1	34.6	35.6
3	13.1	12.8	13.4	13.2	12.8	13.6	12.9	13.0	12.8
4	4.3	4.3	4.4	4.5	4.3	4.7	3.8	4.4	3.2
5	1.7	1.7	1.8	1.8	1.7	1.8	1.6	1.5	1.8
6	0.8	0.8	0.8	0.9	1.0	0.8	0.6	0.2	1.1
7	0.6	0.6	0.6	0.6	0.6	0.6	0.7	0.8	0.5
8	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.5
9	0.2	0.2	0.2	0.2	0.2	0.2	0.1	0.2	0.0
10+	0.2	0.3	0.2	0.3	0.4	0.2	0.1	0.0	0.2

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	Kerala		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	3.5	3.5	3.5
12-18	8.2	7.5	11.5
18-24	20.5	21.3	16.8
24-30	14.2	13.4	18.0
30-36	14.3	15.2	10.0
36+	39.2	39.0	40.2

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

Kerala

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	3.5	8.2	20.5	14.2	14.3	39.2
2	62.5	2.4	5.9	13.7	8.9	8.2	23.4
3	23.0	0.7	1.8	4.1	3.3	3.7	9.3
4	7.6	0.2	0.2	1.4	1.0	1.2	3.5
5	3.0	0.0	0.0	0.6	0.4	0.5	1.6
6	1.5	0.1	0.1	0.3	0.2	0.3	0.5
7	1.1	0.1	0.1	0.2	0.1	0.1	0.5
8	0.6	0.0	0.1	0.1	0.1	0.1	0.2
9	0.3	0.1	0.1	0.1	0.0	0.0	0.1
10+	0.4	0.0	0.0	0.1	0.1	0.1	0.1
R U R A L							
Total	100.0	3.5	7.5	21.3	13.4	15.2	39.0
2	62.3	2.4	5.3	14.4	8.3	8.7	23.2
3	23.0	0.6	1.6	4.1	3.3	4.0	9.3
4	7.8	0.3	0.2	1.5	0.8	1.3	3.6
5	3.1	0.0	0.0	0.6	0.3	0.4	1.6
6	1.6	0.1	0.1	0.4	0.2	0.4	0.5
7	1.0	0.1	0.1	0.2	0.1	0.1	0.4
8	0.5	0.0	0.0	0.1	0.1	0.1	0.2
9	0.3	0.1	0.1	0.1	0.0	0.0	0.1
10+	0.4	0.0	0.0	0.1	0.1	0.1	0.1
U R B A N							
Total	100.0	3.5	11.5	16.8	18.0	10.0	40.2
2	63.5	2.5	8.5	10.6	11.7	5.8	24.5
3	23.4	1.1	2.8	4.3	3.4	2.5	9.4
4	6.9	0.0	0.2	1.1	2.0	0.8	2.9
5	2.9	0.0	0.0	0.5	0.5	0.6	1.4
6	1.1	0.0	0.0	0.2	0.3	0.0	0.6
7	1.2	0.0	0.0	0.2	0.2	0.2	0.8
8	0.6	0.0	0.2	0.0	0.0	0.2	0.3
9	0.2	0.0	0.0	0.0	0.0	0.0	0.2
10+	0.2	0.0	0.0	0.0	0.0	0.0	0.2

TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	Kerala								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	4.6	5.1	4.0	4.7	5.6	3.8	3.9	2.8	5.0
5-9	0.6	0.8	0.4	0.7	1.0	0.5	0.0	0.0	0.0
10-14	0.4	0.6	0.1	0.4	0.6	0.1	0.4	0.7	0.0
15-19	0.7	0.8	0.6	0.8	0.9	0.7	0.3	0.3	0.3
20-24	1.1	1.2	1.0	1.1	1.2	1.0	1.2	1.3	1.1
25-29	1.4	2.0	0.9	1.5	2.1	0.9	1.0	1.1	0.9
30-34	1.6	2.0	1.3	1.7	2.1	1.4	1.2	1.7	0.8
35-39	2.4	3.7	1.2	2.5	3.8	1.2	2.2	3.4	1.0
40-44	4.1	5.6	2.7	3.8	5.2	2.4	5.6	7.0	4.1
45-49	5.2	6.4	4.1	4.6	6.1	3.3	7.7	7.7	7.7
50-54	7.3	10.7	4.3	7.6	11.4	4.1	6.2	7.1	5.4
55-59	11.8	16.6	7.5	11.4	15.9	7.3	14.0	19.8	8.7
60-64	18.6	24.8	12.8	17.3	24.9	10.3	24.2	24.3	24.2
65-69	27.0	36.9	18.4	26.0	35.9	17.5	32.0	42.0	23.2
70+	86.2	92.6	81.1	86.5	91.9	82.2	84.4	96.2	76.0
All ages	6.0	6.9	5.1	6.0	7.0	5.0	6.1	6.5	5.6

TABLE 8

Mortality indicators, 1990

Indicators	Kerala		
	Combined	Rural	Urban
Crude death rate	6.0	6.0	6.1
Infant mortality rate	17	17	15
Neo-natal mortality rate	12.6	12.7	12.0
Post-natal mortality rate	4.2	4.4	3.3
Peri-natal mortality rate	20.0	18.8	25.7
Still birth rate	10.3	8.9	16.6

TABLE 9

Percent distribution of sample births by type of medical attention at birth, 1990

Kerala				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	89.8	6.3	3.7	0.2
Rural	88.7	6.8	4.3	0.2
Urban	94.4	4.5	0.9	0.2

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
 T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
 U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
 O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type of medical attention received before death, 1990

Kerala				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	46.8	32.8	3.2	17.2
Rural	46.1	30.8	3.8	19.3
Urban	49.7	41.7	0.3	8.3

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
 M- If the death occurred at home but was attended by a qualified practitioner.  
 U- If the death occurred at home and was attended by an unqualified practitioner.  
 N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Madhya Pradesh

Age-Group	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	14.6	14.6	14.6	14.8	14.8	14.8	13.7	13.6	13.7
5-9	11.7	11.7	11.7	11.8	11.9	11.8	11.2	11.0	11.5
10-14	12.2	12.4	11.9	12.2	12.5	12.0	11.9	12.1	11.7
15-19	10.7	11.1	10.3	10.7	11.2	10.3	10.5	10.7	10.4
20-24	9.1	9.3	8.9	8.8	9.1	8.5	10.6	10.4	10.7
25-29	7.8	7.6	7.9	7.6	7.4	7.8	8.6	8.7	8.5
30-34	6.6	6.6	6.6	6.4	6.4	6.4	7.6	7.7	7.5
35-39	5.6	5.5	5.7	5.5	5.3	5.7	5.9	6.0	5.8
40-44	4.7	4.7	4.6	4.6	4.6	4.5	5.0	5.2	4.7
45-49	4.2	4.0	4.4	4.3	4.0	4.5	4.0	3.9	4.1
50-54	3.7	3.6	3.7	3.7	3.7	3.8	3.4	3.5	3.3
55-59	3.1	3.2	3.0	3.2	3.3	3.1	2.6	2.6	2.6
60-64	2.1	2.1	2.2	2.2	2.2	2.3	1.8	1.7	1.9
65-59	1.9	1.8	2.0	2.0	1.8	2.1	1.5	1.4	1.7
70 +	2.0	1.7	2.3	2.1	1.8	2.4	1.7	1.4	1.9

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Madhya Pradesh			
Age-group	Combined	Rural	Urban
15-19	136.8	154.9	61.1
20-24	304.4	324.2	237.6
25-29	240.1	249.6	203.1
30-34	143.4	154.9	101.8
35-39	79.2	86.6	48.5
40-44	39.0	43.2	21.7
45-49	13.4	14.3	9.1
Crude birth rate	37.1	38.9	29.3
General fertility rate	158.2	168.5	117.9
Total fertility rate	4.8	5.1	3.4
Gross reproduction rate	2.3	2.5	1.6

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Madhya Pradesh			
Age-group	Combined	Rural	Urban
15-19	268.8	271.8	240.4
20-24	345.3	349.5	327.3
25-29	250.3	257.4	221.3
30-34	149.4	160.7	107.4
35-39	83.7	91.4	51.7
40-44	42.5	46.9	24.1
45-49	15.5	16.5	10.8
General marital fertility rate	189.5	196.3	158.5
Total marital fertility rate	5.8	6.0	4.9

T A B L E 4

Percentage distribution of live births by order of birth.1990

	Madhya Pradesh								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	28.0	27.5	28.6	28.1	27.3	28.9	27.6	28.4	26.8
2	25.2	25.0	25.4	24.8	24.6	25.1	27.2	27.3	27.1
3	19.7	19.9	19.4	19.6	20.0	19.2	19.9	19.1	20.7
4	12.4	12.7	12.1	12.5	12.8	12.2	12.0	12.3	11.6
5	7.4	7.6	7.2	7.6	7.8	7.4	6.4	6.8	6.0
6	4.0	4.2	3.9	4.2	4.5	3.8	3.4	2.7	4.2
7	1.9	1.9	1.8	1.9	1.9	2.0	1.5	2.0	0.9
8	0.8	0.8	0.9	0.8	0.7	0.8	1.2	0.9	1.5
9	0.3	0.3	0.4	0.3	0.3	0.4	0.4	0.2	0.6
10+	0.2	0.1	0.4	0.2	0.1	0.3	0.4	0.2	0.6

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	Madhya Pradesh		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	4.8	4.8	4.3
12-18	11.2	10.9	12.5
18-24	26.6	27.0	24.6
24-30	14.3	13.8	17.2
30-36	17.8	18.6	13.5
36+	25.3	24.9	28.0

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

Madhya Pradesh

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	4.8	11.2	26.6	14.3	17.8	25.3
2	35.0	2.1	4.3	10.1	4.8	5.2	8.5
3	27.3	1.1	3.0	6.7	3.8	5.8	6.9
4	17.2	0.6	1.9	4.5	2.6	3.1	4.5
5	10.3	0.5	0.9	2.6	1.6	1.8	2.8
6	5.6	0.3	0.6	1.4	0.8	1.1	1.4
7	2.6	0.1	0.2	0.6	0.4	0.5	0.7
8	1.2	0.1	0.1	0.3	0.2	0.2	0.3
9	0.5	0.0	0.1	0.1	0.1	0.0	0.1
10+	0.3	0.0	0.0	0.1	0.1	0.0	0.0
R U R A L							
Total	100.0	4.8	10.9	27.0	13.8	18.6	24.9
2	34.6	2.1	4.1	10.2	4.7	5.4	8.1
3	27.2	1.1	2.9	6.9	3.6	5.9	6.8
4	17.4	0.7	1.9	4.5	2.5	3.4	4.4
5	10.5	0.5	0.9	2.7	1.5	2.0	2.9
6	5.8	0.3	0.6	1.6	0.8	1.1	1.4
7	2.7	0.1	0.2	0.7	0.4	0.5	0.7
8	1.1	0.1	0.1	0.3	0.1	0.2	0.3
9	0.5	0.0	0.1	0.1	0.1	0.0	0.1
10+	0.3	0.0	0.0	0.1	0.1	0.0	0.1
U R B A N							
Total	100.0	4.3	12.5	24.6	17.2	13.5	28.0
2	37.6	2.0	5.5	10.0	5.5	4.0	10.7
3	27.5	1.3	3.1	5.6	5.3	5.2	7.0
4	16.5	0.2	1.4	4.6	3.0	1.8	5.4
5	8.9	0.5	1.0	2.4	1.8	0.9	2.4
6	4.7	0.1	0.8	0.5	0.9	1.1	1.4
7	2.1	0.0	0.3	0.5	0.3	0.2	0.8
8	1.7	0.1	0.2	0.7	0.2	0.2	0.3
9	0.5	0.0	0.1	0.1	0.2	0.1	0.1
10+	0.5	0.1	0.1	0.2	0.1	0.1	0.0



TABLE 7

Estimated age-specific death rate by sex, 1990

Madhya Pradesh									
Age-group	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	39.4	37.4	41.5	43.9	41.4	46.5	18.7	18.8	18.6
5-9	3.0	2.8	3.1	3.4	3.2	3.6	1.0	1.1	0.9
10-14	1.6	1.6	1.7	1.8	1.9	1.8	0.9	0.5	1.4
15-19	2.9	2.1	3.7	3.3	2.2	4.5	1.1	1.4	0.6
20-24	3.7	2.7	4.8	3.7	3.0	4.5	3.7	1.8	5.6
25-29	2.6	2.8	2.5	2.7	2.7	2.7	2.4	3.2	1.6
30-34	2.7	2.4	3.0	3.0	2.7	3.4	1.5	1.2	1.8
35-39	3.3	3.8	2.8	3.7	4.0	3.4	1.9	3.1	0.6
40-44	5.4	6.0	4.8	5.7	5.8	5.6	4.2	6.5	1.4
45-49	7.5	8.2	6.8	8.0	8.7	7.4	5.2	6.3	4.0
50-54	11.4	13.7	9.0	12.1	14.6	9.6	8.2	9.9	6.2
55-59	20.9	25.8	15.3	20.5	25.5	14.7	22.9	27.5	18.0
60-64	32.5	36.2	28.7	32.7	35.7	29.7	31.1	38.9	23.6
65-69	43.8	44.3	43.3	45.3	45.9	44.8	35.6	35.6	35.6
70+	94.6	88.7	99.4	95.2	90.6	99.0	91.3	78.4	101.6
All ages	12.6	12.1	13.1	13.7	13.1	14.3	7.6	7.6	7.7

TABLE 8

Mortality indicators, 1990

Madhya Pradesh			
Indicators	Combined	Rural	Urban
Crude death rate	12.6	13.7	7.6
Infant mortality rate	111	120	61
Neo-natal mortality rate	71.9	78.0	38.0
Post-natal mortality rate	39.2	42.1	23.0
Peri-natal mortality rate	59.0	62.5	39.3
Still birth rate	10.5	10.4	11.4

TABLE 9

Percent distribution of sample births by type of medical attention at birth, 1990

Madhya Pradesh				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	11.6	13.5	72.9	2.0
Rural	4.8	12.5	80.4	2.3
Urban	49.1	18.9	32.0	0.0

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
 T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
 U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
 O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type of medical attention received before death, 1990

Madhya Pradesh				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	7.9	27.2	24.2	40.7
Rural	5.4	23.7	26.8	44.1
Urban	26.7	53.2	5.1	15.0

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
 M- If the death occurred at home but was attended by a qualified practitioner.  
 U- If the death occurred at home and was attended by an unqualified practitioner.  
 N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Age-Group	Maharashtra								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	13.1	13.2	13.0	14.0	14.4	13.7	11.3	11.0	11.7
5-9	11.3	11.5	11.2	11.6	11.9	11.3	10.9	10.9	11.0
10-14	10.8	11.0	10.6	10.9	11.2	10.6	10.6	10.6	10.5
15-19	10.4	10.6	10.1	10.6	10.8	10.4	10.0	10.2	9.7
20-24	9.6	9.3	9.8	9.1	8.9	9.2	10.5	10.1	10.9
25-29	8.1	8.3	8.0	7.4	7.5	7.3	9.5	9.8	9.2
30-34	7.2	7.2	7.3	6.5	6.4	6.7	8.5	8.7	8.4
35-39	6.1	6.1	6.2	5.7	5.6	5.9	6.8	6.9	6.7
40-44	5.3	5.4	5.3	5.1	5.0	5.1	5.8	6.0	5.5
45-49	4.6	4.4	4.7	4.6	4.3	4.9	4.6	4.7	4.4
50-54	4.0	4.1	4.0	4.2	4.2	4.2	3.7	3.9	3.5
55-59	3.2	3.2	3.1	3.4	3.4	3.4	2.7	2.8	2.7
60-64	2.4	2.3	2.5	2.6	2.5	2.7	2.0	1.8	2.1
65-59	1.8	1.7	2.0	2.0	1.9	2.1	1.5	1.4	1.7
70 +	2.0	1.7	2.3	2.2	2.0	2.5	1.6	1.3	2.0

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Maharashtra			
Age-group	Combined	Rural	Urban
15-19	96.2	118.1	50.9
20-24	246.8	271.4	206.8
25-29	173.1	175.9	168.8
30-34	81.7	94.5	62.1
35-39	32.8	39.4	21.6
40-44	9.5	11.6	5.7
45-49	2.6	3.6	0.5
Crude birth rate	27.5	29.5	23.8
General fertility rate	109.7	120.3	91.2
Total fertility rate	3.2	3.6	2.6
Gross reproduction rate	1.6	1.7	1.3

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Maharashtra			
Age-group	Combined	Rural	Urban
15-19	262.7	254.7	309.1
20-24	317.9	317.8	318.0
25-29	190.7	189.4	192.8
30-34	88.3	101.9	67.3
35-39	35.6	42.8	23.5
40-44	10.7	13.2	6.4
45-49	3.1	4.3	0.6
General marital fertility rate	142.4	150.1	127.4
Total marital fertility rate	4.5	4.6	4.6

T A B L E 4

Percentage distribution of live births by order of birth, 1990

Maharashtra									
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	30.0	30.1	29.9	28.9	28.8	29.0	33.5	34.1	32.9
2	28.7	28.5	28.9	28.4	28.4	28.5	29.5	29.0	30.1
3	20.8	20.5	21.1	21.4	21.6	21.3	18.8	17.0	20.6
4	11.2	11.3	11.1	11.4	11.2	11.5	10.6	11.6	9.6
5	5.4	5.0	5.8	5.7	5.0	6.3	4.4	4.7	4.1
6	2.3	2.7	1.9	2.6	3.0	2.1	1.6	1.9	1.4
7	1.0	1.0	1.0	1.0	1.1	1.0	1.0	0.8	1.2
8	0.3	0.5	0.2	0.3	0.4	0.2	0.3	0.7	0.0
9	0.1	0.2	0.1	0.2	0.2	0.1	0.0	0.1	0.0
10+	0.1	0.2	0.0	0.1	0.2	0.1	0.1	0.2	0.0

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Maharashtra			
Birth Interval in months			
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	2.9	2.7	3.3
12-18	7.9	7.6	9.0
18-24	22.7	22.8	22.2
24-30	24.4	24.6	23.9
30-36	16.5	17.0	15.1
36+	25.6	25.2	26.6

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

Maharashtra

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	2.9	7.9	22.7	24.4	16.5	25.6
2	41.0	1.5	4.4	9.5	9.2	6.7	9.8
3	29.7	0.7	1.9	6.6	7.5	5.1	8.0
4	16.0	0.3	0.9	3.6	4.3	2.5	4.5
5	7.6	0.2	0.3	1.7	1.9	1.4	2.1
6	3.3	0.1	0.2	0.8	0.9	0.5	0.7
7	1.5	0.1	0.2	0.3	0.4	0.2	0.2
8	0.5	0.0	0.0	0.1	0.1	0.1	0.1
9	0.2	0.0	0.0	0.0	0.0	0.1	0.0
10+	0.1	0.0	0.0	0.0	0.0	0.0	0.0
R U R A L							
Total	100.0	2.7	7.6	22.9	24.6	17.0	25.2
2	40.1	1.3	4.2	9.6	9.3	6.6	9.0
3	30.1	0.6	1.9	6.8	7.8	5.2	7.8
4	16.0	0.3	0.9	3.4	4.1	2.6	4.8
5	7.9	0.3	0.3	1.7	1.9	1.5	2.2
6	3.6	0.1	0.2	0.8	0.9	0.6	0.9
7	1.5	0.1	0.1	0.3	0.4	0.3	0.3
8	0.4	0.0	0.0	0.1	0.1	0.1	0.1
9	0.2	0.0	0.0	0.1	0.0	0.1	0.0
10+	0.1	0.0	0.0	0.1	0.0	0.1	0.0
U R B A N							
Total	100.0	3.3	9.0	22.2	23.9	15.1	26.6
2	44.4	2.0	5.2	9.1	8.8	6.9	12.5
3	28.2	0.8	1.9	5.6	6.7	4.7	8.5
4	16.0	0.4	1.2	4.3	4.8	2.1	3.3
5	6.7	0.0	0.2	1.7	2.0	0.9	1.9
6	2.5	0.1	0.1	0.9	1.0	0.2	0.1
7	1.5	0.0	0.4	0.4	0.4	0.1	0.1
8	0.5	0.0	0.0	0.2	0.1	0.1	0.1
9	0.1	0.0	0.0	0.0	0.1	0.0	0.0
10+	0.1	0.0	0.0	0.0	0.0	0.0	0.1

TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	Maharashtra								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	16.5	15.6	17.5	18.4	17.3	19.6	12.2	11.7	12.8
5-9	1.6	1.6	1.5	1.9	1.9	1.9	0.9	1.2	0.6
10-14	1.1	0.7	1.5	1.4	0.9	1.9	0.6	0.4	0.9
15-19	1.4	1.2	1.7	1.6	1.2	2.0	1.0	1.0	0.9
20-24	2.1	2.2	2.0	2.4	2.4	2.5	1.6	2.0	1.2
25-29	2.4	2.7	2.1	2.5	2.5	2.6	2.3	3.0	1.5
30-34	2.2	2.6	1.7	2.4	2.4	2.5	1.8	2.8	0.5
35-39	2.8	2.7	3.0	3.1	2.4	3.7	2.4	3.0	1.8
40-44	4.1	4.6	3.6	4.8	4.6	5.1	3.0	4.7	0.9
45-49	4.9	5.8	4.1	4.7	5.9	3.6	5.3	5.5	5.0
50-54	10.2	12.7	7.6	10.8	12.5	9.1	9.1	13.1	4.1
55-59	15.4	18.5	12.0	16.5	20.9	12.0	12.8	13.3	12.2
60-64	20.5	24.7	16.5	23.1	29.0	17.5	14.1	14.2	14.0
65-69	32.7	34.9	30.7	34.7	36.7	32.9	27.9	30.7	25.4
70+	78.9	88.2	71.6	80.9	88.3	74.9	73.9	87.9	63.4
All ages	7.4	7.5	7.2	8.5	8.5	8.4	5.4	5.8	4.9

TABLE 8

Mortality indicators, 1990

Indicators	Maharashtra		
	Combined	Rural	Urban
Crude death rate	7.4	8.5	5.4
Infant mortality rate	58	64	44
Neo-natal mortality rate	42.2	48.9	26.9
Post-natal mortality rate	15.9	15.3	17.3
Peri-natal mortality rate	44.7	48.0	37.1
Still birth rate	13.8	12.5	16.8

TABLE 9

Percent distribution of sample births by type of medical attention at birth, 1990

## Maharashtra

Sector	Type of medical attention at birth			
	I	T	U	O
Combined	33.6	14.7	44.1	7.6
Rural	20.4	13.8	57.0	8.8
Urban	75.1	17.8	3.5	3.6

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
 T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
 U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
 O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type of medical attention received before death, 1990

## Maharashtra

Sector	Type of medical attention at death			
	I	M	U	N
Combined	29.8	34.5	22.0	13.7
Rural	26.3	29.4	27.4	16.9
Urban	43.8	55.4	0.4	0.4

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
 M- If the death occurred at home but was attended by a qualified practitioner.  
 U- If the death occurred at home and was attended by an unqualified practitioner.  
 N- No professional doctor/hakim/vaidya attended.



Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Age-Group	Orissa								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	13.0	13.3	12.7	13.2	13.5	12.9	11.2	11.3	11.1
5-9	10.6	10.7	10.5	10.5	10.6	10.4	11.0	11.1	10.9
10-14	11.9	12.0	11.7	11.9	12.1	11.7	11.6	11.3	11.9
15-19	11.2	11.3	11.2	11.3	11.4	11.2	10.8	10.6	11.1
20-24	9.8	9.1	10.4	9.7	9.0	10.3	10.6	10.0	11.4
25-29	8.0	8.0	8.1	7.9	7.9	7.9	9.0	8.8	9.2
30-34	7.0	7.1	6.8	6.8	7.0	6.6	8.2	8.0	8.3
35-39	5.8	5.8	5.7	5.7	5.7	5.6	6.6	6.8	6.4
40-44	5.1	5.0	5.1	5.0	4.9	5.1	5.7	6.2	5.2
45-49	4.6	4.5	4.6	4.6	4.5	4.7	4.2	4.5	3.9
50-54	3.9	3.8	3.9	3.9	3.8	3.9	3.8	4.3	3.4
55-59	3.2	3.3	3.2	3.3	3.4	3.2	2.5	2.7	2.3
60-64	2.3	2.4	2.2	2.3	2.4	2.2	1.8	1.9	1.8
65-59	1.8	1.7	1.9	1.9	1.8	2.0	1.3	1.1	1.4
70 +	2.0	1.9	2.2	2.1	2.0	2.2	1.6	1.5	1.7

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Orissa			
Age-group	Combined	Rural	Urban
15-19	70.0	72.7	44.6
20-24	223.0	227.1	187.7
25-29	200.1	204.7	161.6
30-34	121.9	128.0	75.0
35-39	61.5	64.8	33.2
40-44	21.1	22.6	6.7
45-49	8.1	8.2	6.9
Crude birth rate	30.0	30.7	23.7
General fertility rate	116.5	119.5	90.3
Total fertility rate	3.5	3.6	2.6
Gross reproduction rate	1.7	1.7	1.2

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Orissa			
Age-group	Combined	Rural	Urban
15-19	278.6	275.6	335.1
20-24	301.0	298.8	325.6
25-29	218.4	222.2	184.8
30-34	129.2	135.6	79.8
35-39	65.8	69.4	35.4
40-44	23.6	25.4	7.4
45-49	9.7	9.8	8.2
General marital fertility rate	158.8	161.6	132.5
Total marital fertility rate	5.1	5.2	4.9

T A B L E 4

Percentage distribution of live births by order of birth, 1990.

	Orissa								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	29.2	28.3	30.1	28.6	27.4	30.0	33.0	34.5	31.3
2	25.7	26.2	25.2	25.5	26.2	24.8	26.9	26.1	27.8
3	19.2	19.6	18.8	19.5	19.8	19.1	17.6	18.0	17.2
4	12.5	12.4	12.5	12.7	12.8	12.5	11.0	10.0	12.2
5	6.6	6.8	6.3	6.7	7.0	6.4	5.7	5.5	5.9
6	3.4	3.2	3.6	3.5	3.3	3.6	3.2	3.0	3.5
7	1.9	1.9	1.8	1.9	1.9	1.9	1.3	1.5	1.2
8	0.9	0.9	1.0	0.9	0.9	1.0	0.7	0.6	0.7
9	0.3	0.3	0.4	0.4	0.4	0.4	0.2	0.2	0.2
10+	0.3	0.4	0.2	0.3	0.4	0.3	0.3	0.6	0.0

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	Orissa		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	4.8	4.7	5.5
12-18	9.1	8.6	12.8
18-24	20.3	20.3	20.6
24-30	16.1	16.1	16.4
30-36	19.2	19.6	16.3
36+	30.5	30.8	28.4

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

Orissa

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	4.8	9.1	20.3	16.1	19.2	30.4
2	36.4	2.1	4.0	7.7	5.5	6.4	10.6
3	27.1	1.2	2.2	5.8	4.2	5.2	8.5
4	17.6	0.7	1.4	3.4	3.0	3.8	5.3
5	9.3	0.3	0.8	1.6	1.7	2.0	2.9
6	4.8	0.1	0.4	0.9	1.0	0.9	1.6
7	2.6	0.2	0.2	0.5	0.4	0.5	0.9
8	1.3	0.1	0.1	0.2	0.2	0.3	0.4
9	0.5	0.0	0.0	0.1	0.1	0.1	0.1
10+	0.4	0.1	0.0	0.1	0.0	0.1	0.2
R U R A L							
Total	100.0	4.7	8.6	20.3	16.1	19.6	30.7
2	35.9	2.1	3.7	7.6	5.4	6.4	10.7
3	27.2	1.2	2.1	5.9	4.2	5.4	8.6
4	17.7	0.7	1.5	3.5	3.0	3.8	5.2
5	9.4	0.3	0.7	1.6	1.7	2.0	3.1
6	4.8	0.1	0.4	0.8	1.0	0.9	1.6
7	2.7	0.2	0.1	0.5	0.4	0.5	0.9
8	1.3	0.1	0.0	0.2	0.2	0.3	0.4
9	0.5	0.0	0.0	0.1	0.1	0.1	0.1
10+	0.4	0.0	0.0	0.1	0.0	0.1	0.2
U R B A N							
Total	100.0	5.5	12.8	20.6	16.4	16.3	28.4
2	40.2	2.3	6.0	8.6	6.0	7.0	10.3
3	26.2	1.7	3.0	5.5	4.0	3.8	8.3
4	16.4	0.8	1.2	3.0	2.3	3.2	6.0
5	8.5	0.5	1.5	1.7	1.5	1.7	1.7
6	4.8	0.0	0.7	1.3	1.3	0.3	1.2
7	2.0	0.0	0.3	0.5	0.7	0.0	0.5
8	1.0	0.0	0.2	0.0	0.3	0.3	0.2
9	0.3	0.0	0.0	0.0	0.3	0.0	0.0
10+	0.5	0.2	0.0	0.0	0.0	0.0	0.3

TABLE 9

Percent distribution of sample births by  
type of medical attention at birth, 1990

Orissa				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	9.0	16.5	68.3	6.3
Rural	5.4	15.0	72.8	6.8
Urban	33.0	26.6	37.6	2.8

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
 T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
 U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
 O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type  
of medical attention received before death, 1990

Orissa				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	9.1	19.5	11.4	60.0
Rural	8.2	18.1	12.5	61.2
Urban	17.1	32.2	1.6	49.1

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
 M- If the death occurred at home but was attended by a qualified practitioner.  
 U- If the death occurred at home and was attended by an unqualified practitioner.  
 N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Age-Group	Punjab								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	11.7	11.6	11.8	11.8	11.8	11.7	11.5	11.2	11.9
5-9	11.6	11.6	11.6	11.7	11.7	11.6	11.4	11.4	11.5
10-14	10.7	10.8	10.5	10.9	11.1	10.7	10.0	10.0	10.0
15-19	10.0	10.4	9.6	10.3	10.6	9.9	9.3	9.8	8.7
20-24	10.1	9.6	10.6	10.1	9.7	10.7	9.9	9.5	10.2
25-29	9.1	9.2	9.0	8.8	8.9	8.6	10.0	9.9	10.1
30-34	7.2	7.4	7.0	6.7	6.9	6.6	8.6	9.0	8.2
35-39	6.2	6.1	6.4	6.1	5.8	6.4	6.6	6.8	6.4
40-44	5.0	5.1	4.9	4.9	4.9	4.9	5.3	5.5	5.0
45-49	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4	4.4
50-54	3.6	3.5	3.7	3.6	3.5	3.7	3.7	3.6	3.7
55-59	3.2	3.2	3.1	3.2	3.4	3.1	2.9	2.9	3.0
60-64	2.4	2.3	2.5	2.4	2.3	2.6	2.3	2.2	2.4
65-59	2.1	2.1	2.2	2.2	2.3	2.2	1.9	1.7	2.1
70 +	2.7	2.6	2.7	2.9	2.9	2.8	2.2	2.0	2.4

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Punjab			
Age-group	Combined	Rural	Urban
15-19	28.3	30.0	23.4
20-24	242.3	243.1	240.0
25-29	214.8	228.8	182.4
30-34	98.6	106.1	82.3
35-39	44.1	48.4	32.4
40-44	12.8	13.5	10.9
45-49	1.1	1.5	0.0
Crude birth rate	27.6	28.4	25.6
General fertility rate	111.9	115.5	102.5
Total fertility rate	3.2	3.4	2.9
Gross reproduction rate	1.5	1.6	1.4

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Punjab			
Age-group	Combined	Rural	Urban
15-19	267.8	258.3	313.3
20-24	362.3	363.7	358.4
25-29	237.9	252.7	203.4
30-34	105.6	114.3	87.1
35-39	46.9	51.7	34.2
40-44	13.7	14.5	11.7
45-49	1.2	1.7	0.0
General marital fertility rate	155.6	161.9	139.8
Total marital fertility rate	5.2	5.3	5.0

T A B L E 4

Percentage distribution of live births by order of birth.1990

	Punjab								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	35.1	33.9	36.5	35.9	35.5	36.4	33.0	29.6	36.8
2	26.5	26.7	26.3	25.0	25.1	24.8	30.5	30.9	30.1
3	19.7	20.0	19.2	19.2	19.0	19.3	20.9	22.7	19.0
4	10.5	11.3	9.6	10.9	11.6	10.1	9.5	10.6	8.4
5	4.9	4.5	5.3	5.4	4.9	5.9	3.6	3.4	3.8
6	1.9	2.1	1.7	2.0	2.1	1.8	1.8	1.9	1.6
7	1.0	1.0	1.0	1.2	1.1	1.3	0.5	0.8	0.2
8	0.2	0.3	0.1	0.2	0.3	0.1	0.2	0.2	0.2
9	0.2	0.1	0.2	0.2	0.2	0.3	0.0	0.0	0.0
10+	0.1	0.1	0.0	0.1	0.1	0.1	0.0	0.0	0.0

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	Punjab		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	7.2	7.8	5.5
12-18	15.3	16.0	13.8
18-24	23.6	24.8	20.6
24-30	15.9	16.0	15.8
30-36	13.7	13.8	13.4
36+	24.3	21.7	30.8



T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

Punjab

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	7.2	15.3	23.6	15.9	13.7	24.3
2	40.9	3.5	7.9	9.7	6.1	4.8	8.8
3	30.3	2.1	4.0	7.0	4.9	4.3	8.0
4	16.2	1.0	2.3	4.0	2.6	2.4	3.8
5	7.5	0.3	0.8	1.6	1.4	1.2	2.2
6	2.9	0.1	0.2	0.7	0.6	0.5	0.7
7	1.5	0.0	0.1	0.4	0.1	0.3	0.6
8	0.3	0.0	0.0	0.1	0.1	0.0	0.0
9	0.2	0.0	0.0	0.1	0.0	0.0	0.1
10+	0.1	0.0	0.0	0.0	0.0	0.0	0.0
R U R A L							
Total	100.0	7.8	16.0	24.8	16.0	13.8	21.7
2	39.0	3.7	7.9	10.1	5.2	4.7	7.4
3	29.9	2.2	4.2	7.4	5.2	4.4	6.4
4	17.0	1.3	2.4	4.3	2.9	2.3	3.7
5	8.4	0.4	0.9	1.6	1.6	1.3	2.5
6	3.0	0.1	0.3	0.6	0.6	0.6	0.7
7	1.8	0.0	0.1	0.5	0.1	0.3	0.6
8	0.3	0.0	0.0	0.1	0.1	0.0	0.0
9	0.3	0.0	0.0	0.1	0.0	0.0	0.2
10+	0.1	0.0	0.0	0.0	0.0	0.0	0.0
U R B A N							
Total	100.0	5.5	13.8	20.6	15.8	13.4	30.8
2	45.6	3.1	7.8	8.8	8.5	5.1	12.3
3	31.2	1.6	3.4	6.1	4.0	4.2	11.9
4	14.2	0.4	2.0	3.2	1.9	2.6	4.1
5	5.3	0.1	0.5	1.4	0.7	1.0	1.6
6	2.6	0.1	0.1	1.0	0.7	0.1	0.5
7	0.7	0.0	0.0	0.1	0.0	0.2	0.4
8	0.2	0.1	0.0	0.0	0.0	0.1	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10+	0.0	0.0	0.0	0.0	0.0	0.0	0.0

TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	Punjab								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	18.3	14.9	22.0	20.0	16.7	23.7	13.4	9.8	17.3
5-9	1.6	1.1	2.1	1.8	1.3	2.4	1.0	0.8	1.3
10-14	0.8	0.9	0.6	0.8	0.9	0.7	0.8	1.2	0.4
15-19	1.7	1.8	1.5	1.6	1.9	1.3	1.8	1.6	2.1
20-24	2.8	3.5	2.1	3.2	4.0	2.5	1.6	2.2	1.0
25-29	2.8	3.4	2.0	3.7	4.3	2.9	0.7	1.2	0.0
30-34	1.9	2.9	0.7	2.5	3.8	1.0	0.5	0.9	0.0
35-39	3.1	3.6	2.6	3.5	3.6	3.3	2.3	3.6	0.7
40-44	4.4	6.2	2.4	5.3	7.3	3.0	2.3	3.5	0.9
45-49	8.8	9.4	8.2	9.9	11.1	8.5	6.0	4.8	7.3
50-54	8.4	10.0	6.6	8.4	9.4	7.2	8.3	11.4	5.0
55-59	13.5	16.0	10.5	13.2	14.6	11.6	14.1	20.5	7.4
60-64	16.3	20.5	12.1	18.5	23.3	13.7	10.3	12.9	7.7
65-69	27.1	30.0	24.0	25.6	25.7	25.4	31.8	44.6	19.9
70+	75.5	77.8	73.0	77.3	81.6	72.5	69.4	64.0	74.6
All ages	7.8	8.0	7.5	8.5	8.8	8.2	5.8	5.9	5.7

TABLE 8

Mortality indicators, 1990

Indicators	Punjab		
	Combined	Rural	Urban
Crude death rate	7.8	8.5	5.8
Infant mortality rate	61	66	45
Neo-natal mortality rate	33.6	39.3	16.7
Post-natal mortality rate	27.2	26.8	28.4
Peri-natal mortality rate	49.0	57.2	24.5
Still birth rate	27.9	33.1	12.2

TABLE 9

Percent distribution of sample births by  
type of medical attention at birth, 1990

Punjab				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	7.4	82.4	9.5	0.8
Rural	4.5	82.4	12.3	0.7
Urban	14.9	82.3	1.9	0.8

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
 T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
 U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
 O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type  
of medical attention received before death, 1990

Punjab				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	10.5	69.3	1.8	18.4
Rural	9.1	69.8	2.4	18.7
Urban	15.2	67.3	0.0	17.5

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
 M- If the death occurred at home but was attended by a qualified practitioner.  
 U- If the death occurred at home and was attended by an unqualified practitioner.  
 N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Age-Group	Rajasthan								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	14.1	14.3	14.0	14.4	14.5	14.3	12.9	13.1	12.6
5-9	13.3	13.2	13.4	13.5	13.4	13.6	12.5	12.4	12.5
10-14	12.4	12.6	12.1	12.5	12.7	12.2	11.9	12.2	11.7
15-19	11.0	11.5	10.4	11.1	11.7	10.4	10.7	10.9	10.4
20-24	9.0	9.2	8.7	8.7	9.0	8.4	10.2	10.3	10.0
25-29	7.9	7.7	8.2	7.8	7.6	8.1	8.5	8.4	8.6
30-34	6.6	6.5	6.6	6.4	6.4	6.4	7.4	7.5	7.3
35-39	5.7	5.6	5.9	5.8	5.6	5.9	5.7	5.7	5.7
40-44	4.3	4.4	4.3	4.3	4.3	4.2	4.8	4.8	4.8
45-49	4.0	4.0	4.1	4.1	4.0	4.2	4.0	4.0	4.0
50-54	3.2	3.2	3.3	3.2	3.2	3.3	3.3	3.3	3.4
55-59	2.8	2.9	2.8	2.9	2.9	2.8	2.7	2.7	2.7
60-64	1.9	1.7	2.2	1.9	1.7	2.2	1.9	1.8	2.1
65-59	1.8	1.7	2.0	1.8	1.7	2.0	1.7	1.5	2.0
70 +	1.7	1.5	2.0	1.7	1.5	2.0	1.9	1.6	2.2

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Rajasthan			
Age-group	Combined	Rural	Urban
15-19	93.8	101.3	59.5
20-24	277.3	290.6	226.5
25-29	226.7	233.6	197.4
30-34	153.3	162.4	116.6
35-39	94.5	101.8	59.9
40-44	43.2	48.0	23.7
45-49	20.8	23.1	9.6
Crude birth rate	33.6	34.7	28.3
General fertility rate	146.8	153.8	116.8
Total fertility rate	4.5	4.8	3.5
Gross reproduction rate	2.1	2.2	1.6

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Rajasthan			
Age-group	Combined	Rural	Urban
15-19	194.1	193.6	198.1
20-24	301.6	304.6	288.1
25-29	232.1	237.4	208.4
30-34	157.5	166.2	121.8
35-39	99.1	106.7	62.8
40-44	46.8	51.9	25.8
45-49	23.7	26.3	11.1
General marital fertility rate	174.1	179.0	150.5
Total marital fertility rate	5.3	5.4	4.6

T A B L E 4

Percentage distribution of live births by order of birth, 1990.

	Rajasthan								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	29.2	29.8	28.4	28.8	29.3	28.2	31.2	32.6	29.6
2	23.3	23.4	23.2	23.2	23.4	23.0	23.8	23.1	24.6
3	18.9	19.2	18.5	19.0	19.3	18.7	18.2	18.7	17.6
4	12.4	12.1	12.8	12.7	12.5	13.0	10.9	10.0	11.9
5	7.7	7.4	8.2	7.9	7.6	8.4	6.8	6.5	7.2
6	4.5	4.4	4.5	4.5	4.4	4.5	4.5	4.6	4.4
7	2.3	2.2	2.4	2.3	2.2	2.5	2.1	2.1	2.1
8	1.0	0.9	1.1	0.9	0.8	1.0	1.4	1.1	1.7
9	0.4	0.3	0.4	0.3	0.3	0.4	0.5	0.4	0.7
10+	0.3	0.4	0.3	0.3	0.3	0.3	0.6	0.9	0.3

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	Rajasthan		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	7.1	7.2	6.4
12-18	10.1	10.3	9.3
18-24	30.4	30.9	27.7
24-30	9.4	9.2	10.4
30-36	22.0	22.3	20.5
36+	20.9	20.1	25.7

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

Rajasthan

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	7.1	10.1	30.4	9.4	22.0	20.9
2	32.9	2.9	3.4	10.8	3.3	6.3	6.3
3	26.7	1.6	2.8	7.8	2.5	6.7	5.3
4	17.5	1.0	1.6	5.0	1.7	3.8	4.4
5	10.9	0.8	1.0	3.1	1.1	2.5	2.4
6	6.3	0.4	0.6	2.0	0.5	1.4	1.3
7	3.2	0.2	0.4	1.0	0.2	0.7	0.7
8	1.4	0.1	0.1	0.5	0.2	0.3	0.3
9	0.5	0.1	0.1	0.1	0.0	0.1	0.1
10+	0.5	0.1	0.1	0.1	0.0	0.1	0.1
R U R A L							
Total	100.0	7.2	10.3	31.0	9.2	22.3	20.0
2	32.6	2.8	3.3	11.0	3.2	6.3	5.9
3	26.8	1.6	2.9	7.9	2.5	6.9	5.0
4	17.9	1.1	1.7	5.2	1.7	3.8	4.4
5	11.1	0.8	1.1	3.3	1.0	2.5	2.3
6	6.3	0.4	0.6	1.9	0.5	1.4	1.3
7	3.3	0.2	0.4	1.0	0.2	0.8	0.7
8	1.3	0.1	0.1	0.5	0.1	0.3	0.2
9	0.5	0.1	0.1	0.1	0.0	0.1	0.0
10+	0.4	0.1	0.1	0.0	0.0	0.1	0.1
U R B A N							
Total	100.0	6.4	9.3	27.7	10.4	20.5	25.7
2	34.6	3.2	3.8	9.9	3.5	6.0	8.2
3	26.5	1.5	2.3	7.3	2.8	5.6	7.0
4	15.8	0.7	1.2	4.0	1.5	4.1	4.3
5	9.9	0.5	0.6	2.0	1.3	2.4	3.0
6	6.6	0.1	0.6	2.5	0.5	1.3	1.5
7	3.1	0.3	0.4	0.9	0.2	0.4	0.9
8	2.0	0.0	0.3	0.4	0.4	0.3	0.4
9	0.8	0.0	0.1	0.1	0.2	0.2	0.3
10+	0.9	0.1	0.0	0.5	0.0	0.1	0.2

TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	Rajasthan								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	29.5	26.2	33.2	31.8	28.6	35.4	17.8	14.3	21.8
5-9	3.0	2.4	3.6	2.9	2.3	3.5	3.4	2.7	4.1
10-14	1.3	1.3	1.2	1.3	1.4	1.3	0.9	0.7	1.2
15-19	1.9	1.5	2.5	2.0	1.4	2.6	1.6	1.6	1.7
20-24	2.5	2.0	3.1	2.6	1.9	3.4	2.1	2.1	2.2
25-29	2.3	2.1	2.4	2.1	1.8	2.5	2.8	3.7	2.0
30-34	3.3	3.7	2.9	3.2	3.7	2.8	3.6	3.7	3.6
35-39	3.5	4.2	2.8	3.7	4.3	3.0	2.7	3.5	1.9
40-44	4.5	6.5	2.3	4.4	6.2	2.3	5.1	7.6	2.3
45-49	6.6	9.9	3.1	7.1	10.5	3.5	4.5	7.2	1.6
50-54	10.2	13.2	7.1	10.0	13.2	6.5	11.4	12.9	9.9
55-59	15.2	16.4	13.8	16.1	17.6	14.5	10.4	10.5	10.4
60-64	23.9	25.8	22.3	24.5	26.7	22.5	21.5	21.7	21.4
65-69	44.3	56.1	33.2	44.7	58.2	31.7	41.9	44.8	39.6
70+	78.7	93.3	66.9	79.8	96.2	66.4	74.3	81.0	69.0
All ages	9.6	9.5	9.7	10.1	10.0	10.1	7.5	7.2	7.9

TABLE 8

Mortality indicators, 1990

Indicators	Rajasthan		
	Combined	Rural	Urban
Crude death rate	9.6	10.1	7.5
Infant mortality rate	84	88	59
Neo-natal mortality rate	52.3	56.5	28.8
Post-natal mortality rate	31.5	31.6	30.7
Peri-natal mortality rate	45.0	48.1	27.8
Still birth rate	7.7	8.2	4.8



TABLE 9

Percent distribution of sample births by  
type of medical attention at birth, 1990

Rajasthan

Sector	Type of medical attention at birth			
	I	T	U	O
Combined	4.4	17.5	77.6	0.5
Rural	2.1	14.8	82.5	0.6
Urban	16.4	31.9	51.7	0.0

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type  
of medical attention received before death, 1990

Rajasthan

Sector	Type of medical attention at death			
	I	M	U	N
Combined	9.4	33.0	29.3	28.3
Rural	7.3	31.0	31.6	30.1
Urban	21.0	44.9	16.0	18.1

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
M- If the death occurred at home but was attended by a qualified practitioner.  
U- If the death occurred at home and was attended by an unqualified practitioner.  
N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Tamil Nadu

Age-Group	Tamil Nadu								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	10.3	10.3	10.3	10.6	10.7	10.5	9.7	9.7	9.7
5-9	10.6	10.7	10.4	10.6	10.8	10.5	10.5	10.6	10.3
10-14	10.7	10.8	10.5	10.8	11.1	10.5	10.3	10.3	10.4
15-19	10.0	10.4	10.0	10.0	10.2	9.9	10.4	10.0	10.2
20-24	10.0	9.5	10.6	9.7	9.2	10.1	10.8	10.1	11.4
25-29	8.7	8.8	8.7	8.2	8.3	8.1	9.8	9.7	9.8
30-34	7.4	7.5	7.3	7.0	6.9	7.0	8.3	8.5	8.0
35-39	6.4	6.5	6.3	6.2	6.1	6.4	6.7	7.3	6.1
40-44	5.9	5.8	6.0	5.8	5.6	6.0	6.0	6.0	5.9
45-49	5.1	5.1	5.1	5.4	5.4	5.4	4.6	4.7	4.5
50-54	4.5	4.6	4.4	4.8	4.9	4.6	4.1	4.2	3.9
<del>55-59</del>	<del>3.6</del>	<del>3.6</del>	<del>3.6</del>	<del>3.8</del>	<del>3.9</del>	<del>3.8</del>	<del>3.1</del>	<del>3.0</del>	<del>3.0</del>
60-64	2.7	2.7	2.8	2.8	2.8	2.8	2.5	2.4	2.6
65-59	2.1	2.0	2.1	2.2	2.2	2.2	1.8	1.6	1.9
70 +	2.0	1.9	2.1	2.1	2.0	2.2	1.9	1.8	2.0

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Age-group	Tamil Nadu		
	Combined	Rural	Urban
15-19	56.1	60.3	48.0
20-24	194.1	200.4	183.2
25-29	133.6	138.7	125.3
30-34	56.0	62.6	44.8
35-39	22.0	25.3	15.5
40-44	6.5	7.3	4.7
45-49	1.1	1.2	1.0
Crude birth rate	21.6	21.8	21.1
General fertility rate	80.9	83.2	76.8
Total fertility rate	2.3	2.5	2.1
Gross reproduction rate	1.1	1.2	1.0

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Age-group	Tamil Nadu		
	Combined	Rural	Urban
15-19	335.8	329.2	352.5
20-24	297.1	302.4	287.6
25-29	152.7	157.6	144.6
30-34	61.0	68.0	49.0
35-39	24.4	27.9	17.3
40-44	7.5	8.4	5.5
45-49	1.4	1.5	1.2
General marital fertility rate	115.4	117.4	111.7
Total marital fertility rate	4.4	4.5	4.3

T A B L E 4

Percentage distribution of live births by order of birth, 1990.

	Tamil Nadu								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	40.5	39.8	41.3	39.6	39.2	40.0	43.5	41.6	45.4
2	30.2	30.6	29.8	29.8	29.9	29.6	31.6	32.9	30.3
3	17.1	17.0	17.2	17.9	17.7	18.0	14.8	14.7	14.8
4	7.2	7.4	7.0	7.8	7.9	7.8	5.2	6.0	4.5
5	2.9	3.0	2.9	3.1	3.2	3.0	2.4	2.3	2.4
6	1.2	1.2	1.1	1.2	1.2	1.1	1.2	1.2	1.2
7	0.5	0.5	0.4	0.4	0.5	0.3	0.6	0.5	0.7
8	0.2	0.2	0.2	0.2	0.2	0.1	0.3	0.2	0.4
9	0.1	0.1	0.1	0.0	0.0	0.0	0.3	0.4	0.2
10+	0.0	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.0

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Tamil Nadu

Birth Interval in months	Tamil Nadu		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	6.0	5.8	6.4
12-18	8.9	8.5	10.0
18-24	20.8	21.0	20.3
24-30	13.0	13.2	12.2
30-36	17.0	17.2	16.4
36+	34.3	34.2	34.6

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

Tamil Nadu

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	6.0	8.9	20.9	13.0	17.0	34.3
2	50.9	3.2	5.5	11.1	6.7	8.5	15.9
3	28.8	1.7	2.0	5.4	3.8	5.5	10.4
4	12.1	0.5	0.8	2.8	1.5	1.6	4.9
5	4.9	0.3	0.4	1.0	0.6	0.8	1.8
6	2.0	0.1	0.2	0.2	0.3	0.3	0.8
7	0.8	0.1	0.0	0.2	0.1	0.1	0.3
8	0.3	0.0	0.1	0.1	0.1	0.1	0.0
9	0.1	0.0	0.0	0.0	0.0	0.0	0.0
10+	0.0	0.0	0.0	0.0	0.0	0.0	0.0
R U R A L							
Total	100.0	5.8	8.5	21.0	13.2	17.2	34.2
2	49.3	3.2	4.9	11.1	6.8	8.2	15.0
3	29.6	1.5	2.1	5.4	3.9	5.8	10.8
4	13.0	0.6	0.9	3.1	1.5	1.8	5.1
5	5.2	0.4	0.4	0.9	0.6	0.9	2.0
6	1.9	0.1	0.1	0.2	0.3	0.4	0.8
7	0.7	0.1	0.0	0.2	0.1	0.1	0.3
8	0.3	0.0	0.1	0.1	0.1	0.0	0.0
9	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10+	0.0	0.0	0.0	0.0	0.0	0.0	0.0
U R B A N							
Total	100.0	6.4	10.0	20.3	12.2	16.4	34.6
2	56.0	3.2	7.1	11.1	6.4	9.3	18.8
3	26.2	2.2	1.6	5.4	3.1	4.7	9.1
4	9.3	0.4	0.4	1.8	1.4	1.0	4.3
5	4.2	0.2	0.4	1.2	0.8	0.5	1.2
6	2.1	0.2	0.4	0.4	0.4	0.1	0.6
7	1.1	0.2	0.0	0.2	0.0	0.4	0.4
8	0.5	0.0	0.0	0.2	0.1	0.3	0.0
9	0.5	0.1	0.0	0.1	0.0	0.2	0.2
10+	0.1	0.0	0.0	0.0	0.0	0.0	0.1

TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	Tamil Nadu								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	17.0	16.6	17.5	20.5	19.3	21.8	9.7	10.8	8.6
5-9	1.8	1.9	1.7	2.1	2.2	2.1	1.0	1.2	0.9
10-14	0.9	0.9	0.9	1.0	1.0	1.0	0.8	0.8	0.8
15-19	1.9	1.8	2.0	2.2	1.9	2.6	1.3	1.7	0.8
20-24	2.3	2.2	2.4	3.0	3.1	2.9	0.9	0.4	1.4
25-29	2.6	2.6	2.6	3.4	3.5	3.4	1.3	1.2	1.3
30-34	3.3	4.4	2.2	4.0	4.9	3.0	2.2	3.5	0.8
35-39	3.7	4.7	2.6	4.6	6.2	3.1	2.1	2.4	1.7
40-44	5.2	6.0	4.3	5.5	6.3	4.7	4.6	5.5	3.6
45-49	7.1	8.3	5.9	7.1	7.5	6.6	7.3	10.0	4.3
50-54	12.0	14.7	9.1	11.2	13.3	8.9	13.9	17.8	9.5
55-59	15.5	18.4	12.5	15.6	18.1	13.0	15.1	19.1	11.3
60-64	27.6	30.3	25.0	28.0	30.4	25.6	26.8	30.1	23.7
65-69	44.1	45.6	42.6	46.6	50.0	43.0	38.2	34.0	41.8
70+	95.0	106.9	83.8	98.2	113.1	84.3	88.2	94.1	82.6
All ages	8.5	9.2	7.8	9.6	10.2	8.9	6.5	7.2	5.7

TABLE 8

Mortality indicators, 1990

Indicators	Tamil Nadu		
	Combined	Rural	Urban
Crude death rate	8.5	9.6	6.5
Infant mortality rate	59	70	37
Neo-natal mortality rate	43.9	52.3	27.1
Post-natal mortality rate	15.1	17.6	10.2
Peri-natal mortality rate	47.1	52.5	36.4
Still birth rate	11.1	8.5	16.2

TABLE 9

Percent distribution of sample births by  
type of medical attention at birth, 1990

Tamil Nadu				
Sector	Type of medical attention at birth			
	I	T	U	O
Combined	52.4	20.7	25.7	1.2
Rural	41.0	25.1	32.3	1.6
Urban	87.7	7.1	5.1	0.1

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
 T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
 U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
 O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type  
of medical attention received before death, 1990

Tamil Nadu				
Sector	Type of medical attention at death			
	I	M	U	N
Combined	17.8	23.7	15.9	42.6
Rural	13.3	20.7	18.4	47.6
Urban	37.5	37.1	4.9	20.5

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
 M- If the death occurred at home but was attended by a qualified practitioner.  
 U- If the death occurred at home and was attended by an unqualified practitioner.  
 N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

Uttar Pradesh

Age-Group	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	14.7	14.6	14.8	15.0	14.8	15.1	13.5	13.5	13.5
5-9	12.5	12.4	12.6	12.5	12.4	12.7	12.4	12.3	12.4
10-14	12.6	12.9	12.3	12.8	13.1	12.4	12.0	12.1	11.9
15-19	10.7	11.5	9.8	10.7	11.6	9.6	10.8	11.1	10.4
20-24	9.2	9.4	9.0	9.0	9.2	8.7	10.2	10.1	10.3
25-29	7.2	7.0	7.5	7.0	6.8	7.2	8.2	7.9	8.6
30-34	6.3	6.2	6.3	6.0	5.9	6.2	7.2	7.4	7.0
35-39	5.4	5.1	5.7	5.3	5.0	5.7	5.8	5.7	6.0
40-44	4.8	4.7	5.0	4.8	4.6	5.0	5.0	5.1	4.9
45-49	4.2	4.1	4.3	4.2	4.1	4.4	4.0	4.2	3.8
50-54	3.5	3.4	3.6	3.5	3.4	3.6	3.3	3.5	3.2
55-59	3.0	3.0	2.9	3.1	3.1	3.0	2.5	2.5	2.5
60-64	2.1	2.0	2.2	2.2	2.1	2.3	1.8	1.8	1.9
65-59	1.9	1.8	1.9	1.9	1.9	2.0	1.6	1.5	1.7
70 +	2.0	1.9	2.1	2.0	2.0	2.2	1.7	1.6	1.8



TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Uttar Pradesh			
Age-group	Combined	Rural	Urban
15-19	74.8	83.9	38.8
20-24	265.2	284.2	196.4
25-29	254.4	267.5	207.5
30-34	202.4	216.3	149.9
35-39	141.7	151.7	101.7
40-44	64.7	68.8	47.0
45-49	32.8	34.9	22.4
Crude birth rate	35.6	37.0	29.3
General fertility rate	159.2	168.9	121.2
Total fertility rate	5.2	5.5	3.8
Gross reproduction rate	2.4	2.6	1.8

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Uttar Pradesh			
Age-group	Combined	Rural	Urban
15-19	211.2	208.3	239.6
20-24	311.2	312.1	306.5
25-29	263.5	272.8	228.1
30-34	208.2	221.7	156.0
35-39	148.3	158.4	107.1
40-44	70.1	74.6	50.6
45-49	37.4	39.6	26.2
General marital fertility rate	197.6	203.6	170.1
Total marital fertility rate	6.2	6.4	5.6

T A B L E 4

Percentage distribution of live births by order of birth, 1990

	Uttar Pradesh								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	25.7	26.3	24.9	25.5	26.2	24.7	26.6	27.2	26.0
2	22.7	22.3	23.2	22.8	22.2	23.5	22.2	22.5	21.9
3	17.7	18.1	17.3	17.9	18.4	17.4	16.8	16.7	17.0
4	13.8	13.6	14.0	14.1	13.9	14.4	12.1	12.2	12.1
5	9.4	9.2	9.5	9.4	9.2	9.6	9.1	9.5	8.8
6	5.7	5.5	5.9	5.6	5.4	5.8	6.2	6.0	6.4
7	2.8	2.6	3.0	2.7	2.6	2.8	3.3	2.7	4.0
8	1.4	1.4	1.4	1.3	1.3	1.3	1.9	1.7	2.2
9	0.5	0.5	0.5	0.5	0.5	0.4	0.8	0.6	1.1
10+	0.3	0.4	0.2	0.2	0.3	0.2	0.8	0.9	0.6

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	Uttar Pradesh		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	6.5	6.3	7.2
12-18	7.6	7.4	8.6
18-24	26.0	25.5	28.7
24-30	10.0	10.0	10.1
30-36	20.5	20.7	19.6
36+	29.3	30.0	25.9

T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

Uttar Pradesh

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	6.5	7.6	26.0	10.0	20.5	29.3
2	30.6	2.5	2.7	8.8	2.9	5.7	8.0
3	23.9	1.4	1.7	5.9	2.5	5.1	7.3
4	18.6	1.1	1.3	4.4	1.9	3.9	6.0
5	12.6	0.7	0.8	3.1	1.3	2.7	4.0
6	7.7	0.4	0.5	2.0	0.8	1.6	2.3
7	3.8	0.2	0.3	1.0	0.4	0.8	1.0
8	1.9	0.1	0.1	0.6	0.2	0.3	0.5
9	0.7	0.0	0.1	0.2	0.1	0.1	0.2
10+	0.4	0.0	0.1	0.1	0.0	0.1	0.1
R U R A L							
Total	100.0	6.3	7.4	25.5	10.0	20.7	30.0
2	30.6	2.4	2.6	8.6	2.9	5.9	8.3
3	24.0	1.3	1.7	5.8	2.5	5.2	7.4
4	19.0	1.1	1.3	4.5	1.9	4.0	6.2
5	12.6	0.7	0.8	3.1	1.3	2.7	4.1
6	7.5	0.4	0.5	1.9	0.8	1.7	2.3
7	3.6	0.2	0.3	1.0	0.3	0.8	1.0
8	1.7	0.1	0.1	0.5	0.2	0.3	0.5
9	0.6	0.0	0.1	0.1	0.1	0.1	0.2
10+	0.3	0.0	0.0	0.1	0.0	0.1	0.1
U R B A N							
Total	100.0	7.2	8.6	28.7	10.1	19.6	25.9
2	30.4	2.9	2.9	9.6	3.1	5.0	6.9
3	22.9	1.5	1.8	6.1	2.5	4.7	6.2
4	16.5	1.0	1.5	3.9	1.5	3.7	5.0
5	12.4	0.7	0.9	3.4	1.4	3.0	3.2
6	8.4	0.6	0.7	2.7	0.7	1.5	2.2
7	4.5	0.2	0.3	1.1	0.6	1.1	1.2
8	2.6	0.2	0.3	1.0	0.1	0.5	0.6
9	1.1	0.1	0.1	0.5	0.1	0.1	0.3
10+	1.0	0.1	0.2	0.4	0.0	0.1	0.3

TABLE 7

Estimated age-specific death rate by sex, 1990

Uttar Pradesh									
Age-group	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	36.6	32.2	41.4	39.4	34.6	44.8	22.8	20.6	25.2
5-9	3.4	2.7	4.1	3.8	3.2	4.5	1.5	0.8	2.3
10-14	1.6	1.5	1.6	1.6	1.5	1.7	1.5	1.6	1.3
15-19	2.2	1.8	2.9	2.3	1.8	2.9	1.9	1.3	2.6
20-24	3.2	2.6	4.0	3.4	2.7	4.2	2.6	2.2	3.0
25-29	3.2	2.7	3.7	3.4	2.7	4.0	2.7	2.7	2.7
30-34	3.8	3.3	4.4	4.2	3.4	5.1	2.3	2.8	1.7
35-39	4.1	3.8	4.4	4.5	4.2	4.7	2.7	2.4	3.1
40-44	5.9	6.6	5.1	5.8	6.6	4.9	6.3	6.5	6.0
45-49	8.7	10.5	6.7	8.9	11.0	6.7	7.7	8.8	6.3
50-54	12.7	14.4	10.8	12.7	14.0	11.4	12.5	16.2	8.0
55-59	20.2	23.8	15.9	19.8	23.4	15.6	22.2	26.4	17.7
60-64	26.7	29.5	23.8	25.9	28.1	23.6	30.8	36.6	24.8
65-69	48.3	52.4	44.0	47.8	51.5	43.8	51.2	57.4	45.2
70+	84.3	87.4	81.1	85.0	88.3	81.5	80.9	82.9	78.9
All ages	12.0	11.4	12.7	12.8	12.0	13.7	8.8	8.7	8.8

TABLE 8

Mortality indicators, 1990

Uttar Pradesh			
Indicators	Combined	Rural	Urban
Crude death rate	12.0	12.8	8.8
Infant mortality rate	99	105	67
Neo-natal mortality rate	65.2	69.8	39.9
Post-natal mortality rate	33.8	35.1	27.1
Peri-natal mortality rate	51.6	55.1	32.5
Still birth rate	8.3	8.9	4.9

TABLE 9

Percent distribution of sample births by  
type of medical attention at birth, 1990

Uttar Pradesh

Sector	Type of medical attention at birth			
	I	T	U	O
Combined	4.2	25.1	70.3	0.4
Rural	2.5	19.1	78.0	0.4
Urban	13.0	56.5	30.4	0.1

- I- Institutions like hospitals, maternity/nursing homes, health centres etc.  
 T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.  
 U- Delivery conducted at home by untrained village dai or other untrained professional functionary.  
 O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type  
of medical attention received before death, 1990

Uttar Pradesh

Sector	Type of medical attention at death			
	I	M	U	N
Combined	6.3	62.8	25.4	5.5
Rural	5.9	59.7	28.8	5.6
Urban	8.8	81.9	4.6	4.7

- I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.  
 M- If the death occurred at home but was attended by a qualified practitioner.  
 U- If the death occurred at home and was attended by an unqualified practitioner.  
 N- No professional doctor/hakim/vaidya attended.

Table 1

Percent distribution of estimated population  
by age-group and sex, 1990

West Bengal

Age-Group	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	13.0	12.7	13.2	14.4	14.3	14.5	9.2	8.8	9.8
5-9	10.7	10.5	10.9	11.1	11.0	11.2	9.6	9.2	10.0
10-14	11.7	11.5	11.8	12.2	12.3	12.2	10.2	9.8	10.7
15-19	10.5	10.5	10.5	10.8	10.9	10.7	9.7	9.6	9.9
20-24	10.0	9.8	10.2	10.0	9.9	10.0	10.1	9.6	10.7
25-29	8.2	8.0	8.3	7.6	7.5	7.8	9.5	9.3	9.8
30-34	8.4	8.7	8.1	8.0	8.3	7.8	9.3	9.6	9.0
35-39	6.3	6.6	5.9	5.9	6.1	5.7	7.2	7.8	6.6
40-44	5.4	5.7	5.0	5.0	5.3	4.7	6.4	6.9	5.9
45-49	4.2	4.4	4.0	3.8	3.8	3.8	5.2	5.7	4.6
50-54	3.7	3.7	3.6	3.4	3.4	3.5	4.3	4.7	3.9
55-59	2.9	2.9	2.9	2.8	2.7	2.9	3.2	3.4	3.0
60-64	2.0	2.0	2.0	1.9	1.9	1.9	2.2	2.2	2.2
65-59	1.5	1.5	1.6	1.5	1.4	1.6	1.7	1.6	1.8
70 +	1.7	1.5	1.9	1.6	1.4	1.7	2.0	1.8	2.3

TABLE 2

Estimated age-specific fertility rates  
and other fertility indicators, 1990

Age-group	West Bengal		
	Combined	Rural	Urban
15-19	92.4	106.7	50.6
20-24	208.8	232.3	149.0
25-29	178.6	204.5	122.6
30-34	100.7	119.2	57.2
35-39	62.9	77.0	29.8
40-44	23.1	29.8	8.7
45-49	9.7	11.9	4.6
Crude birth rate	28.2	32.0	18.6
General fertility rate	113.8	130.9	72.2
Total fertility rate	3.4	3.9	2.1
Gross reproduction rate	1.6	1.9	1.0

TABLE 3

Estimated age-specific marital fertility rates  
and other fertility indicators, 1990

Age-group	West Bengal		
	Combined	Rural	Urban
15-19	307.0	308.5	297.9
20-24	292.2	300.1	264.8
25-29	204.0	225.4	152.0
30-34	110.1	128.5	64.7
35-39	69.5	85.0	33.1
40-44	26.8	34.8	9.9
45-49	12.6	15.6	5.8
General marital fertility rate	156.3	174.7	106.6
Total marital fertility rate	5.1	5.5	4.1

T A B L E 4

Percentage distribution of live births by order of birth, 1990

	West Bengal								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1	29.4	29.2	29.6	28.3	28.1	28.5	37.1	36.7	37.5
2	25.1	25.1	25.1	25.0	24.7	25.4	25.3	27.4	23.1
3	17.6	17.9	17.3	17.8	18.2	17.4	16.4	15.8	17.1
4	11.3	11.2	11.4	11.5	11.5	11.5	9.9	9.4	10.5
5	7.0	7.1	6.8	7.3	7.6	7.0	4.8	4.1	5.6
6	4.4	4.3	4.6	4.7	4.5	4.8	3.0	2.7	3.3
7	2.6	2.6	2.7	2.8	2.8	2.9	1.4	1.4	1.3
8	1.3	1.3	1.3	1.3	1.3	1.4	0.9	1.1	0.8
9	0.6	0.6	0.6	0.7	0.7	0.6	0.2	0.2	0.1
10+	0.6	0.7	0.6	0.6	0.6	0.6	0.9	1.2	0.7

T A B L E 5

Percentage distribution of Current Live Births  
by Birth Interval, 1990

Birth Interval in months	West Bengal		
	Combined	Rural	Urban
Total	100.0	100.0	100.0
10-12	3.4	3.4	3.1
12-18	8.5	8.4	9.3
18-24	24.2	24.7	19.6
24-30	15.2	15.3	14.5
30-36	17.4	17.8	13.9
36+	31.4	30.3	39.7



T A B L E 6

Percentage distribution of Current Live Births by  
Birth Interval and Birth Order, 1990

West Bengal

Birth Order	Birth Interval in months						
	Total	10-12	12-18	18-24	24-30	30-36	36+
C O M B I N E D							
Total	100.0	3.4	8.5	24.2	15.2	17.4	31.3
2	35.6	1.5	3.8	8.4	4.9	6.2	11.0
3	25.0	0.7	2.0	5.8	3.9	4.5	8.1
4	16.0	0.4	1.0	4.1	2.4	2.8	5.2
5	9.9	0.2	0.7	2.5	1.7	1.7	3.0
6	6.3	0.2	0.5	1.6	0.9	1.0	2.0
7	3.8	0.2	0.2	0.9	0.7	0.7	1.0
8	1.8	0.0	0.2	0.4	0.4	0.3	0.5
9	0.9	0.1	0.1	0.3	0.1	0.1	0.2
10+	0.8	0.1	0.1	0.2	0.1	0.1	0.3
R U R A L							
Total	100.0	3.4	8.4	24.8	15.3	17.9	30.3
2	35.0	1.5	3.7	8.4	5.0	6.4	10.0
3	24.8	0.6	2.0	5.9	3.9	4.5	7.9
4	16.0	0.5	1.0	4.1	2.3	2.9	5.2
5	10.2	0.2	0.7	2.7	1.7	1.8	3.1
6	6.5	0.2	0.5	1.7	0.9	1.1	2.1
7	4.0	0.2	0.2	1.0	0.7	0.7	1.0
8	1.8	0.0	0.2	0.4	0.4	0.3	0.6
9	0.9	0.1	0.1	0.3	0.1	0.1	0.2
10+	0.7	0.1	0.0	0.2	0.1	0.1	0.2
U R B A N							
Total	100.0	3.1	9.3	19.6	14.5	13.9	39.6
2	40.3	1.4	4.5	7.8	3.6	4.8	18.2
3	26.1	0.8	2.1	4.8	4.3	4.4	9.7
4	15.8	0.2	1.0	4.3	2.7	1.9	5.7
5	7.7	0.2	0.7	1.3	1.8	1.1	2.8
6	4.8	0.1	0.4	0.9	1.0	0.8	1.6
7	2.2	0.2	0.2	0.3	0.3	0.3	1.0
8	1.5	0.0	0.2	0.2	0.5	0.4	0.3
9	0.3	0.0	0.1	0.0	0.2	0.0	0.0
10+	1.4	0.3	0.2	0.2	0.3	0.2	0.4

TABLE 7

Estimated age-specific death rate by sex, 1990

Age-group	West Bengal								
	Combined			Rural			Urban		
	Person	Male	Female	Person	Male	Female	Person	Male	Female
0-4	19.7	19.6	19.8	21.5	21.3	21.8	12.4	12.7	12.1
5-9	2.3	2.3	2.3	2.7	2.7	2.6	1.2	1.0	1.5
10-14	1.4	1.3	1.6	1.6	1.5	1.7	1.0	0.6	1.4
15-19	2.5	1.8	3.1	2.7	2.0	3.5	1.7	1.5	2.0
20-24	2.4	2.3	2.6	2.7	2.6	2.9	1.7	1.7	1.8
25-29	2.3	1.9	2.7	2.7	2.1	3.4	1.3	1.5	1.1
30-34	2.6	2.2	3.1	2.9	2.6	3.2	2.1	1.5	2.9
35-39	3.3	3.6	2.9	3.4	3.8	2.8	3.1	3.3	2.9
40-44	3.9	3.9	4.0	4.1	3.7	4.6	3.7	4.3	2.9
45-49	8.4	9.1	7.7	7.5	8.0	7.0	10.2	10.8	9.3
50-54	10.8	11.8	9.7	12.6	14.1	11.0	7.2	7.7	6.5
55-59	19.1	21.7	16.2	20.9	24.1	17.7	15.2	17.3	12.3
60-64	25.2	29.4	20.7	25.4	28.0	22.6	24.9	32.3	15.8
65-69	50.0	56.3	43.9	50.9	56.7	45.4	48.1	55.6	40.2
70+	90.9	103.7	79.5	91.2	102.2	81.4	90.3	106.6	75.8
All ages	8.4	8.5	8.3	9.0	9.0	8.9	7.0	7.5	6.5

TABLE 8

Mortality indicators, 1990

Indicators	West Bengal		
	Combined	Rural	Urban
Crude death rate	8.4	9.0	7.0
Infant mortality rate	63	68	41
Neo-natal mortality rate	37.4	41.6	18.9
Post-natal mortality rate	25.6	26.4	22.1
Peri-natal mortality rate	42.1	45.6	26.5
Still birth rate	16.8	18.1	11.4

TABLE 9

Percent distribution of sample births by  
type of medical attention at birth, 1990

## West Bengal

Sector	Type of medical attention at birth			
	I	T	U	O
Combined	29.7	8.5	61.7	0.1
Rural	22.7	8.1	69.1	0.1
Urban	77.7	10.7	11.3	0.3

I- Institutions like hospitals, maternity/nursing homes, health centres etc.

T- Delivery conducted at home by doctor, trained dai, trained mid-wife, trained nurses, etc.

U- Delivery conducted at home by untrained village dai or other untrained professional functionary.

O- Delivery conducted at home by relation and others excluding the above.

TABLE 10

Percent distribution of sample deaths by type  
of medical attention received before death, 1990

## West Bengal

Sector	Type of medical attention at death			
	I	M	U	N
Combined	14.6	39.1	27.0	19.3
Rural	9.6	36.2	32.0	22.2
Urban	39.6	53.6	2.0	4.8

I- If the death occurred in a hospital, dispensary, health centre, other medical institutions etc.

M- If the death occurred at home but was attended by a qualified practitioner.

U- If the death occurred at home and was attended by an unqualified practitioner.

N- No professional doctor/hakim/vaidya attended.

## G L O S S A R Y

$$\text{Crude Birth Rate (CBR)} = \frac{\text{Number of Live Births during the year}}{\text{Mid-year Population}} \times 1000$$

$$\text{Crude Death Rate (CDR)} = \frac{\text{Number of deaths during the year}}{\text{Mid-year Population}} \times 1000$$

$$\text{Infant Mortality Rate (IMR)} = \frac{\text{Number of infant deaths during the year}}{\text{Number of live births during the year}} \times 1000$$

$$\text{Still Birth Rate (SBR)} = \frac{\text{Number of still births during the year}}{\text{Number of live births + still births during the year}} \times 1000$$

$$\text{Peri-natal mortality Rate (PNR)} = \frac{\text{Number of still births + infant deaths of less than 7 days during the year}}{\text{Number of live births + still births during the year}} \times 1000$$

$$\text{Neo-natal mortality Rate (NNR)} = \frac{\text{Number of infant deaths of less than 28 days during the year}}{\text{Number of live births during the year}} \times 1000$$

$$\text{Post Neo-natal Mortality Rate (PNMR)} = \frac{\text{Number of infant deaths of over 28 days during the year}}{\text{Number of live births during the year}} \times 1000$$

$$\text{Age-specific Fertility Rate (ASFR)} = \frac{\text{Number of live births in a particular age-group}}{\text{Mid-year female population of the same age-group}} \times 1000$$

$$\text{General Fertility Rate (GFR)} = \frac{\text{Number of live births in a year}}{\text{Mid-year female population in the age-group (15-49) years}} \times 1000$$

$$\text{Total Fertility Rate (TFR)} = \frac{5 \times \sum_{15-19}^{45-49} \text{ASFR}}{1000}$$

$$\text{Gross Reproduction Rate} = \frac{5 \times \sum_{15-19}^{45-49} \text{ASFR for female births}}{1000} \quad \begin{matrix} \text{---} \\ 0.1 \\ 0.1 \\ \text{---} \end{matrix}$$

$$\text{Age-specific Marital Fertility Rate (ASMFR)} = \frac{\text{Number of live births in a particular age-group}}{\text{Mid-year married female population of the same age-group}} \times 1000$$

$$\text{General Marital Fertility Rate (GMFR)} = \frac{\text{Number of live births in a year}}{\text{Mid-year married female population of the age-group (15-49) year}} \times 1000$$

$$\text{Total Marital Fertility Rate (TMFR)} = \frac{5 \times \sum_{15-19}^{45-49} \text{ASMFR}}{1000}$$

$$\text{Age-specific Mortality Rate (ASMR)} = \frac{\text{Number of deaths in a particular age group}}{\text{Mid-year population of the same age group}} \times 1000$$

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