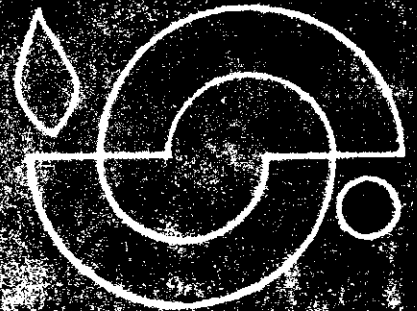




SAMPLE REGISTRATION SYSTEM 1989



Sl. No. 11
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32627

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

SAMPLE REGISTRATION SYSTEM - 1989

OFFICE OF THE REGISTRAR GENERAL, INDIA

(VITAL STATISTICS DIVISION)

MINISTRY OF HOME AFFAIRS

NEW DELHI

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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 1989 gives a detailed account of the salient features of the SRS along with other aspects connected with the implementation of SRS. The report also contains an analysis of data relating to population composition, fertility and mortality. The analysis aims at describing the population composition by broad age-group, the overall levels of fertility as well as the level of fertility for different age groups of women, including married women, the overall level of mortality as well as the mortality level for various age-groups during the year 1989. It also aims at bringing out the rural-urban and inter-state differentials as well as sex-wise differentials, wherever relevant. Further, the analysis aims at indicating the changes over recent years. Zonal level estimates of fertility and mortality have also been included in this report.

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 Unit of Vital Statistics and Data Processing Divisions at headquarters for their hard work. In particular, I am happy to place on record my appreciation of efforts put in by Shri S.K. Sinha, Deputy Registrar General, Shri S.P. Grover, Deputy Director of Census Operations, Shri K.M. Vasudevan, Senior Research Officer, Shri B.L. Jain, Deputy Director (EDP), Shri A.K. Saxena, Assistant Director of Census Operations, Shri Sunder Singh, Statistical Assistant and Shri G.V. Ramachandran, Computer in bringing out this report.

New Delhi
Dated: 17th August, 1992


(A.R. Nanda)
Registrar General, India

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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 numeration 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 towns/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 400,000 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 separate 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 1989, 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 (1989), No. of Sample Units
and average sample size.

States/ Union Territories	Sample Population			No. of units			Average Sample Size		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
States									
Andhra Pradesh	360126	251738	108388	290	190	100	1242	1325	1084
Arunachal Pr.	24520	20011	4509	50	45	5	490	445	902
Assam	282333	228471	53862	254	200	54	1112	1142	997
Bihar	507126	439398	67728	500	400	100	1014	1098	677
Goa	64531	49034	15497	63	36	27	1024	1362	574
Gujarat	314244	263665	50579	300	200	100	1047	1318	506
Haryana	174200	132504	41696	160	100	60	1089	1325	695
Himachal Pr.	67893	52889	15004	140	115	25	485	460	600
Jammu & Kashmir	136643	100292	36351	166	100	66	823	1003	551
Karnataka	388643	283993	104650	360	250	110	1080	1136	951
Kerala	319251	260268	58983	240	150	90	1330	1735	655
Madhya Pradesh	315314	254544	60770	400	300	100	788	848	608
Maharashtra	306715	221021	85694	330	190	140	929	1163	612
Manipur	106402	79675	26727	125	95	30	851	839	891
Meghalaya	43951	32487	11464	85	65	20	517	500	573
Nagaland	16385	11676	4709	25	20	5	655	584	942
Orissa	228382	191959	36423	310	250	60	737	768	607
Punjab	152159	106959	45200	160	100	60	951	1070	753
Rajasthan	305259	246104	59155	320	230	90	954	1070	657
Sikkim	45233	38400	6833	50	42	8	905	914	854
Tamil Nadu	372133	279329	92804	330	190	140	1128	1470	663
Tripura	105267	96437	8830	75	60	15	1404	1607	589
Uttar Pradesh	633044	510939	122105	630	450	180	1005	1135	678
West Bengal	491621	391162	100459	450	300	150	1092	1304	670
Union Territories									
A. & N. Islands	31075	23025	8050	38	28	10	818	822	805
Chandigarh	11162	3027	8135	15	2	13	744	1514	626
D & N Haveli	15084	15084	-	10	10	-	1508	1508	-
Daman & Diu	6547	4860	1687	6	4	2	1091	1215	844
Delhi	80349	15586	64763	100	10	90	803	1559	720
L.M. & A. Islands	7724	4225	3499	5	2	3	1545	2113	1166
Pondicherry	30300	15531	14769	35	15	20	866	1035	738
I N D I A	5943616	4624293	1319323	6022	4149	1873	987	1115	704

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. Commissionarate 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 Health (40)
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.

CHAPTER 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 1989. Children aged 0-14 years comprise 37.2 per cent of the total population. While 50 per cent of the population is in the age group 15-49 years, population aged 50 years and above is about 13 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, 1989

Sex	Age group		
	0-14	15-49	50 & above
Male	37.6	50.0	12.4
Female	36.7	50.0	13.3
Person	37.2	50.0	12.8

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 areas 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, 1989

Residence/	Sex	Age group		
		0-14	15-49	50 & above
Rural	Male	38.7	48.7	12.6
	Female	37.3	49.2	13.5
	Person	38.0	48.9	13.1
Urban	Male	33.9	54.6	11.5
	Female	34.7	52.8	12.5
	Person	34.3	53.7	12.0

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 Assam, Haryana, Himachal Pradesh, Jammu and Kashmir, 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 covered in 10 states viz. Assam, Gujarat, Jammu & Kashmir, Karnataka, Kerala, Maharashtra, Orissa Punjab, Tamil Nadu and West Bengal. Andhra Pradesh, Bihar, Haryana, Himachal Pradesh, Madhya Pradesh, Rajasthan and Uttar Pradesh are reported to have 46-50 per cent population in the age group 15-49 years. Andhra Pradesh, Himachal Pradesh, Kerala, 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, Jammu & Kashmir, Karnataka, Rajasthan, Uttar Pradesh and West Bengal.

STATEMENT 3

Percent distribution of population by broad age groups for major states, India, 1989

India/States	Age - group		
	0-14	15-49	50 & above
INDIA	37.2	50.0	12.8
Andhra Pradesh	36.1	49.8	14.1
Assam	38.0	52.3	9.7
Bihar	42.1	46.4	11.5
Gujarat	35.6	53.2	11.2
Haryana	39.4	49.3	11.3
Himachal Pradesh	37.7	47.9	14.4
Jammu & Kashmir	37.5	50.8	11.7
Karnataka	36.4	50.8	12.8
Kerala	31.1	53.6	15.3
Madhya Pradesh	38.8	47.9	13.3
Maharashtra	35.3	50.7	14.0
Orissa	35.8	50.6	13.6
Punjab	33.9	51.7	14.4
Rajasthan	40.0	48.1	11.9
Tamil Nadu	31.9	53.2	14.9
Uttar Pradesh	39.7	48.0	12.3
West Bengal	35.3	52.8	11.9

2.3 A comparison of the percentages of child population and population in the age-group 15-49 for the period 1981-83 and 1987-89 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 & 1987-89

Resi- dence	Age-group	1981-83	1987-89	Percentage change w.r.t. 1981-83
Total	0-14	38.5	37.6	-2.3
	15-19	49.1	49.8	1.6
	50 & above	12.5	12.6	1.0
Rural	0-14	39.1	38.4	-1.9
	15-49	48.1	48.8	1.3
	50 & above	12.8	12.9	0.9
Urban	0-14	36.0	34.8	-3.1
	15-49	52.6	53.5	1.7
	50 & above	11.4	11.7	2.2

2.4 State-wise comparison of the percentage distribution of population for the periods 1981-83 and 1987-89 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 and Rajasthan 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 except in Bihar and Rajasthan.

STATEMENT 5

Percent distribution of population by broad
age-group 0-14 and 15-49 for major states, India,
1981-83 & 1987-89

India/ States	0-14			15-49			50 & above		
	81-83	87-89	Per cent change w.r.t. 1981-83	81-83	87-89	Per cent change w.r.t. 1981-83	81-83	87-89	Per cent change w.r.t. 1981-83
INDIA	38.5	37.6	-2.3	49.1	49.8	1.6	12.5	12.6	1.0
Andhra Pradesh	37.0	36.4	-1.8	49.7	49.9	0.4	13.3	13.7	3.3
Assam	38.7	37.8	-2.3	51.8	52.6	1.4	9.6	9.7	1.6
Bihar	41.3	41.9	1.4	46.3	46.2	-0.3	12.4	11.9	-3.7
Gujarat	38.0	36.1	-5.0	50.4	52.2	3.6	11.6	11.7	0.7
Haryana	40.2	39.3	-2.4	48.0	49.5	3.1	11.7	11.2	-4.4
Himachal Pradesh	38.9	38.0	-2.3	47.6	47.9	0.6	13.5	14.1	4.5
Jammu & Kashmir	39.5	38.1	-3.7	49.2	50.3	2.2	11.3	11.6	3.5
Karnataka	38.0	37.1	-2.3	49.7	50.4	1.3	12.3	12.5	1.9
Kerala	34.1	31.3	-8.2	52.0	53.7	3.3	14.0	15.1	7.8
Madhya Pradesh	40.1	39.2	-2.2	48.0	48.2	0.5	11.9	12.6	5.9
Maha- rashtra	36.8	35.6	-3.3	50.3	50.9	1.2	12.8	13.4	4.5
Orissa	38.1	36.5	-4.5	49.6	50.5	1.9	12.3	13.0	6.2
Punjab	34.9	34.1	-2.2	50.3	51.6	2.7	14.9	14.3	-3.8
Rajasthan	40.5	40.9	0.9	47.9	47.8	-0.2	11.7	11.4	-2.5
Tamil Nadu	34.0	32.4	-4.7	52.0	53.2	2.3	14.0	14.4	3.0
Uttar Pradesh	40.3	40.2	-0.2	47.0	47.6	1.3	12.7	12.2	-4.0
West Bengal	38.5	36.0	-6.5	50.3	52.2	3.8	11.2	11.8	5.3

CHAPTER - 3

MEASURES OF FERTILITY

Crude birth rate is the most commonly used measure of fertility. For the year 1989, the crude birth rate for India is found to be 30.6. The rate for rural areas is 32.2 which is much higher than the rate of 25.2 for urban areas. From Statement 6 it is seen that Kerala is having the lowest birth rate (20.3) and Uttar Pradesh is having the highest birth rate (37.0) followed by Madhya Pradesh (35.5). Haryana and Bihar have birth rates as 35.2 and 34.3 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, 1989

India/States	Total	Rural	Urban
INDIA	30.6	32.2	25.2
Andhra Pradesh	25.9	26.3	24.4
Assam	29.4	30.0	21.7
Bihar	34.3	35.1	27.6
Gujarat	28.7	29.6	26.6
Haryana	35.2	36.6	30.1
Himachal Pradesh	27.7	28.3	20.4
Jammu & Kashmir	30.1	31.8	23.3
Karnataka	28.0	29.1	25.1
Kerala	20.3	20.2	20.5
Madhya Pradesh	35.5	36.7	30.3
Maharashtra	28.5	30.6	24.6
Orissa	30.5	31.1	25.0
Punjab	28.3	28.7	27.5
Rajasthan	34.2	35.4	28.8
Tamil Nadu	23.1	23.5	22.4
Uttar Pradesh	37.0	38.8	29.2
West Bengal	27.2	30.7	18.4

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, Himachal Pradesh, Gujarat, Karnataka, Kerala, Punjab and Tamil Nadu.

STATEMENT 7

Distribution of major states by rural and urban birth rates for 1989

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

3.2 Statement 8 shows the average birth rate for India and major states for the periods 1981-83 and 1987-89. Statewise comparison of the average birth rate for the two periods 1981-83 and 1987-89 shows decline in all the major states except Jammu & Kashmir and Karnataka.

STATEMENT 8

Average crude birth rates for India
and major states, 1981-83 & 1987-89

India/States	1981-83	1987-1989	Percent change w.r.t. 1981-83
INDIA	33.8	31.4	-7.0
Andhra Pradesh	31.2	27.8	-10.9
Assam	34.0	32.1	-6.1
Bihar	37.9	36.1	-4.7
Gujarat	34.3	29.7	-13.4
Haryana	36.4	34.5	-5.2
Himachal Pradesh	32.3	30.2	-6.5
Jammu & Kashmir	31.4	31.4	0.0
Karnataka	28.4	28.5	0.4
Kerala	25.6	20.7	-19.1
Madhya Pradesh	38.2	36.3	-5.0
Maharashtra	29.3	28.9	-1.4
Orissa	33.5	31.1	-7.2
Punjab	30.3	28.5	-5.9
Rajasthan	38.5	34.2	-11.2
Tamil Nadu	27.9	23.3	-16.5
Uttar Pradesh	38.9	37.3	-4.1
West Bengal	32.5	28.8	-11.4

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 135.7 for rural areas, 97.6 for urban areas and 126.5 for rural and urban areas combined (Statement 9). Statewise rates indicate wide variations, the lowest being 71.4 for Kerala and the highest 161.6 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 174.9 in Uttar Pradesh to 72.7 in Kerala, while the urban rates vary from 120.8 in Haryana to 66.4 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, Himachal Pradesh, Jammu & Kashmir, Karnataka, Maharashtra, Orissa, Punjab, West Bengal
125 - 150	-----
150 - 175	Bihar, Haryana, Madhya Pradesh, Rajasthan, Uttar Pradesh,

STATEMENT 9

General fertility rates by residence,
India and major States, 1989

India/States	Total	Rural	Urban
INDIA	126.5	135.7	97.6
Andhra Pradesh	104.8	108.2	93.0
Assam	114.8	118.8	71.4
Bihar	157.2	161.6	119.2
Gujarat	123.4	132.8	103.9
Haryana	151.3	160.8	120.8
Himachal Pradesh	110.7	113.0	80.8
Jammu & Kashmir	104.0	107.9	87.6
Karnataka	111.9	118.1	96.0
Kerala	71.4	72.7	66.4
Madhya Pradesh	152.8	163.3	115.3
Maharashtra	111.6	118.1	99.2
Orissa	119.2	121.8	95.6
Punjab	114.8	117.9	107.0
Rajasthan	151.5	159.2	119.4
Tamil Nadu	86.7	89.5	81.4
Uttar Pradesh	161.6	174.9	112.4
West Bengal	109.5	125.1	71.5

3.4 A comparison of the GFRs for the periods 1981-83 and 1987-89 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 18.2 per cent in Tamil Nadu to 2.4 per cent in Karnataka.

STATEMENT 10

Average general fertility rates for India
and major states, 1981-83 and 1987-89

India/States	1981-83	1987-1989	Percentage change w.r.t. 1981-83
INDIA	142.2	130.4	8.3
Andhra Pradesh	128.3	112.7	-12.1
Assam	134.9	125.1	-7.2
Bihar	175.4	162.7	-7.2
Gujarat	139.5	121.4	-13.0
Haryana	158.4	148.3	-6.4
Himachal Pradesh	129.7	120.0	-7.5
Jammu & Kashmir	135.0	122.0	-9.6
Karnataka	117.8	115.0	-2.4
Kerala	91.8	73.7	-19.7
Madhya Pradesh	164.3	155.3	-5.5
Maharashtra	121.6	115.1	-5.3
Orissa	133.8	122.4	-8.5
Punjab	126.4	115.6	-8.5
Rajasthan	170.1	151.8	-10.7
Tamil Nadu	107.1	87.6	-18.2
Uttar Pradesh	173.9	166.4	-4.3
West Bengal	136.7	117.5	-14.0

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 found to be 175.2 for rural areas, 141.4 for urban areas and 167.8 for rural and urban combined (Statement 11). Statewise rates indicate variations. The

lowest rate is 128 for Kerala and the highest is 208.2 for Assam. The rural rates vary from 124.6 in Kerala to 208.3 in Uttar Pradesh and urban rates vary from 106.6 in West Bengal to 207.9 in Assam. The states can be grouped as under on the basis of the rate for rural and urban areas combined:

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

STATEMENT 11

General marital fertility rates by residence,
India and major States, 1989

India/States	Total	Rural	Urban
INDIA	167.8	175.2	141.4
Andhra Pradesh	130.6	134.4	117.4
Assam	208.2	208.2	207.9
Bihar	190.5	190.5	156.3
Gujarat	166.0	170.0	156.3
Haryana	187.7	195.6	160.1
Himachal Pradesh	166.3	170.3	116.6
Jammu & Kashmir	171.8	179.0	141.9
Karnataka	165.2	173.5	143.4
Kerala	128.0	124.6	145.7
Madhya Pradesh	183.8	185.6	175.3
Maharashtra	146.9	150.8	138.8
Orissa	161.3	163.4	140.6
Punjab	161.8	167.6	147.4
Rajasthan	183.4	189.5	155.4
Tamil Nadu	126.9	131.1	119.0
Uttar Pradesh	199.3	208.3	159.6
West Bengal	153.6	171.3	106.6

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, 1989

Residence	Age-group						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Total	82.0	246.4	202.5	127.5	72.2	34.5	11.6
Rural	91.6	259.6	216.3	140.8	81.5	39.7	13.4
Urban	50.3	206.5	163.4	85.1	42.5	17.3	4.9

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 and Jammu & Kashmir 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, 1989

India/State	Age-group						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
INDIA	82.0	246.4	202.5	127.0	72.2	34.5	11.6
Andhra Pradesh	119.4	226.4	143.8	76.0	37.0	15.4	3.5
Assam	61.8	193.9	177.1	135.4	74.4	36.1	2.0
Bihar	104.4	247.4	250.6	189.0	130.2	66.4	27.4
Gujarat	39.4	273.6	215.5	116.1	49.6	18.6	5.0
Haryana	84.2	313.9	247.9	128.7	63.6	28.3	5.6
Himachal Pradesh	42.9	271.5	175.5	96.1	38.8	15.2	2.3
Jammu & Kashmir	40.9	179.6	198.2	124.5	80.2	36.9	7.7
Karnataka	85.0	239.9	170.4	92.5	45.8	20.3	6.0
Kerala	27.0	164.8	130.4	54.9	18.8	7.3	1.9
Madhya Pradesh	125.5	297.7	230.3	145.0	83.9	38.9	10.5
Maharashtra	91.4	271.3	187.1	84.8	27.8	11.8	1.8
Orissa	69.5	232.2	214.5	119.2	56.3	23.1	6.5
Punjab	21.2	244.3	223.9	109.9	46.0	17.2	0.7
Rajasthan	96.5	282.8	244.0	159.7	93.1	40.8	19.8
Tamil Nadu	59.0	206.1	143.6	64.1	25.1	7.3	1.3
Uttar Pradesh	79.8	268.8	258.9	202.8	136.5	74.4	27.5
West Bengal	85.4	211.0	159.8	107.2	56.3	27.8	9.9

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, 1989

Residence	Age-group						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
Total	237.3	315.9	227.8	137.5	79.7	39.2	14.8
Rural	230.6	314.4	238.4	154.1	90.0	44.9	17.0
Urban	288.0	321.8	195.3	89.2	46.8	20.1	6.5

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, 1989

India/State	Age-group						
	15-19	20-24	25-29	30-34	35-39	40-44	45-49
INDIA	237.3	315.9	227.8	137.5	79.7	39.2	14.8
Andhra Pradesh	285.1	275.4	157.7	69.6	41.1	18.0	4.5
Assam	356.5	380.5	261.2	176.9	95.4	48.3	3.0
Bihar	212.3	275.1	261.1	198.9	141.2	75.8	34.9
Gujarat	132.7	364.3	245.7	125.9	54.5	21.0	6.3
Haryana	233.0	344.7	247.8	135.1	68.0	31.2	6.4
Himachal Pradesh	387.7	377.6	197.6	108.7	44.8	18.9	3.1
Jammu & Kashmir	312.7	306.0	229.4	133.2	86.3	40.6	33.6
Karnataka	304.4	345.9	200.8	108.7	54.8	25.7	8.3
Kerala	238.8	302.5	208.6	76.7	24.4	9.6	2.7
Madhya Pradesh	201.6	337.4	267.8	157.8	91.5	44.8	12.0
Maharashtra	252.2	321.8	209.8	93.7	31.1	12.8	3.1
Orissa	266.2	315.0	219.4	125.9	59.8	26.7	8.1
Punjab	257.8	370.3	247.2	115.5	48.6	18.2	0.9
Rajasthan	211.2	311.8	257.3	165.8	99.6	45.8	21.8
Tamil Nadu	317.8	309.3	168.4	70.7	28.0	8.9	2.0
Uttar Pradesh	209.0	308.9	267.6	214.1	143.1	79.3	32.7
West Bengal	276.0	290.1	183.2	123.1	67.2	31.9	13.0

3.10 Differences in the pattern of child bearing can also be 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 16 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 29.3 for Uttar Pradesh to 25.4 for Andhra Pradesh.

STATEMENT 16

Mean age of fertility, India
and major States, 1989

India/States	Mean age of fertility
INDIA	27.6
Andhra Pradesh	25.4
Assam	28.1
Bihar	29.0
Gujarat	27.1
Haryana	26.8
Himachal Pradesh	26.5
Jammu & Kashmir	28.6
Karnataka	26.4
Kerala	26.3
Madhya Pradesh	27.1
Maharashtra	25.5
Orissa	27.2
Punjab	27.3
Rajasthan	27.9
Tamil Nadu	25.7
Uttar Pradesh	29.3
West Bengal	27.2

3.11 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 1989 are given in statement 17. The TFR for India is found to be 3.9. Bihar, Haryana, Madhya Pradesh, Rajasthan and Uttar Pradesh have values exceeding All-India. Uttar Pradesh (5.2) registered the highest TFR closely followed by Bihar (5.1). On the other extreme, Kerala (2.0) has the lowest TFR. Based on the levels of TFR the states have been categorised as under:-

<u>TFR</u>	<u>States</u>
Below 2	--
2.0 - 3.0	Kerala, Tamil Nadu
3.0 - 4.0	Andhra Pradesh, Assam, Gujarat, Himachal Pradesh, Jammu & Kashmir, Karnataka, Maharashtra, Orissa, Punjab and West Bengal
4.0 - 5.0	Haryana, Madhya Pradesh and Rajasthan
5.0 - 6.0	Bihar and Uttar Pradesh

STATEMENT 17

Total fertility rates by residence,
India and major States, 1989

India/States	Total	Rural	Urban
INDIA	3.9	4.2	2.8
Andhra Pradesh	3.1	3.2	2.6
Assam	3.4	3.5	2.0
Bihar	5.1	5.2	3.9
Gujarat	3.6	3.9	3.0
Haryana	4.4	4.7	3.3
Himachal Pradesh	3.2	3.3	2.3
Jammu & Kashmir	3.3	3.5	2.5
Karnataka	3.3	3.5	2.7
Kerala	2.0	2.1	1.8
Madhya Pradesh	4.7	5.1	3.2
Maharashtra	3.4	3.6	2.9
Orissa	3.6	3.7	2.7
Punjab	3.3	3.5	3.0
Rajasthan	4.7	5.0	3.6
Tamil Nadu	2.5	2.7	2.2
Uttar Pradesh	5.2	5.7	3.6
West Bengal	3.3	3.8	2.1

3.12 A comparison of TFRs for the period 1981-83, and 1987-89 indicates decline in the TFRs in all states (Statement 18). The highest decline (26.2 per cent) is observed in Kerala. At national level, there is a decline of 11.1 per cent.

STATEMENT 18
Total fertility rates, India and major
states, 1981-83 and 1987-89

India/States	1981-83	1987-1989	Percentage change w.r.t. 1981-83
INDIA	4.5	4.0	-11.1
Andhra Pradesh	3.9	3.3	-14.5
Assam	4.2	3.7	-11.1
Bihar	5.6	5.3	-6.0
Gujarat	4.2	3.5	-15.9
Haryana	4.9	4.3	-12.2
Himachal Pradesh	4.0	3.5	-12.5
Jammu & Kashmir	4.5	3.9	-13.3
Karnataka	3.6	3.4	-6.5
Kerala	2.8	2.1	-26.2
Madhya Pradesh	5.2	4.7	-9.6
Maharashtra	3.7	3.5	-6.3
Orissa	4.4	3.7	-15.7
Punjab	4.0	3.4	-15.8
Rajasthan	5.5	4.7	-15.2
Tamil Nadu	3.3	2.5	-23.2
Uttar Pradesh	5.8	5.4	-7.5
West Bengal	4.1	3.5	-13.8

3.13 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 1989 are given in statement 19. The TMFR at the all-India level is found to be 5.3. Assam, Bihar, Himachal Pradesh, Jammu & Kashmir, Madhya Pradesh Rajasthan and Uttar Pradesh have values of TMFR exceeding the All-India level Kerala (4.3) registered the lowest TMFR. Whereas the highest (6.6) is for Assam. Based on different levels of TMFR the states have been categorized as under:-

<u>TMFR</u>	<u>States</u>
4-5	Andhra Pradesh, Gujarat, Kerala, Maharashtra, Tamil Nadu, West Bengal
5-6	Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Madhya Pradesh, Orissa, Punjab, Rajasthan
6-7	Assam, Bihar, Uttar Pradesh.

STATEMENT 19
Total Marital fertility rates by residence,
India and major States, 1989

India/States	Total	Rural	Urban
INDIA	5.3	5.4	4.8
Andhra Pradesh	4.3	4.3	4.4
Assam	6.6	6.7	5.5
Bihar	6.0	6.0	5.2
Gujarat	4.8	4.9	4.7
Haryana	5.3	5.5	4.9
Himachal Pradesh	5.7	5.8	4.5
Jammu & Kashmir	5.7	6.0	5.9
Karnataka	5.2	5.4	5.0
Kerala	4.3	4.2	4.7
Madhya Pradesh	5.6	5.7	5.2
Maharashtra	4.6	4.6	4.9
Orissa	5.1	5.1	5.1
Punjab	5.3	5.5	4.8
Rajasthan	5.6	5.7	4.9
Tamil Nadu	4.5	4.6	4.4
Uttar Pradesh	6.3	6.5	5.3
West Bengal	4.9	5.3	4.1

3.14 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 1.9.

Kerala (1.0) has the lowest GRR, whereas Bihar and Uttar Pradesh have the highest GRR (2.4). The rates for rural areas are in the range of 1.3 for Tamil Nadu to 2.7 for Uttar Pradesh while the rates for urban areas are in the range of 0.9 for Assam and Kerala to 1.9 for Bihar and Gujarat. The states have been grouped according to the values of GRR as under:-

<u>GRR</u>	<u>States</u>
1.0 - 1.5	Kerala, Tamil Nadu.
1.5 - 2.0	Andhra Pradesh, Assam, Gujarat, Himachal Pradesh, Jammu & Kashmir, Karnataka, Maharashtra, Orissa, Punjab and West Bengal
2.0 - 2.5	Bihar, Haryana, Madhya Pradesh, Rajasthan, Uttar Pradesh

STATEMENT 20
Gross reproduction rates by residence,
India and major States, 1989

India/States	Total	Rural	Urban
INDIA	1.9	2.0	1.4
Andhra Pradesh	1.5	1.6	1.3
Assam	1.7	1.7	0.9
Bihar	2.4	2.5	1.9
Gujarat	1.7	1.8	1.4
Haryana	2.0	2.2	1.5
Himachal Pradesh	1.6	1.6	1.1
Jammu & Kashmir	1.6	1.7	1.2
Karnataka	1.6	1.7	1.3
Kerala	1.0	1.0	0.9
Madhya Pradesh	2.2	2.4	1.6
Maharashtra	1.6	1.7	1.5
Orissa	1.8	1.8	1.3
Punjab	1.6	1.6	1.5
Rajasthan	2.1	2.2	1.7
Tamil Nadu	1.3	1.3	1.1
Uttar Pradesh	2.4	2.7	1.7
West Bengal	1.6	1.8	1.0

3.15 Information about the type of 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 21. It is observed that institutional births comprise 21.8 per cent of the total births. Births attended by trained professionals account for 20.5 per cent and the remaining 57.7 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 15.2 per cent and births attended by trained professionals comprise 19.2 per cent of the total rural births. The percentage of births attended by untrained professionals and others is 65.5 in the rural areas. On the contrary the births attended to by untrained professionals and others, in urban areas, comprise only 23.3 per cent of the total urban births. The institutional births in urban areas comprise 51.0 per cent of the total urban births and the births attended by trained professionals comprise 25.7 per cent. These are much higher than the corresponding figures for the rural areas.

STATEMENT 21

Per cent distribution of births by type of attention at birth by residence, India, 1989

Residence	Type of attention at birth		
	Institutional	Attended by trained medical professionals	Attended by untrained professionals and others
Total	21.8	20.5	57.7
Rural	15.2	19.3	65.5
Urban	51.0	25.7	23.3

3.16 State-wise percentage distribution of births by type of attention at birth is shown in statement 22. In the case of institutional births, the highest percentage (85.7) has been registered by Kerala. The lowest percentage of institutional births is recorded in Uttar Pradesh (3.9). In the case of births attended by untrained professionals and others the highest percentage is recorded in Rajasthan (78.9) and the lowest in Kerala (8.2).

STATEMENT 22

Per cent distribution of births by type of attention at birth in major States, 1989

States	Type of attention at birth		
	Institutional	Attended by trained professionals	Attended by untrained professionals and others
Andhra Pradesh	32.8	19.1	48.1
Assam	17.3	9.5	73.2
Bihar	11.3	13.8	74.9
Gujarat	21.6	32.6	45.8
Haryana	17.9	64.2	17.9
Himachal Pradesh	21.9	23.1	55.0
Jammu & Kashmir	14.6	19.8	65.6
Karnataka	30.3	26.8	42.9
Kerala	85.7	6.1	8.2
Madhya Pradesh	11.5	12.7	75.8
Maharashtra	33.3	13.8	52.9
Orissa	8.4	15.5	76.1
Punjab	6.8	78.2	15.0
Rajasthan	4.2	16.9	78.9
Tamil Nadu	48.7	18.9	32.4
Uttar Pradesh	3.9	23.5	72.6
West Bengal	29.6	7.8	62.6

3.17 Percentage distribution of births by type of attention before delivery in rural areas of major states is shown in statement 23. In Kerala, 84.3 per cent of the

total births are found to be institutional. In most of the states, the percentage of births attended by trained professionals is generally low except in Punjab (76.6) and Haryana (65.3). In Kerala, the percentage of births attended by untrained professionals and others is the lowest (9.3). This is followed by Haryana (18.5), Punjab (19.4) and Tamil Nadu (40.6). In Madhya Pradesh, Orissa and Rajasthan over four-fifths of the births are attended by untrained professionals and others.

STATEMENT 23
Per cent distribution of births by type of attention at birth in rural areas of major States, 1989

States	Type of attention at birth		
	Institutional	Attended by trained professionals	Attended by untrained professionals and others
Andhra Pradesh	16.8	22.8	60.4
Assam	11.6	8.8	79.6
Bihar	9.3	12.1	78.6
Gujarat	15.1	35.6	49.3
Haryana	16.2	65.3	18.5
Himachal Pradesh	16.5	19.5	64.0
Jammu & Kashmir	8.7	16.7	74.6
Karnataka	20.1	12.5	49.9
Kerala	84.3	6.4	9.3
Madhya Pradesh	4.1	12.0	83.9
Maharashtra	20.1	12.5	67.4
Orissa	4.8	13.9	81.3
Punjab	4.0	76.6	19.4
Rajasthan	1.9	14.2	83.9
Tamil Nadu	36.7	22.7	40.6
Uttar Pradesh	2.4	18.1	79.5
West Bengal	22.4	7.5	70.1

3.18 In urban areas, percentages of institutional births are much higher than those in rural areas (statement 24).

The percentages of births attended by trained professionals are also generally higher as compared to corresponding percentages for rural areas. Kerala (92) has recorded the highest percentage of institutional births followed by Tamil Nadu (86.7). The lowest percentage of births attended by untrained professionals and others is found to be 3.5 for Kerala and the highest percentage 53 for Rajasthan.

STATEMENT 24

Per cent distribution of births by type of attention at birth in urban areas of major States, 1989

States	Type of attention at birth		
	Institutional	Attended by trained professionals	Attended by untrained professionals and others
Andhra Pradesh	72.0	10.1	17.9
Assam	49.5	13.9	36.6
Bihar	27.4	27.7	46.9
Gujarat	59.7	15.4	24.9
Haryana	24.3	60.2	15.5
Himachal Pradesh	48.7	41.1	10.2
Jammu & Kashmir	37.6	31.6	30.8
Karnataka	62.6	16.8	20.6
Kerala	92.0	4.5	3.5
Madhya Pradesh	48.9	16.2	34.9
Maharashtra	74.8	17.6	7.6
Orissa	31.8	25.8	42.4
Punjab	13.6	82.2	4.2
Rajasthan	16.2	30.8	53.0
Tamil Nadu	86.7	7.0	6.3
Uttar Pradesh	12.1	53.3	34.6
West Bengal	77.1	10.2	12.7

C H A P T E R - 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 1989, the crude death rate for India is estimated to be 10.3. The rate for rural areas is 11.1 which is much higher than the rate of 7.2 for urban areas. From statement 25 it is seen that level of crude death rate varies from 6.1 in Kerala to 12.9 in Madhya Pradesh. There are eleven states having death rate below the national level. The states having death rate higher than the national level (10.3) are Assam (10.4), Bihar (12.1), Madhya Pradesh (12.9), Orissa (12.7), Rajasthan (10.7) and Uttar Pradesh (12.6).

STATEMENT 25
Estimated crude death rates by residence,
India and major States, 1989

India/States	Total	Rural	Urban
INDIA	10.3	11.1	7.2
Andhra Pradesh	9.5	10.2	6.7
Assam	10.4	10.6	7.6
Bihar	12.1	12.5	7.9
Gujarat	9.7	10.0	8.9
Haryana	8.5	9.0	6.6
Himachal Pradesh	8.7	8.9	6.1
Jammu & Kashmir	7.6	7.9	6.4
Karnataka	8.8	9.6	6.5
Kerala	6.1	6.0	6.1
Madhya Pradesh	12.9	13.9	8.6
Maharashtra	8.0	8.9	6.3
Orissa	12.7	13.2	8.1
Punjab	8.2	8.7	6.8
Rajasthan	10.7	11.4	7.8
Tamil Nadu	8.7	9.7	6.8
Uttar Pradesh	12.6	13.7	8.2
West Bengal	8.8	9.5	7.0

4.1 Statement 26 gives the statewise grouping of death rates by place of residence. It is observed that Kerala has the lowest death rate both in the rural and urban areas.

STATEMENT 26

Distribution of major states by rural and urban death rates, 1989

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

4.2 Statement 27 shows the average death rate for India and major states for the periods 1981-83 and 1987-89. Statewise comparison of the average death rates show decline in respect of all the major states. The extent of decline varies from 1.6 per cent in Orissa to about 20 per cent in Tamil Nadu.

STATEMENT 27

Average estimated crude death rates, India
and major States, 1981-83 and 1987-89

India/States	1981-83	1987-89	Percentage change w.r.t. 1981-83
INDIA	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
Himachal Pradesh	10.2	8.9	-12.8
Jammu & Kashmir	8.7	7.9	-9.2
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

4.3. Statement 28 gives estimated death rates at the national level by sex and residence. It is observed that females have lower level of mortality in urban areas.

STATEMENT 28

Estimated death rates by sex and residence
India, 1989

Residence	Male	Female
Total	10.4	10.1
Rural	11.2	11.1
Urban	7.8	6.7

4.4 Statewise male and female death rates are shown in statement 29. It is seen that female death rate is lower than male death rate in 12 States. The position is reverse in the case of Bihar, Gujarat, Madhya Pradesh, Rajasthan and Uttar Pradesh.

STATEMENT 29

Estimated death rates by sex,
major States, 1989

States	Male	Female
Andhra Pradesh	10.3	8.7
Assam	11.2	9.6
Bihar	10.9	13.4
Gujarat	9.3	10.1
Haryana	8.6	8.4
Himachal Pradesh	9.1	8.4
Jammu & Kashmir	9.4	6.3
Karnataka	9.6	7.9
Kerala	7.3	5.0
Madhya Pradesh	12.8	13.0
Maharashtra	8.5	7.4
Orissa	12.9	12.5
Punjab	8.9	7.5
Rajasthan	10.6	10.9
Tamil Nadu	9.0	8.3
Uttar Pradesh	12.4	12.9
West Bengal	9.0	8.6

4.5 Statement 30 gives the estimates of Infant Mortality Rate (IMR) by residence for India and major states for the year 1989. It is observed that infant mortality rate for India for 1989 is 91 per thousand live births. The rural rate (98) is higher than the urban rate (58). Among the major States, the lowest rate is recorded for Kerala (21) and the highest rate is recorded for Orissa (121). 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	Jammu & Kashmir, Maharashtra, Punjab, Tamil Nadu
75 - 100	Andhra Pradesh, Assam, Bihar, Gujarat, Haryana, Himachal Pradesh, Karnataka, Rajasthan, West Bengal
100 - 125	Madhya Pradesh, Orissa, Uttar Pradesh

STATEMENT 30

Estimated infant mortality rates by residence,
India and major States, 1989

India/States	Rural	Urban	Total
INDIA	98	58	91
Andhra Pradesh	88	53	81
Assam	93	63	91
Bihar	93	63	91
Gujarat	92	70	86
Haryana	88	58	82
Himachal Pradesh	78	33	75
Jammu & Kashmir	68	55	66
Karnataka	89	53	80
Kerala	23	15	21
Madhya Pradesh	125	78	117
Maharashtra	66	44	59
Orissa	125	78	121
Punjab	71	44	64
Rajasthan	103	58	96
Tamil Nadu	80	43	68
Uttar Pradesh	126	75	118
West Bengal	83	53	77

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

STATEMENT 31

Estimated infant mortality rates by sex, India
and major States, 1989

India/States	Male	Female
INDIA	92	90
Andhra Pradesh	89	73
Assam	97	85
Bihar	94	88
Gujarat	85	88
Haryana	75	90
Himachal Pradesh	59	92
Jammu & Kashmir	72	60
Karnataka	86	74
Kerala	23	20
Madhya Pradesh	115	120
Maharashtra	64	53
Orissa	123	119
Punjab	72	56
Rajasthan	95	99
Tamil Nadu	67	69
Uttar Pradesh	114	123
West Bengal	83	71

4.7 Statement 32 presents state-wise average infant mortality rates for the periods 1981-83 and 1987-89. The average infant mortality rates among states for the period 1987-89 are found to be lower than those for the period 1981-83 except in Andhra Pradesh, Himachal Pradesh and Karnataka. The extent of decline (20.3) is found to be maximum for Punjab.

STATEMENT- 32

Average estimated infant mortality rates, India and major States, 1981-83 and 1987-89

India/States	1981-83	1987-89	Percentage change w.r.t. 1981-83
INDIA	107	93	-13.1
Andhra Pradesh	79	81	2.5
Assam	101	97	-3.9
Gujarat	112	96	-14.3
Haryana	99	86	-13.1
Himachal Pradesh	68	79	16.2
Jammu & Kashmir	71	69	-2.8
Karnataka	68	76	11.8
Kerala	31	26	-16.1
Madhya Pradesh	132	119	-9.8
Maharashtra	75	64	-14.7
Orissa	129	123	-4.7
Punjab	79	63	-20.3
Rajasthan	105	100	-4.8
Tamil Nadu	86	73	-15.1
Uttar Pradesh	153	123	-19.6
West Bengal	86	72	-16.3

4.8 The contribution of infant deaths to total deaths is about 27 per cent at the national level (statement 33). Among major states, Kerala (7.2) is having the lowest percentage of infant deaths to total deaths while the highest percentage (34.6) is in Uttar Pradesh. For rural areas, the percentage of infant deaths is 28 as against 20 for urban areas at the national level. In the rural area Haryana, Madhya Pradesh, Orissa, Rajasthan and Uttar Pradesh have percentage of infant deaths in the range 29-36. In urban areas the lowest percentage (5.0) is for Kerala and the highest (27.5) is 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	--
15-20	Tamil Nadu
20-25	Andhra Pradesh, Himachal Pradesh, Maharashtra, Punjab, West Bengal
25-30	Assam, Bihar, Gujarat, Jammu and Kashmir, Karnataka, Orissa
30 and above	Haryana, Madhya Pradesh, Rajasthan, Uttar Pradesh

STATEMENT- 33

Percentage of infant deaths to total deaths by residence,
India and major States, 1989

India/States	Total	Rural	Urban
INDIA	27.1	28.4	20.1
Andhra Pradesh	22.1	22.6	19.1
Assam	25.7	26.1	18.2
Bihar	26.0	26.2	22.2
Gujarat	25.6	27.5	20.8
Haryana	34.0	35.6	26.3
Himachal Pradesh	23.9	24.6	11.0
Jammu & Kashmir	26.1	27.4	20.0
Karnataka	25.6	26.9	20.6
Kerala	7.2	7.6	5.0
Madhya Pradesh	32.2	32.9	27.5
Maharashtra	21.1	22.6	17.2
Orissa	29.1	29.4	23.9
Punjab	22.2	23.4	17.9
Rajasthan	30.7	32.1	21.6
Tamil Nadu	18.0	19.3	14.4
Uttar Pradesh	34.6	35.7	26.6
West Bengal	23.9	26.8	31.9

4.9 Statement 34 presents the neo-natal and post neo-natal mortality rates for India for the year 1989. 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, 1989

Residence	Neo-natal mortality	Post neo-natal mortality
Total	56.4	34.5
Rural	62.1	36.4
Urban	31.4	26.3

4.10 Among the major states, the highest neo-natal mortality rate is 75.5 for Orissa (statement 35) and the lowest rate is 14.2 for Kerala. The highest post neo-natal mortality rate is 50.3 for Madhya Pradesh and the lowest is 7.1 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	50-75
Below 25	Kerala	-	-
25-50	Jammu & Kashmir, Maharashtra, Punjab	Haryana, Himachal Pradesh	-
50-75	Karnataka, Tamil Nadu	Andhra Pradesh, Assam, Bihar, Gujarat, Rajasthan, Uttar Pradesh	Madhya Pradesh
75 & above	-	Orissa, West Bengal	-

STATEMENT 35

Neo-natal and post neo-natal mortality
rates for major States, 1989

States	Neo-natal	Post neo-natal
Andhra Pradesh	54.8	26.2
Assam	62.3	28.7
Bihar	56.7	34.4
Gujarat	56.4	29.7
Haryana	49.7	32.5
Himachal Pradesh	38.7	36.6
Jammu & Kashmir	42.6	23.6
Karnataka	57.9	22.3
Kerala	14.2	7.2
Madhya Pradesh	67.0	50.3
Maharashtra	40.0	19.0
Orissa	75.5	45.5
Punjab	39.4	24.7
Rajasthan	60.6	35.7
Tamil Nadu	50.1	17.6
Uttar Pradesh	68.5	49.6
West Bengal	45.6	31.4

4.11 Percentages of neo-natal and post neo-natal deaths to infant deaths for major states are shown in statement 36. It is seen that neo-natal deaths account for 62 per cent of the infant deaths at the national level and post neo-natal deaths account for 38 cent of infant deaths.

STATEMENT 36

Percentages of neo-natal and post neo-natal
deaths to total infant deaths, India
and major States, 1989

India/States	Neo-natal	Post neo-natal deaths
INDIA	62.0	38.0
Andhra Pradesh	67.7	32.3
Assam	68.7	31.3
Bihar	62.2	37.8
Gujarat	65.5	34.5
Haryana	60.5	39.5
Himachal Pradesh	51.4	48.6
Jammu & Kashmir	64.3	35.7
Karnataka	72.2	27.8
Kerala	66.7	33.3
Madhya Pradesh	57.1	42.9
Maharashtra	67.7	32.3
Orissa	62.4	37.6
Punjab	61.5	38.5
Rajasthan	62.9	37.1
Tamil Nadu	73.9	26.1
Uttar Pradesh	58.0	42.0
West Bengal	59.2	40.8

4.12 Statement 37 shows the peri-natal mortality rates for rural and urban areas of India for 1989 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 47.2 and the still birth-rate 12.7.

STATEMENT 37

Estimated peri-natal mortality rate and
still birth rate by residence, India, 1989

Residence	Peri-natal mortality	Still birth rate
Total	47.2	12.7
Rural	50.9	13.1
Urban	31.0	11.2

4.13 Statement 38 gives peri-natal mortality rates and still birth rates for major states. The highest peri-natal mortality rate is 62 for Karnataka which is followed by Orissa (60.7). Himachal Pradesh has the lowest rate (27.8). As regards the still birth rate, it ranges from 23.7 for Punjab to 5.9 for Gujarat.

STATEMENT 38

Estimated peri-natal mortality rates and
still birth rates, major states, 1989

States	Peri-natal mortality rates	Still birth rate
Andhra Pradesh	52.9	14.4
Assam	53.0	11.9
Bihar	43.6	10.9
Gujarat	43.3	5.9
Haryana	43.8	13.7
Himachal Pradesh	27.8	10.6
Jammu & Kashmir	42.6	17.5
Karnataka	62.0	20.8
Kerala	23.1	12.6
Madhya Pradesh	54.0	12.4
Maharashtra	41.0	15.2
Orissa	60.7	15.2
Punjab	46.2	23.7
Rajasthan	50.4	9.0
Tamil Nadu	53.8	13.8
Uttar Pradesh	47.1	10.0
West Bengal	42.3	15.2

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 29.9 per 1000 child population. The rural rate (33.2) is almost twice the urban rate (16.9). 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, 1989

Residence	Male	Female	Person
Total	28.5	31.4	29.9
Rural	31.3	35.2	33.2
Urban	16.5	17.2	16.9

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 6.1 for Kerala, while the highest is found to be 43 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	Andhra Pradesh, Maharashtra, Tamil Nadu, West Bengal	Haryana, Jammu & Kashmir, Punjab
30 - 45	-	Assam, Bihar, Gujarat, Rajasthan
45 and above	-	Madhya Pradesh, Orissa, Uttar Pradesh

STATEMENT 40

Estimated death rates for children aged 0-4 years by residence, major states, 1989.

States	Total	Rural	Urban
Andhra Pradesh	21.8	24.1	12.6
Assam	29.6	30.0	21.7
Bihar	32.8	34.1	19.4
Gujarat	29.2	33.2	20.4
Haryana	24.1	26.1	16.1
Himachal Pradesh	19.3	20.1	6.4
Jammu & Kashmir	19.6	20.6	15.0
Karnataka	25.7	29.1	15.5
Kerala	6.1	6.3	4.8
Madhya Pradesh	43.0	47.4	23.2
Maharashtra	18.0	21.2	12.0
Orissa	39.7	41.3	23.1
Punjab	21.9	24.1	15.8
Rajasthan	35.6	38.2	22.2
Tamil Nadu	20.6	23.9	13.3
Uttar Pradesh	41.3	45.2	22.7
West Bengal	21.9	23.7	14.8

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 38.8 per cent of the total deaths at the national level. The rural percentage (40.9) is much higher than the urban percentage (27.9) Kerala (10.5) is having the lowest percentage while Madhya

Pradesh (48.2) is having the highest percentage followed by Uttar Pradesh (47.2). 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 :-

<u>Percentage of deaths among children aged 0-4</u>	<u>States</u>
Below 20	Kerala
20 - 30	Andhra Pradesh, Himachal Pradesh, Tamil Nadu
30 - 40	Assam, Gujarat, Jammu & Kashmir, Karnataka, Maharashtra, Punjab, West Bengal
40 and above	Bihar, Haryana, 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, 1989

India/States	Total	Rural	Urban
INDIA	38.8	40.9	27.9
Andhra Pradesh	29.1	30.3	22.3
Assam	38.8	39.5	27.6
Bihar	42.1	42.6	34.0
Gujarat	34.9	37.8	27.4
Haryana	42.4	44.6	32.3
Himachal Pradesh	29.4	30.4	11.0
Jammu & Kashmir	35.8	37.9	25.9
Karnataka	35.6	37.8	26.7
Kerala	10.5	11.1	8.0
Madhya Pradesh	48.2	49.9	36.7
Maharashtra	30.3	32.0	25.9
Orissa	40.5	41.0	33.2
Punjab	30.9	32.1	27.0
Rajasthan	46.8	48.4	36.3
Tamil Nadu	25.0	27.0	19.4
Uttar Pradesh	47.2	48.7	37.0
West Bengal	32.7	36.4	20.1

4.17 From statement 42, it may be seen that death rate among children aged 5-14 years at the national level is 2.2 per thousand population. Urban areas have a much lower value (1.1) as compared to rural areas (2.5). 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, 1989

Residence	Male	Female	Person
Total	1.9	2.5	2.2
Rural	2.2	2.8	2.5
Urban	1.1	1.2	1.1

4.18 Statement 43 presents the estimated death rates among children aged 5-14 years for major states. Bihar has the highest rate (3.2) followed by Assam (3.1), Orissa (2.8). Rajasthan and Uttar Pradesh (2.7) each. The lowest rate is recorded for Kerala (0.5). The urban rates are lower than the rural rates. The highest urban rate is found to be 1.9 in case of Orissa and Rajasthan as against 3.3 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, Haryana, Himachal Pradesh, Jammu & Kashmir, Karnataka, Maharashtra, Punjab, Tamil Nadu, West Bengal
2.0-3.0	Gujarat, Madhya Pradesh, Orissa, Karnataka, Uttar Pradesh
3.0-4.0	Assam, Bihar

STATEMENT 43

Estimated death rates for children aged 5-14
years by residence, major states, 1989

States	Total	Rural	Urban
Andhra Pradesh	1.6	1.7	1.1
Assam	3.1	3.3	1.2
Bihar	3.2	3.3	1.7
Gujarat	2.0	2.2	1.5
Haryana	1.4	1.4	1.4
Himachal Pradesh	1.3	1.3	0.6
Jammu & Kashmir	1.5	1.6	1.2
Karnataka	1.5	1.7	0.9
Kerala	0.5	0.5	0.3
Madhya Pradesh	2.9	3.3	1.3
Maharashtra	1.4	1.7	0.8
Orissa	2.8	2.9	1.9
Punjab	1.4	1.4	1.1
Rajasthan	2.7	2.8	1.9
Tamil Nadu	1.4	1.7	0.8
Uttar Pradesh	2.7	3.0	1.4
West Bengal	1.7	2.0	1.1

4.19 Statement 44 present 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 rate by age-group 15-34
years by residence and sex, India, 1989

Residence	Male	Female	Person
Total	2.3	2.9	2.6
Rural	2.4	3.2	2.8
Urban	2.0	1.9	1.9

4.20 Statement 45 gives death rate in the age group 15-34 years for major states. The lowest rate (1.3) is observed for Kerala, while the highest (3.4) is observed for Orissa closely followed by Bihar (3.3) and Assam (3.2). The rural rate is higher than urban rate for all the states.

STATEMENT 45

Estimated death rates for age-group 15-34 years by residence, major states, 1989

States	Total	Rural	Urban
Andhra Pradesh	2.9	3.2	2.0
Assam	3.2	3.4	1.4
Bihar	3.3	3.4	2.5
Gujarat	2.6	2.7	2.3
Haryana	2.0	2.2	1.2
Himachal Pradesh	1.9	2.0	1.7
Jammu & Kashmir	1.6	1.8	0.9
Karnataka	2.2	2.2	2.1
Kerala	1.3	1.3	1.0
Madhya Pradesh	3.0	3.1	2.3
Maharashtra	2.1	2.2	1.9
Orissa	3.4	3.5	2.3
Punjab	2.6	2.8	2.1
Rajasthan	2.8	3.1	1.9
Tamil Nadu	2.5	2.9	1.7
Uttar Pradesh	2.7	2.9	2.1
West Bengal	2.4	2.6	1.8

4.21 The death rates in the age group 35-39 years are presented in statement 46 for rural and urban areas. It is seen that the death rate for the age-group 35-39 years is 5.2 which is double the death rate for the age-group 15-34 years. The male death rate in the age-group 35-39 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, 1989

Residence	Male	Female	Person
Total	6.0	4.3	5.2
Rural	6.3	4.6	5.5
Urban	5.2	3.2	4.3

4.22 Statement 47 gives the death rate in the age group 35-39 years by residence for major states. The lowest death rate for the age-group 35-39 years is found to be 3.1 for Kerala while the highest death rate is found to be 7.0 for Assam.

STATEMENT 47
Estimated death rates for age-group 35-49
years by residence, major states, 1989

States	Total	Rural	Urban
Andhra Pradesh	5.3	5.6	4.2
Assam	7.0	7.0	6.6
Bihar	6.7	6.8	5.6
Gujarat	4.8	5.2	4.0
Haryana	3.7	3.5	4.3
Himachal Pradesh	4.0	4.0	3.4
Jammu & Kashmir	5.0	4.7	6.1
Karnataka	4.9	5.0	4.6
Kerala	3.1	3.1	3.3
Madhya Pradesh	5.6	5.8	4.8
Maharashtra	4.4	4.5	4.2
Orissa	5.8	6.0	4.6
Punjab	3.9	4.4	2.7
Rajasthan	4.7	4.9	3.7
Tamil Nadu	5.0	5.1	5.0
Uttar Pradesh	5.7	5.9	4.8
West Bengal	4.6	5.3	3.2

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 aged 50 years and above by residence and sex, India, 1989

Residence	Male	Female	Person
Total	35.4	28.0	31.7
Rural	35.7	28.9	32.3
Urban	34.4	24.9	29.6

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 Punjab (26.4) has the lowest and Bihar (35.8) has the highest death rate. The rural death rates are generally higher than the urban rates except for Gujarat, Himachal Pradesh, Kerala and Madhya Pradesh.

STATEMENT 49

Estimated death rates for aged 50 years and above by residence, major States, 1989

States	Total	Rural	Urban
Andhra Pradesh	32.3	32.6	31.0
Assam	34.9	35.1	31.9
Bihar	35.8	36.2	30.9
Gujarat	34.0	31.3	40.7
Haryana	29.7	29.9	29.0
Himachal Pradesh	32.2	32.2	33.1
Jammu & Kashmir	27.6	27.6	27.4
Karnataka	29.4	30.0	27.4
Kerala	28.5	27.9	31.2
Madhya Pradesh	31.5	31.2	32.7
Maharashtra	27.4	28.8	24.4
Orissa	35.6	35.9	31.5
Punjab	26.4	26.6	25.7
Rajasthan	28.5	28.9	26.8
Tamil Nadu	29.9	30.9	27.8
Uttar Pradesh	34.3	35.1	30.5
West Bengal	33.0	34.2	30.5

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 51.9 at the national level. Institutional deaths comprise only 13.2 per cent of the total deaths, while deaths included under the category "attended by qualified medical practitioners" comprise 34.9 per cent of the total deaths. In respect of rural areas, institutional deaths comprise only 10.3 per cent of the total deaths, as against 28.5 per cent for urban areas.

STATEMENT 50

Per cent distribution of deaths by type of medical attention received before death, India, 1989

Residence	Institutional	Attended by qualified medical practitioners	Attended by unqualified medical practitioners and others
Total	13.2	34.9	51.9
Rural	10.3	32.5	57.2
Urban	28.5	47.5	24.0

4.26 The percentage distribution of deaths by type of medical attention received before in major states death is presented in statement 51. The highest percentage of

institutional deaths (44.6) is recorded for Kerala and the lowest (5.4) for Uttar Pradesh. Nearly three-fourth of deaths in Orissa and about two-thirds of deaths in Bihar, Gujarat, 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, 1989

Residence	Institutional	Attended by qualified medical practitioners	Attended by unqualified medical practitioners and others
Andhra Pradesh	16.9	24.0	59.1
Assam	7.0	58.1	34.9
Bihar	12.6	23.2	64.2
Gujarat	12.0	25.7	62.3
Haryana	10.2	46.6	43.2
Himachal Pradesh	9.1	65.9	25.0
Jammu & Kashmir	12.2	58.0	29.8
Karnataka	16.8	25.7	57.5
Kerala	44.6	32.4	23.0
Madhya Pradesh	7.5	26.1	66.4
Maharashtra	26.5	33.6	39.9
Orissa	8.5	17.5	74.0
Punjab	9.9	61.8	28.3
Rajasthan	8.7	28.7	62.6
Tamil Nadu	17.1	21.2	61.7
Uttar Pradesh	5.4	55.0	39.6
West Bengal	13.6	35.6	50.8

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 (43.9) has the highest percentage of institutional deaths in rural areas

followed by Maharashtra where the percentage of institutional deaths is 22.1. About three-fourth of the deaths in Madhya Pradesh and Orissa are attended by untrained medical practitioners and others. The lowest percentage of deaths attended by untrained medical practitioners and others is recorded for Kerala (25.6). 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, 1989

Residence	Institutional	Attended by qualified medical practitioners	Attended by unqualified medical practitioners and others
Andhra Pradesh	13.1	18.3	68.6
Assam	4.7	56.5	38.8
Bihar	10.0	21.5	68.5
Gujarat	8.5	24.9	66.6
Haryana	7.6	48.0	44.4
Himachal Pradesh	6.5	65.6	27.9
Jammu & Kashmir	8.7	56.9	34.4
Karnataka	12.7	25.5	61.8
Kerala	43.9	30.5	25.6
Madhya Pradesh	4.9	22.4	72.7
Maharashtra	22.1	27.3	50.6
Orissa	7.6	16.1	76.3
Punjab	8.7	61.6	29.7
Rajasthan	6.9	26.4	66.7
Tamil Nadu	12.7	17.7	69.6
Uttar Pradesh	5.3	52.2	42.5
West Bengal	8.9	32.5	58.6

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 48.1 for Kerala, closely followed by Maharashtra (41.9). The percentage of deaths attended by unqualified medical practitioners and others are in the range of 2.2 per cent in Maharashtra to 54.8 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, 1989

Residence	Institutional	Attended by qualified medical practitioners	Attended by unqualified medical practitioners and others
Andhra Pradesh	30.6	44.2	25.2
Assam	20.6	67.5	11.9
Bihar	38.4	41.1	20.5
Gujarat	31.8	30.0	38.2
Haryana	21.8	40.4	37.8
Himachal Pradesh	23.3	67.8	8.9
Jammu & Kashmir	24.9	61.8	13.3
Karnataka	32.8	26.6	40.6
Kerala	48.1	40.8	11.1
Madhya Pradesh	25.2	51.2	23.6
Maharashtra	41.9	55.9	2.2
Orissa	15.6	29.6	54.8
Punjab	13.9	62.6	23.5
Rajasthan	19.6	43.1	37.3
Tamil Nadu	36.1	36.3	27.6
Uttar Pradesh	6.4	75.0	18.6
West Bengal	37.8	51.8	10.4

CHAPTER - 5

ZONAL PATTERNS OF FERTILITY AND MORTALITY

6.1 In this chapter an attempt has been made to provide demographic profile of groups of States/U>Ts, termed here as "zones" based on the Sample Registration data on fertility and mortality for the year 1989. This is a new chapter in the present report with the aim of 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

6.2 Statement 54 gives zonewise figures of sample population covered number of sample units and average sample size of the Sample Registration System³ areas for the year 1989.

STATEMENT 54

Sample population (1989) No. of Sample
Units and average sample size by Zones

Zones:	Sample Population			No. of Sample Unit			Average Sample Size		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
North	927665	657361	270304	1061	657	404	874	1001	669
North- East	634091	507157	116934	664	527	137	940	962	854
East	1258204	1045544	212660	1298	978	320	969	1069	665
South	1478177	1095084	383093	1260	797	463	1173	1374	827
West	707121	553664	153457	709	440	269	997	1258	570
Central	948358	765483	182875	1030	750	280	921	1020	653
INDIA	5943616	4624293	1319323	6022	4149	1873	987	1115	704

6.3 Percentage distribution of population by broad age groups and residence at the zonal level are given in statement 55. It is observed(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 reversed which may mainly be attributed to higher fertility in rural areas and migration of population from rural to urban areas. Amongst the zones west 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 group and residence, zones and India, 1989

Zones	Total			Rural			Urban		
	0-14	15-49	50+	0-14	15-49	50+	0-14	15-49	50+
North	37.8	49.8	12.2	39.1	48.4	12.5	34.3	53.9	11.8
North-East	37.9	51.9	10.2	38.6	51.3	10.1	31.1	58.3	10.6
East	38.4	49.6	12.0	39.6	48.5	11.9	32.8	55.0	12.2
South	34.1	51.7	14.2	34.6	50.6	14.8	32.7	54.7	12.6
West	35.3	51.3	13.4	35.9	50.3	13.8	34.2	53.4	12.4
Central	39.4	48.0	12.6	39.8	47.1	13.0	37.7	51.4	10.9
INDIA	37.2	50.0	12.8	38.0	48.9	13.1	34.3	53.7	12.0

6.4 Indicators of fertility for the year 1989 at the zone level by residence are presented in Statement 56.

STATEMENT 56

Fertility Indicators by residence zones and India, 1989

Zones	Birth Rate			General Fertility Rate			Total Fertility Rate		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
North	32.0	33.5	27.5	133.8	142.5	110.4	4.0	4.3	3.2
North-East	28.9	29.8	20.1	113.5	119.2	67.9	3.4	3.6	1.9
East	30.9	32.9	21.4	132.0	141.9	86.5	4.1	4.5	2.6
South	24.7	25.1	23.4	95.0	98.5	85.8	2.8	2.9	2.4
West	28.4	30.1	25.2	114.9	122.4	100.3	3.4	3.7	2.9
Central	36.5	38.1	29.6	158.8	171.2	113.4	5.1	5.5	3.5
INDIA	30.6	32.2	25.2	126.5	135.7	97.6	3.9	4.2	2.8

6.5 Statement 57 gives estimates of some of the important indicators of mortality for the year 1989 separately for rural and urban areas of the zones. It is observed that central zone by the highest level of mortality as compared to the other zones. Further mortality levels is higher in rural areas than urban for all the zones.

STATEMENT 57

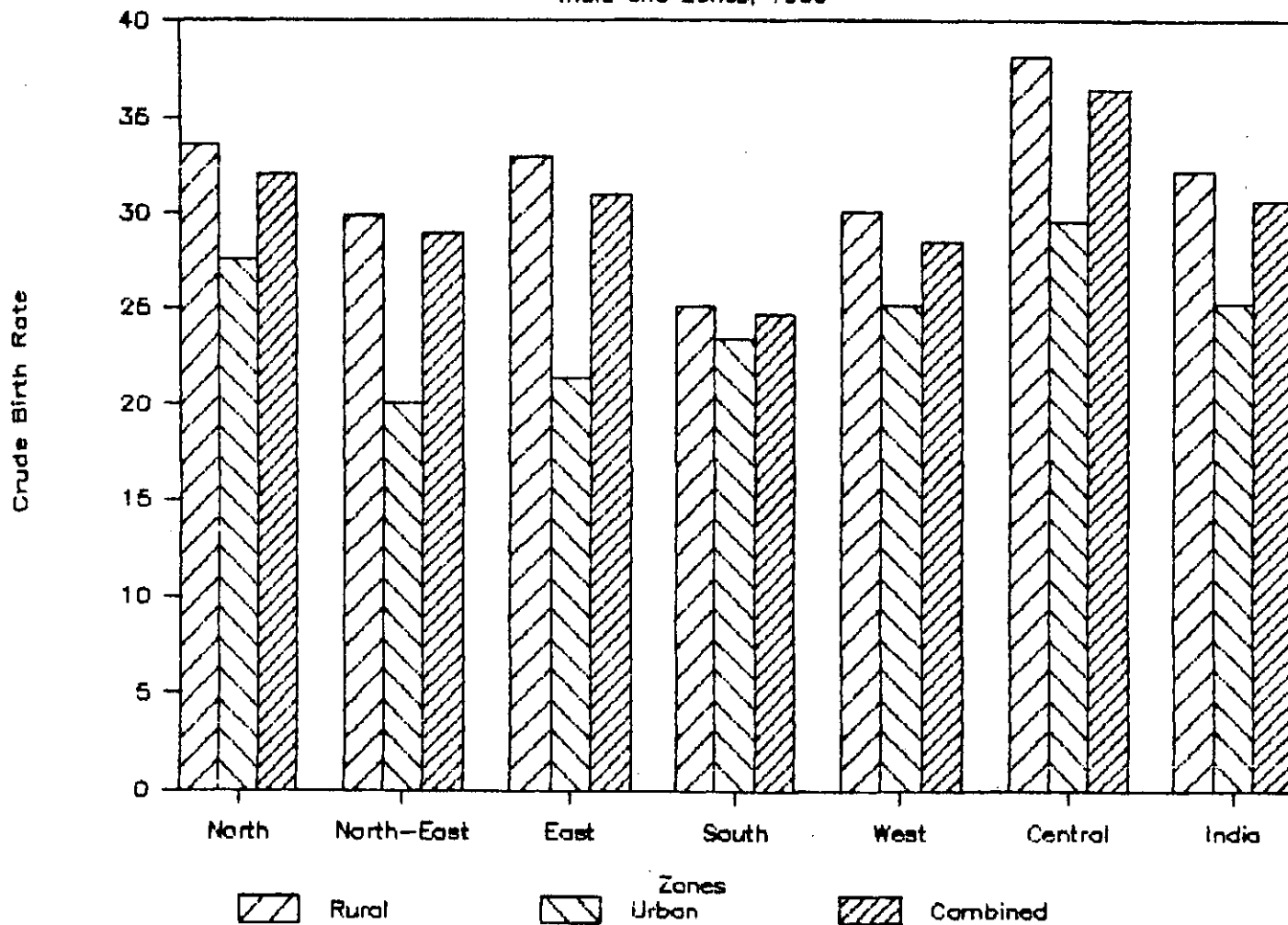
Mortality Indicators by residence zones
and India, 1989

Zones	Death Rate			Infant Mortality Rate			% Child Death (0-4 years)		
	Total	Rural	Urban	Total	Rural	Urban	Total	Rural	Urban
North	9.2	10.0	6.9	83	91	54	41.1	43.4	31.3
North-East	10.0	10.4	6.4	82	84	48	36.1	37.1	21.1
East	10.9	11.6	7.3	91	95	59	38.8	40.6	25.4
South	8.6	9.2	6.6	69	77	46	27.3	28.9	20.7
West	8.5	9.3	7.1	68	75	52	31.9	34.1	26.3
Central	12.7	13.7	8.3	118	125	76	47.6	49.1	36.9
INDIA	10.3	11.1	7.2	91	98	58	38.8	40.9	27.9

6.6 Figures 1 and 2 and 3 provide a pictorial view of the levels of fertility and mortality in the year 1989 in term of birth rate, and death rate and infant mortality rates at the zonal level separately for rural and urban areas.

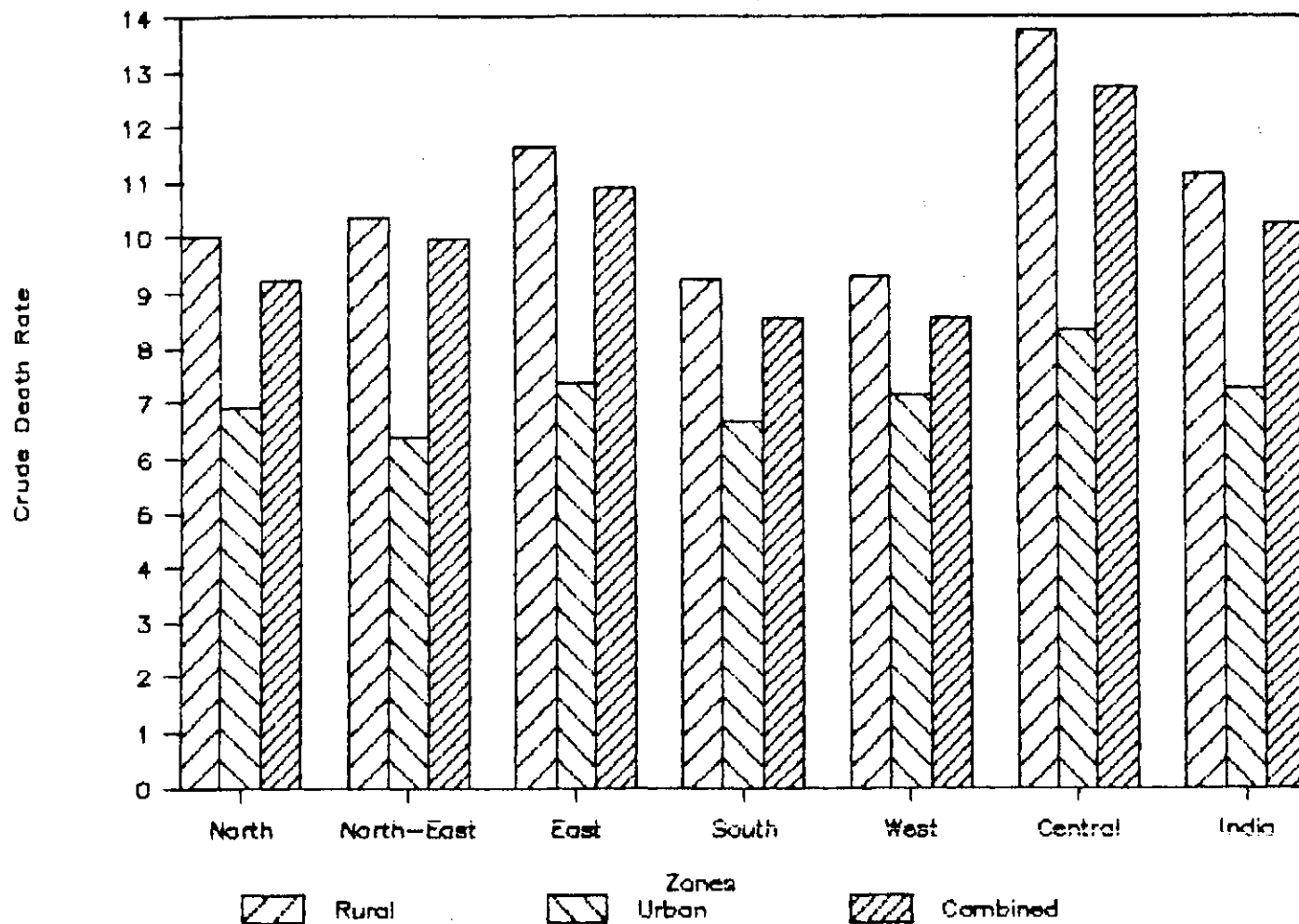
CRUDE BIRTH RATE BY PLACE OF RESIDENCE

India and Zones, 1989



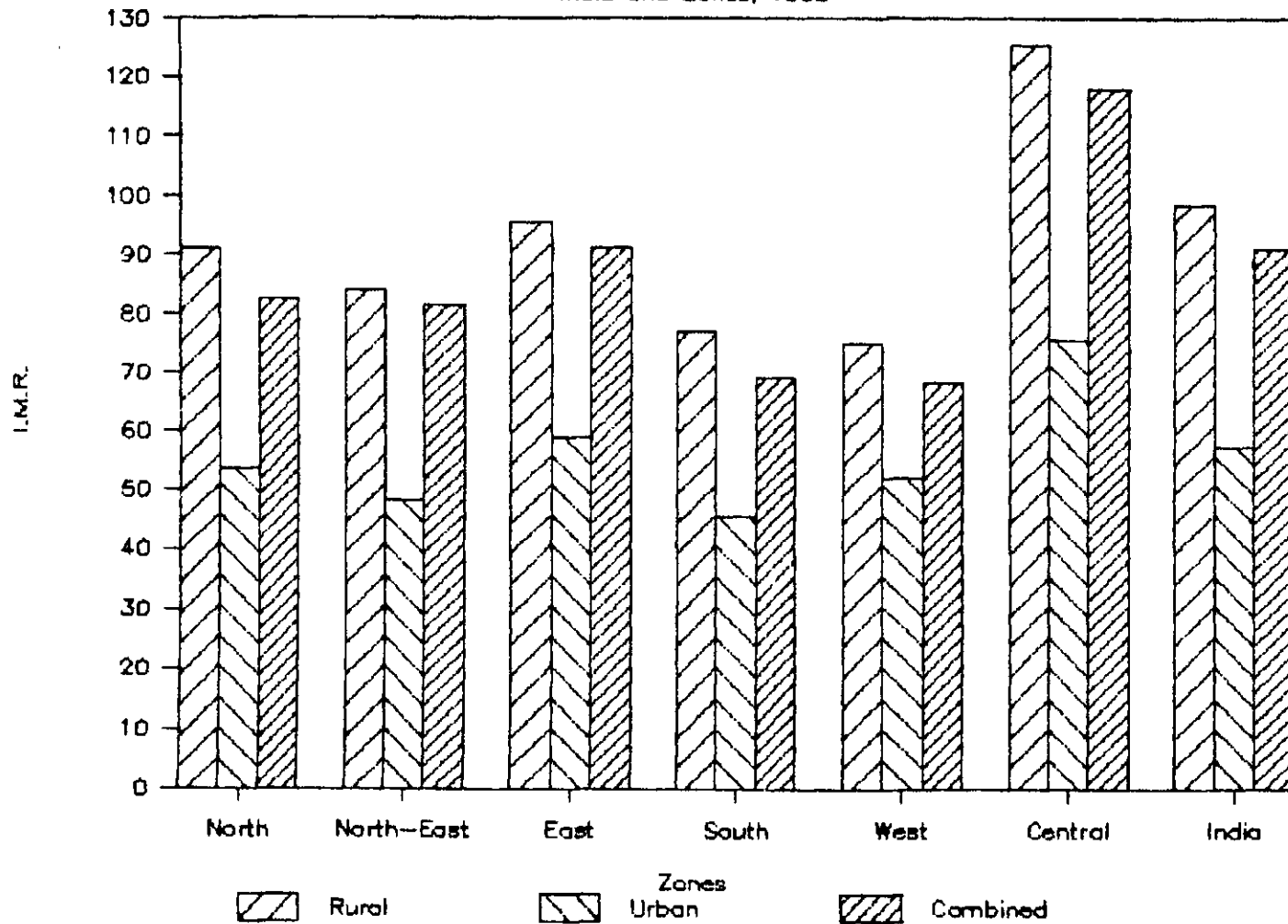
CRUDE DEATH RATE BY PLACE OF RESIDENCE

India and Zones, 1989



I.M.R. BY PLACE OF RESIDENCE

India and Zones, 1989



D E T A I L E D T A B L E S

TABLE 1

Percent distribution of estimated population
by age-group and sex , 1989

Age groups	India								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	14.0	13.5	13.7	11.6	12.4	12.0	13.4	13.3	13.3
5-9	12.1	11.9	12.0	11.2	11.4	11.3	11.9	11.7	11.8
10-14	12.6	11.9	12.3	11.1	11.0	11.0	12.3	11.7	12.0
15-19	11.3	10.2	10.8	10.7	10.4	10.5	11.2	10.2	10.7
20-24	9.0	9.1	9.1	9.5	10.2	9.8	9.1	9.4	9.2
25-29	7.5	7.8	7.6	9.4	9.3	9.3	7.9	8.1	8.0
30-34	6.5	6.8	6.6	8.0	7.5	7.8	6.8	6.9	6.9
35-39	5.4	5.9	5.7	6.9	6.2	6.6	5.8	6.0	5.9
40-44	4.8	5.0	4.9	5.4	5.2	5.3	4.9	5.0	5.0
45-49	4.2	4.4	4.3	4.7	4.0	4.4	4.3	4.3	4.3
50-54	3.7	3.8	3.7	3.6	3.6	3.6	3.6	3.7	3.7
55-59	3.1	3.0	3.1	2.9	2.9	2.9	3.0	3.0	3.0
60-64	2.1	2.4	2.2	1.9	2.2	2.1	2.1	2.3	2.2
65-69	1.8	2.1	1.9	1.5	1.9	1.7	1.8	2.0	1.9
70+	1.9	2.3	2.1	1.6	2.0	1.8	1.9	2.2	2.0

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	India		
	Rural	Urban	Combined
15-19	91.6	50.3	82.0
20-24	259.6	206.5	246.4
25-29	216.3	163.4	202.5
30-34	140.8	85.1	127.0
35-39	81.5	42.5	72.2
40-44	39.7	17.3	34.5
45-49	13.4	4.9	11.6
Crude birth rate	32.2	25.2	30.6
General fertility rate	135.7	97.6	126.5
Total fertility rate	4.2	2.8	3.9
Gross reproduction rate	2.0	1.4	1.9

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	India		
	Rural	Urban	Combined
15-19	230.6	288.0	237.3
20-24	314.4	321.8	315.9
25-29	238.4	195.3	227.8
30-34	154.1	89.2	137.5
35-39	90.0	46.8	79.7
40-44	44.9	20.1	39.2
45-49	17.0	6.5	14.8
General marital fertility rate	175.2	141.4	167.8
Total marital fertility rate	5.4	4.8	5.3

TABLE-4

Estimated age-specific death rates by sex, 1989

Age groups	India								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	31.3	35.2	33.2	16.5	17.2	16.9	28.5	31.4	29.9
5-9	2.7	3.8	3.2	1.4	1.6	1.5	2.4	3.3	2.8
10-14	1.6	1.9	1.7	0.8	0.8	0.8	1.5	1.6	1.5
15-19	1.7	2.8	2.2	1.4	1.7	1.5	1.7	2.5	2.1
20-24	2.5	3.8	3.1	2.0	2.3	2.1	2.3	3.4	2.9
25-29	2.8	3.3	3.0	2.1	1.9	2.0	2.6	2.9	2.8
30-34	3.2	3.1	3.2	2.7	1.5	2.1	3.1	2.7	2.9
35-39	4.3	3.7	4.0	3.0	2.4	2.7	4.0	3.4	3.7
40-44	5.9	4.5	5.2	5.4	3.0	4.3	5.8	4.1	5.0
45-49	9.3	6.0	7.6	8.1	4.7	6.6	9.0	5.7	7.4
50-54	13.3	9.1	11.2	12.7	8.0	10.4	13.2	8.9	11.0
55-59	19.3	14.3	16.9	22.8	11.6	17.3	20.1	13.7	17.0
60-64	33.1	23.1	28.1	32.3	20.7	26.3	33.0	22.6	27.7
65-69	48.0	38.8	43.3	49.4	32.2	40.1	48.2	37.4	42.6
70+	95.1	78.2	86.2	93.0	73.1	82.2	94.7	77.1	85.4
All ages	11.2	11.1	11.1	7.8	6.7	7.2	10.4	10.1	10.3

TABLE-5

Mortality Indicators, 1989

Indicators	India		
	Rural	Urban	Combined
Crude death rate	11.1	7.2	10.3
Infant mortality rate	98	58	91
Neo-natal mortality rate	62.1	31.4	56.4
Post-natal mortality rate	36.4	26.3	34.5
Peri-natal mortality rate	50.9	31.0	47.2
Still birth rate	13.1	11.2	12.7

TABLE 6

Percent distribution of sample births by type of medical attention at birth, 1989

India

Sector	Type of medical attention at birth			
	I	T	U	O
Rural	15.2	19.3	62.1	3.4
Urban	51.0	25.7	21.8	1.5
Combined	21.8	20.5	54.6	3.1

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 7

Percent distribution of sample deaths by type of medical attention received before death, 1989

India

Sector	Type of medical attention at death			
	I	M	U	N
Rural	10.3	32.5	27.7	29.5
Urban	28.5	47.5	7.8	16.2
Combined	13.2	34.9	24.5	27.4

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 , 1989

Age groups	North Zone								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	14.1	14.0	14.0	12.1	12.2	12.1	13.6	13.5	13.5
5-9	12.6	12.6	12.6	11.3	11.6	11.5	12.3	12.4	12.3
10-14	12.7	12.1	12.4	10.7	10.7	10.7	12.2	11.7	12.0
15-19	11.5	10.5	11.0	10.6	10.1	10.4	11.3	10.4	10.9
20-24	9.4	9.3	9.4	9.4	10.4	9.9	9.4	9.6	9.5
25-29	7.3	7.7	7.5	9.5	9.6	9.5	7.9	8.2	8.0
30-34	6.5	6.8	6.6	8.6	7.8	8.2	7.0	7.0	7.0
35-39	5.2	5.4	5.3	7.4	6.2	6.8	5.7	5.6	5.7
40-44	4.5	4.8	4.6	4.8	4.8	4.8	4.6	4.8	4.7
45-49	3.9	3.9	3.9	4.2	4.3	4.2	4.0	4.0	4.0
50-54	3.3	3.6	3.5	3.2	3.3	3.3	3.3	3.5	3.4
55-59	3.0	2.8	2.9	2.8	2.8	2.8	2.9	2.8	2.9
60-64	2.0	2.3	2.1	1.9	2.1	2.0	2.0	2.2	2.1
65-69	1.9	1.9	1.9	1.7	1.9	1.8	1.9	1.9	1.9
70+	2.0	2.2	2.1	1.8	2.1	1.9	2.0	2.2	2.1

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	North Zone		
	Rural	Urban	Combined
15-19	76.8	41.0	67.9
20-24	278.9	232.2	266.1
25-29	241.3	200.7	229.3
30-34	144.4	99.6	131.8
35-39	81.2	40.3	69.8
40-44	34.1	16.7	29.7
45-49	13.3	2.3	10.3
Crude birth rate	33.5	27.5	32.0
General fertility rate	142.5	110.4	133.8
Total fertility rate	4.3	3.2	4.0
Gross reproduction rate	2.0	1.5	1.9

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	North Zone		
	Rural	Urban	Combined
15-19	224.3	290.0	232.1
20-24	335.1	392.9	347.3
25-29	255.5	230.7	248.6
30-34	152.0	102.1	137.6
35-39	87.0	40.4	73.4
40-44	37.9	17.5	32.4
45-49	17.5	2.5	12.8
General marital fertility rate	184.6	153.3	176.5
Total marital fertility rate	5.5	5.4	5.4

TABLE-4

Estimated age-specific death rates by sex, 1989

Age groups	North Zone								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	30.2	31.9	31.0	16.1	19.6	17.8	26.8	29.1	27.9
5-9	2.8	2.7	2.7	0.8	1.1	0.9	2.3	2.3	2.3
10-14	1.3	2.0	1.6	2.0	0.9	1.5	1.5	1.7	1.6
15-19	1.8	2.5	2.1	1.6	2.4	1.9	1.8	2.4	2.1
20-24	2.6	3.0	2.8	1.7	1.0	1.3	2.4	2.4	2.4
25-29	3.0	2.9	3.0	1.3	2.2	1.7	2.5	2.7	2.6
30-34	3.4	3.0	3.2	2.4	1.7	2.1	3.0	2.6	2.8
35-39	3.6	3.4	3.5	2.9	2.3	2.6	3.3	3.1	3.2
40-44	5.5	3.4	4.5	4.3	1.2	2.9	5.2	2.9	4.0
45-49	7.2	4.2	5.8	7.8	4.0	6.0	7.4	4.1	5.8
50-54	11.5	9.0	10.3	10.2	7.2	8.7	11.2	8.6	9.9
55-59	14.2	11.8	13.1	20.6	8.5	14.8	15.8	11.0	13.5
60-64	26.5	19.0	22.6	29.0	18.6	23.8	27.1	18.9	22.9
65-69	40.5	28.1	34.5	38.4	28.3	33.4	40.0	28.2	34.2
70+	89.5	72.0	80.7	75.1	74.8	74.9	86.0	72.7	79.3
All ages	10.3	9.7	10.0	7.1	6.7	6.9	9.4	9.0	9.2

TABLE-5

Mortality Indicators, 1989

Indicators	North Zone		
	Rural	Urban	Combined
Crude death rate	10.0	6.9	9.2
Infant mortality rate	91	54	83
Neo-natal mortality rate	57.7	26.0	50.6
Post-natal mortality rate	33.2	27.8	32.0
Peri-natal mortality rate	51.1	24.4	45.2
Still birth rate	13.9	9.7	12.9

TABLE 1

Percent distribution of estimated population
by age-group and sex , 1989

Age groups	North-East Zone								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	13.9	13.8	13.9	10.1	10.0	10.0	13.6	13.4	13.5
5-9	12.8	13.3	13.0	10.8	10.4	10.6	12.6	13.0	12.8
10-14	11.7	11.8	11.7	10.5	10.5	10.5	11.6	11.7	11.6
15-19	11.2	11.6	11.4	10.0	12.1	11.1	11.1	11.7	11.4
20-24	10.0	11.1	10.5	10.0	12.8	11.4	10.0	11.3	10.6
25-29	8.7	8.7	8.7	9.9	11.1	10.5	8.8	9.0	8.9
30-34	6.9	6.5	6.7	9.2	8.4	8.8	7.1	6.7	6.9
35-39	5.6	5.2	5.4	7.6	6.3	7.0	5.8	5.3	5.5
40-44	4.8	4.5	4.7	6.0	4.8	5.4	4.9	4.6	4.7
45-49	4.0	3.8	3.9	4.7	3.7	4.2	4.1	3.8	3.9
50-54	3.4	3.2	3.3	3.7	3.0	3.3	3.4	3.1	3.3
55-59	2.6	2.3	2.4	2.8	2.4	2.6	2.6	2.3	2.4
60-64	1.9	1.8	1.8	1.8	1.6	1.7	1.9	1.7	1.8
65-69	1.3	1.1	1.2	1.4	1.3	1.3	1.3	1.2	1.2
70+	1.4	1.3	1.4	1.5	1.6	1.6	1.4	1.3	1.4

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

North-East Zone			
Age-group	Rural	Urban	Combined
15-19	61.6	25.5	57.9
20-24	194.7	112.1	185.5
25-29	187.0	115.1	178.3
30-34	145.7	85.8	138.3
35-39	86.9	34.3	80.7
40-44	43.7	11.4	40.4
45-49	5.7	1.5	5.3
Crude birth rate	29.8	20.1	28.9
General fertility rate	119.2	67.9	113.5
Total fertility rate	3.6	1.9	3.4
Gross reproduction rate	1.8	0.9	1.7

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

North-East Zone			
Age-group	Rural	Urban	Combined
15-19	383.9	221.1	371.6
20-24	379.6	321.2	375.0
25-29	261.1	218.5	257.2
30-34	179.4	132.6	174.7
35-39	103.6	59.1	99.9
40-44	54.6	21.3	52.2
45-49	8.0	3.1	7.7
General marital fertility rate	206.0	159.6	202.1
Total marital fertility rate	6.9	4.9	6.7

TABLE-4

Estimated age-specific death rates by sex, 1989

North-East Zone

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
	0-4	28.2	27.2	27.7	14.5	12.3	13.4	27.2	26.1
5-9	5.3	5.1	5.2	2.3	3.0	2.6	5.1	4.9	5.0
10-14	2.4	1.8	2.1	0.4	0.4	0.4	2.2	1.7	2.0
15-19	2.4	3.1	2.7	1.5	0.5	0.9	2.3	2.8	2.5
20-24	2.1	3.4	2.7	1.0	1.1	1.0	2.0	3.1	2.6
25-29	2.7	4.3	3.5	1.4	1.9	1.7	2.6	4.0	3.3
30-34	4.3	4.8	4.5	1.6	1.4	1.5	4.0	4.4	4.2
35-39	4.4	4.2	4.3	3.6	2.0	2.9	4.3	3.9	4.1
40-44	8.9	5.0	7.0	6.6	4.5	5.7	8.6	4.9	6.9
45-49	11.9	8.3	10.2	10.3	5.3	8.1	11.7	8.0	10.0
50-54	18.5	13.2	16.0	11.7	7.9	10.0	17.8	12.7	15.4
55-59	24.2	19.3	21.9	21.9	18.7	20.4	23.9	19.2	21.8
60-64	44.4	28.9	37.2	33.9	13.3	24.2	43.5	27.5	36.0
65-69	47.6	40.6	44.4	39.4	47.7	43.5	46.8	41.4	44.3
70+	88.9	81.1	85.3	101.1	84.6	92.5	90.2	81.5	86.1
All ages	11.0	9.7	10.4	7.2	5.5	6.4	10.6	9.3	10.0

TABLE-5

Mortality Indicators, 1989

North-East Zone

Indicators	Rural		Urban	Combined
Crude death rate	10.4		6.4	10.0
Infant mortality rate	84		48	82
Neo-natal mortality rate	56.4		30.8	54.6
Post-natal mortality rate	27.7		17.4	27.0
Peri-natal mortality rate	47.3		27.8	46.0
Still birth rate	11.2		7.8	11.0

TABLE 1

Percent distribution of estimated population
by age-group and sex , 1989

Age groups	East Zone								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	14.8	14.8	14.8	10.4	11.4	10.8	14.0	14.2	14.1
5-9	12.1	11.7	11.9	10.3	11.4	10.8	11.8	11.7	11.7
10-14	13.3	12.4	12.9	10.9	11.5	11.2	12.9	12.2	12.6
15-19	12.0	10.3	11.2	10.5	10.6	10.5	11.8	10.3	11.1
20-24	8.6	8.7	8.6	9.3	10.0	9.6	8.7	8.9	8.8
25-29	7.4	7.8	7.6	9.0	9.4	9.2	7.7	8.1	7.9
30-34	6.4	6.7	6.6	8.1	8.1	8.1	6.7	6.9	6.8
35-39	5.5	5.9	5.7	7.4	6.7	7.1	5.8	6.0	5.9
40-44	4.5	4.8	4.7	6.1	5.5	5.8	4.8	4.9	4.8
45-49	4.0	4.3	4.2	5.7	3.6	4.7	4.3	4.2	4.3
50-54	3.2	3.5	3.3	4.1	3.5	3.8	3.4	3.5	3.4
55-59	2.8	3.0	2.9	3.3	2.8	3.0	2.9	3.0	2.9
60-64	1.9	2.1	2.0	1.9	1.9	1.9	1.9	2.1	2.0
65-69	1.7	2.0	1.8	1.6	1.7	1.6	1.7	1.9	1.8
70+	1.7	2.0	1.9	1.5	2.0	1.8	1.7	2.0	1.8

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	East Zone		
	Rural	Urban	Combined
15-19	98.0	47.8	89.6
20-24	253.6	167.4	237.7
25-29	220.1	143.8	205.6
30-34	157.0	84.7	143.1
35-39	97.9	45.7	88.4
40-44	50.0	17.8	44.2
45-49	18.3	8.6	16.9
Crude birth rate	32.9	21.4	30.9
General fertility rate	141.9	86.5	132.0
Total fertility rate	4.5	2.6	4.1
Gross reproduction rate	2.2	1.3	2.0

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	East Zone		
	Rural	Urban	Combined
15-19	239.2	258.1	240.8
20-24	290.9	270.4	288.0
25-29	232.1	173.1	222.1
30-34	169.7	93.1	155.2
35-39	109.2	49.6	98.1
40-44	56.2	20.2	49.7
45-49	22.5	8.8	20.2
General marital fertility rate	178.9	123.1	169.9
Total marital fertility rate	5.6	4.4	5.4

TABLE-4

Estimated age-specific death rates by sex, 1989

Age groups	East Zone								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	30.2	33.7	31.9	15.8	18.6	17.2	28.3	31.7	29.9
5-9	3.3	4.5	3.9	2.3	1.4	1.9	3.1	4.0	3.5
10-14	1.6	2.2	1.9	0.6	1.1	0.9	1.5	2.0	1.7
15-19	1.9	3.5	2.6	1.7	1.4	1.6	1.8	3.2	2.4
20-24	2.9	4.1	3.5	1.4	2.7	2.0	2.6	3.9	3.2
25-29	3.0	4.2	3.6	3.0	2.3	2.7	3.0	3.9	3.4
30-34	2.9	3.4	3.1	2.1	1.7	1.9	2.7	3.1	2.9
35-39	4.6	5.3	4.9	2.9	3.0	2.9	4.2	4.9	4.5
40-44	6.5	5.2	5.9	4.0	3.9	4.0	5.9	5.0	5.5
45-49	9.1	7.0	8.1	5.1	5.0	5.0	8.2	6.7	7.5
50-54	13.3	10.5	11.9	13.8	9.8	12.1	13.4	10.4	12.0
55-59	20.8	16.5	18.7	24.0	16.6	20.9	21.5	16.5	19.1
60-64	34.2	25.6	29.9	30.1	25.5	28.0	33.5	25.6	29.6
65-69	48.5	45.8	47.1	46.4	36.8	41.8	48.2	44.5	46.3
70+	103.8	94.1	98.7	87.0	75.1	80.7	101.1	91.0	95.8
All ages	11.1	12.2	11.6	7.4	7.2	7.3	10.5	11.3	10.9

TABLE-5

Mortality Indicators, 1989

Indicators	East Zone		
	Rural	Urban	Combined
Crude death rate	11.6	7.3	10.9
Infant mortality rate	95	59	91
Neo-natal mortality rate	59.3	31.0	56.0
Post-natal mortality rate	36.1	28.2	35.2
Peri-natal mortality rate	48.9	28.6	46.5
Still birth rate	14.2	8.7	13.6

TABLE 1

Percent distribution of estimated population
by age-group and sex , 1989

Age groups	South Zone								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	12.2	11.5	11.9	10.9	10.6	10.7	11.9	11.3	11.6
5-9	11.4	11.1	11.2	11.3	11.0	11.2	11.4	11.0	11.2
10-14	11.8	11.2	11.5	10.9	10.8	10.8	11.6	11.1	11.3
15-19	10.5	10.3	10.4	10.5	10.7	10.6	10.5	10.4	10.4
20-24	9.1	9.7	9.4	9.5	10.9	10.2	9.2	10.0	9.6
25-29	7.9	7.8	7.9	9.5	9.7	9.6	8.3	8.3	8.3
30-34	6.9	7.0	6.9	8.1	7.6	7.9	7.2	7.2	7.2
35-39	5.8	6.0	5.9	7.0	6.0	6.5	6.1	6.0	6.1
40-44	5.2	5.6	5.4	5.5	5.4	5.4	5.3	5.5	5.4
45-49	4.7	4.8	4.8	4.7	4.3	4.5	4.7	4.6	4.7
50-54	4.3	4.2	4.3	3.9	3.7	3.8	4.2	4.1	4.1
55-59	3.4	3.5	3.5	2.9	3.0	2.9	3.3	3.4	3.3
60-64	2.5	2.6	2.6	2.1	2.4	2.3	2.4	2.6	2.5
65-69	2.1	2.3	2.2	1.6	1.9	1.7	2.0	2.2	2.1
70+	2.1	2.5	2.3	1.7	2.1	1.9	2.0	2.4	2.2

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	South Zone		
	Rural	Urban	Combined
15-19	85.2	58.3	78.1
20-24	219.6	192.3	211.9
25-29	152.5	134.2	147.0
30-34	76.9	60.8	72.4
35-39	35.2	23.4	32.1
40-44	13.6	8.8	12.4
45-49	3.3	2.2	3.1
Crude birth rate	25.1	23.4	24.7
General fertility rate	98.5	85.8	95.0
Total fertility rate	2.9	2.4	2.8
Gross reproduction rate	1.4	1.2	1.4

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	South Zone		
	Rural	Urban	Combined
15-19	283.8	333.2	292.4
20-24	303.9	308.1	305.0
25-29	182.9	164.8	177.5
30-34	88.8	57.5	78.8
35-39	40.5	27.6	37.2
40-44	16.7	10.8	15.2
45-49	4.5	3.2	4.2
General marital fertility rate	140.1	126.2	136.4
Total marital fertility rate	4.6	4.5	4.6

TABLE-4

Estimated age-specific death rates by sex, 1989

South Zone

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	22.2	22.8	22.5	13.1	12.5	12.8	20.0	20.3	20.2
5-9	1.5	1.8	1.6	1.0	1.4	1.2	1.4	1.7	1.5
10-14	1.3	1.5	1.4	0.6	0.5	0.6	1.1	1.2	1.2
15-19	1.6	2.3	2.0	1.6	1.0	1.3	1.6	2.0	1.8
20-24	2.7	3.0	2.9	1.9	2.0	1.9	2.5	2.7	2.6
25-29	2.7	2.4	2.6	1.6	1.9	1.8	2.4	2.3	2.3
30-34	3.6	2.4	3.0	3.0	1.6	2.3	3.4	2.2	2.8
35-39	4.5	2.4	3.4	3.4	2.7	3.1	4.2	2.5	3.3
40-44	4.7	4.3	4.5	5.0	2.2	3.6	4.8	3.8	4.3
45-49	10.2	4.3	7.3	10.0	5.2	7.7	10.2	4.5	7.4
50-54	14.0	8.3	11.1	11.5	7.3	9.5	13.4	8.0	10.7
55-59	19.6	12.1	15.8	21.3	13.3	17.2	20.0	12.4	16.1
60-64	30.3	19.8	25.0	32.7	20.7	26.3	30.8	20.1	25.3
65-69	45.0	36.4	40.5	47.9	36.2	41.6	45.6	36.3	40.8
70+	99.7	75.2	86.5	85.7	73.0	78.7	96.7	74.7	84.8
All ages	10.0	8.4	9.2	7.3	6.0	6.6	9.3	7.8	8.6

TABLE-5

Mortality Indicators, 1989

South Zone

Indicators	Rural	Urban	Combined
Crude death rate	9.2	6.6	8.6
Infant mortality rate	77	46	69
Neo-natal mortality rate	55.4	29.7	49.1
Post-natal mortality rate	21.6	15.9	20.2
Peri-natal mortality rate	55.1	41.7	41.7
Still birth rate	14.4	19.6	11.9

TABLE 1

Percent distribution of estimated population
by age-group and sex , 1989

Age groups	West Zone								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	13.1	12.1	12.6	11.5	14.5	13.0	12.6	12.9	12.7
5-9	12.0	11.2	11.6	11.1	10.5	10.8	11.7	10.9	11.3
10-14	12.1	11.2	11.7	10.8	10.1	10.4	11.6	10.9	11.3
15-19	11.1	10.1	10.6	10.5	9.5	10.1	10.9	9.9	10.4
20-24	9.4	9.4	9.4	9.7	9.1	9.4	9.5	9.3	9.4
25-29	7.9	7.8	7.9	10.2	8.8	9.5	8.7	8.2	8.4
30-34	6.5	7.1	6.8	8.1	7.8	8.0	7.1	7.3	7.2
35-39	5.6	7.0	6.3	6.8	6.2	6.5	6.0	6.7	6.3
40-44	4.9	4.9	4.9	5.6	5.6	5.6	5.1	5.1	5.1
45-49	4.3	4.7	4.5	4.6	3.9	4.3	4.4	4.4	4.4
50-54	4.0	4.2	4.1	3.6	4.1	3.8	3.9	4.1	4.0
55-59	3.2	3.1	3.2	2.9	3.2	3.0	3.1	3.1	3.1
60-64	2.3	2.6	2.4	1.9	2.5	2.2	2.2	2.5	2.4
65-69	1.8	2.1	1.9	1.2	2.1	1.7	1.6	2.1	1.8
70+	1.9	2.5	2.2	1.4	2.1	1.7	1.7	2.3	2.0

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	West Zone		
	Rural	Urban	Combined
15-19	83.4	53.6	73.7
20-24	279.8	250.4	270.1
25-29	212.2	169.7	196.7
30-34	105.9	74.1	94.4
35-39	36.8	28.7	34.3
40-44	16.6	8.8	13.8
45-49	3.3	1.9	2.9
Crude birth rate	30.1	25.2	28.4
General fertility rate	122.4	100.3	114.9
Total fertility rate	3.7	2.9	3.4
Gross reproduction rate	1.7	1.4	1.6

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	West Zone		
	Rural	Urban	Combined
15-19	202.2	291.9	218.0
20-24	325.5	361.0	335.6
25-29	234.0	199.1	221.7
30-34	115.6	81.1	103.2
35-39	40.6	31.9	37.9
40-44	17.9	9.8	15.0
45-49	4.7	3.3	4.3
General marital fertility rate	155.8	143.6	152.0
Total marital fertility rate	4.7	4.9	4.7

TABLE-4

Estimated age-specific death rates by sex, 1989

Age groups	West Zone								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	23.7	26.7	25.1	14.9	14.0	14.4	21.0	21.9	21.4
5-9	1.8	3.3	2.5	1.2	1.7	1.5	1.6	2.8	2.2
10-14	1.2	1.2	1.2	0.4	0.9	0.6	1.0	1.1	1.0
15-19	1.6	2.2	1.9	0.7	1.8	1.2	1.3	2.1	1.7
20-24	1.7	3.3	2.5	2.1	3.0	2.5	1.8	3.2	2.5
25-29	2.5	2.8	2.6	2.5	1.8	2.2	2.5	2.4	2.5
30-34	3.1	2.3	2.7	2.9	1.2	2.1	3.0	1.9	2.5
35-39	3.8	2.9	3.3	3.4	2.4	3.0	3.6	2.8	3.2
40-44	6.2	3.7	5.0	5.3	2.7	4.0	5.8	3.3	4.6
45-49	8.4	5.0	6.7	7.6	4.3	6.2	8.1	4.8	6.5
50-54	11.5	6.5	9.1	14.2	8.8	11.4	12.3	7.3	9.8
55-59	17.7	13.2	15.6	21.5	11.1	16.2	18.9	12.5	15.8
60-64	30.9	21.4	26.1	35.6	15.4	24.4	32.3	19.4	25.6
65-69	54.2	35.3	44.4	56.8	32.1	41.2	54.8	34.2	43.4
70+	92.0	71.6	80.8	102.6	73.6	85.3	94.7	72.2	82.1
All ages	9.5	9.0	9.3	7.4	6.8	7.1	8.8	8.2	8.5

TABLE-5

Mortality Indicators, 1989

Indicators	West Zone		
	Rural	Urban	Combined
Crude death rate	9.3	7.1	8.5
Infant mortality rate	75	52	68
Neo-natal mortality rate	51.7	31.2	45.7
Post-natal mortality rate	23.4	21.1	22.7
Peri-natal mortality rate	47.0	29.1	41.7
Still birth rate	13.5	8.3	11.9

TABLE 1

Percent distribution of estimated population
by age-group and sex , 1989

Age groups	Central Zone								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	14.9	14.5	14.7	13.4	13.4	13.4	14.6	14.3	14.5
5-9	12.3	12.4	12.4	12.1	12.4	12.3	12.3	12.4	12.4
10-14	13.0	12.5	12.8	12.0	12.0	12.0	12.8	12.4	12.6
15-19	11.4	9.7	10.6	11.5	10.7	11.1	11.5	9.9	10.7
20-24	8.8	8.5	8.6	9.4	10.1	9.8	8.9	8.8	8.9
25-29	6.9	7.5	7.2	8.7	8.7	8.7	7.2	7.7	7.4
30-34	6.2	6.5	6.4	7.0	6.6	6.8	6.4	6.5	6.5
35-39	5.1	5.7	5.4	5.9	6.2	6.1	5.3	5.8	5.5
40-44	4.6	4.9	4.7	4.9	4.6	4.7	4.7	4.8	4.7
45-49	4.1	4.4	4.2	4.3	4.0	4.2	4.1	4.4	4.2
50-54	3.6	3.7	3.6	3.1	3.2	3.2	3.5	3.6	3.6
55-59	3.1	2.9	3.0	2.7	2.7	2.7	3.0	2.8	2.9
60-64	2.0	2.3	2.2	1.7	1.9	1.8	2.0	2.3	2.1
65-69	1.9	2.1	2.0	1.6	1.7	1.7	1.8	2.0	1.9
70+	2.1	2.4	2.3	1.6	1.6	1.6	2.0	2.3	2.1

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	Central Zone		
	Rural	Urban	Combined
15-19	107.8	46.7	94.4
20-24	298.8	208.3	277.9
25-29	266.9	191.4	249.8
30-34	200.2	121.3	184.1
35-39	133.1	77.0	120.9
40-44	68.9	39.2	63.3
45-49	24.3	10.6	21.7
Crude birth rate	38.1	29.6	36.5
General fertility rate	171.2	113.4	158.8
Total fertility rate	5.5	3.5	5.1
Gross reproduction rate	2.6	1.7	2.4

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	Central Zone		
	Rural	Urban	Combined
15-19	200.5	256.5	205.3
20-24	321.8	300.7	318.0
25-29	279.8	222.6	267.9
30-34	211.5	133.9	196.3
35-39	140.9	82.0	128.2
40-44	73.3	48.0	69.0
45-49	27.9	13.6	25.5
General marital fertility rate	200.9	164.4	194.3
Total marital fertility rate	6.3	5.3	6.1

TABLE-4

Estimated age-specific death rates by sex, 1989

Age groups	Central Zone								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	41.6	50.9	45.9	22.1	23.5	22.8	38.4	45.7	41.9
5-9	3.2	5.2	4.1	1.8	2.1	1.9	2.9	4.6	3.7
10-14	2.1	2.1	2.1	0.9	0.7	0.8	1.9	1.8	1.9
15-19	1.7	2.8	2.2	1.4	2.5	2.0	1.6	2.7	2.1
20-24	2.3	4.9	3.5	2.7	2.5	2.6	2.3	4.4	3.3
25-29	2.7	3.5	3.1	2.4	1.4	1.9	2.7	3.0	2.9
30-34	3.2	3.6	3.4	3.0	1.3	2.2	3.1	3.1	3.1
35-39	4.5	4.0	4.2	2.3	1.6	1.9	4.1	3.4	3.8
40-44	6.2	4.7	5.5	8.4	4.8	6.7	6.6	4.8	5.7
45-49	9.4	7.4	8.4	9.5	4.5	7.0	9.5	6.8	8.2
50-54	13.5	9.5	11.6	13.3	7.2	10.2	13.5	9.1	11.4
55-59	20.1	15.7	18.1	26.4	7.5	16.8	21.1	14.1	17.9
60-64	37.4	26.3	31.8	32.2	25.6	28.6	36.6	26.2	31.3
65-69	50.8	40.8	45.8	56.9	25.3	40.2	51.8	38.2	44.9
70+	89.8	74.5	81.9	111.7	68.3	89.9	93.0	73.6	83.0
All ages	13.2	14.4	13.7	9.5	7.2	8.3	12.5	12.9	12.7

TABLE-5

Mortality Indicators, 1989

Indicators	Central Zone		
	Rural	Urban	Combined
Crude death rate	13.7	8.3	12.7
Infant mortality rate	125	76	118
Neo-natal mortality rate	73.8	36.1	68.0
Post-natal mortality rate	51.7	39.6	49.9
Peri-natal mortality rate	53.3	27.1	49.3
Still birth rate	11.3	7.7	10.7

TABLE 1

Percent distribution of estimated population
by age-group and sex , 1989

Andhra Pradesh

Age groups	Andhra Pradesh								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	13.6	12.1	12.9	11.9	11.7	11.8	13.2	12.1	12.7
5-9	11.6	11.6	11.6	12.0	11.7	11.9	11.7	11.7	11.7
10-14	12.2	11.7	11.9	11.4	11.4	11.4	12.0	11.6	11.8
15-19	9.9	9.9	9.9	10.7	10.8	10.8	10.1	10.1	10.1
20-24	8.3	8.8	8.6	9.3	10.2	9.8	8.5	9.1	8.8
25-29	7.6	7.5	7.5	9.0	9.1	9.0	7.9	7.8	7.8
30-34	6.8	7.0	6.9	7.8	7.4	7.6	7.0	7.0	7.0
35-39	5.8	5.8	5.8	6.8	5.9	6.4	6.0	5.8	5.9
40-44	5.3	5.5	5.4	5.2	5.2	5.2	5.3	5.5	5.4
45-49	4.7	4.8	4.7	4.8	4.4	4.6	4.7	4.7	4.7
50-54	4.3	4.4	4.4	3.8	3.7	3.7	4.2	4.2	4.2
55-59	3.4	3.5	3.5	2.8	2.9	2.8	3.3	3.4	3.3
60-64	2.5	2.7	2.6	1.9	2.1	2.0	2.4	2.6	2.5
65-69	2.1	2.3	2.2	1.4	1.7	1.5	1.9	2.2	2.1
70+	1.9	2.3	2.1	1.2	1.8	1.5	1.8	2.2	2.0

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	Andhra Pradesh		
	Rural	Urban	Combined
15-19	130.2	82.5	119.4
20-24	232.5	206.9	226.4
25-29	147.1	133.7	143.8
30-34	79.6	63.3	76.0
35-39	39.2	29.0	37.0
40-44	16.3	11.8	15.4
45-49	3.8	2.4	3.5
Crude birth rate	26.3	24.4	25.9
General fertility rate	108.2	93.0	104.8
Total fertility rate	3.2	2.6	3.1
Gross reproduction rate	1.6	1.3	1.5

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	Andhra Pradesh		
	Rural	Urban	Combined
15-19	278.4	327.9	285.1
20-24	269.0	301.8	275.4
25-29	158.0	156.8	157.7
30-34	85.2	38.7	69.6
35-39	43.0	33.8	41.1
40-44	18.7	14.7	18.0
45-49	4.7	3.4	4.5
General marital fertility rate	134.4	117.4	130.6
Total marital fertility rate	4.3	4.4	4.3

TABLE-4

Estimated age-specific death rates by sex, 1989

Age groups	Andhra Pradesh								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	24.0	24.2	24.1	12.0	13.3	12.6	21.7	22.0	21.8
5-9	1.6	1.8	1.7	1.0	2.0	1.5	1.5	1.8	1.6
10-14	1.8	1.5	1.7	0.8	0.6	0.7	1.6	1.3	1.5
15-19	1.6	3.1	2.3	2.3	0.4	1.4	1.8	2.5	2.1
20-24	4.0	3.7	3.8	1.9	2.6	2.3	3.5	3.4	3.5
25-29	2.9	2.9	2.9	1.4	2.3	1.9	2.6	2.8	2.7
30-34	4.3	3.5	3.9	2.7	2.2	2.4	3.9	3.2	3.5
35-39	4.6	2.2	3.4	2.8	0.9	2.0	4.2	1.9	3.1
40-44	4.8	5.1	4.9	4.8	4.2	4.5	4.8	4.9	4.8
45-49	13.6	4.6	9.1	8.2	5.7	7.0	12.4	4.8	8.7
50-54	16.4	9.3	12.9	14.0	7.7	10.9	15.9	9.0	12.5
55-59	21.1	13.1	17.1	26.4	14.7	20.4	22.0	13.4	17.7
60-64	32.3	24.4	28.3	35.0	23.9	29.3	32.8	24.3	28.4
65-69	51.6	39.7	45.4	58.8	53.1	55.6	52.7	41.9	47.0
70+	103.2	79.7	90.6	81.5	75.4	77.8	100.2	78.9	88.6
All ages	11.1	9.3	10.2	6.9	6.5	6.7	10.3	8.7	9.5

TABLE-5

Mortality Indicators, 1989

Indicators	Andhra Pradesh		
	Rural	Urban	Combined
Crude death rate	10.2	6.7	9.5
Infant mortality rate	88	53	81
Neo-natal mortality rate	61.8	26.6	54.8
Post-natal mortality rate	26.2	26.0	26.2
Peri-natal mortality rate	56.6	38.2	52.9
Still birth rate	12.6	21.7	14.4

TABLE 6

Percent distribution of sample births by
type of medical attention at birth, 1989

Andhra Pradesh

Sector	Type of medical attention at birth			
	I	T	U	O
Rural	16.8	22.8	58.5	1.9
Urban	72.0	10.1	17.6	0.3
Combined	32.8	19.1	46.7	1.4

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 7

Percent distribution of sample deaths by type
of medical attention received before death, 1989

Andhra Pradesh

Sector	Type of medical attention at death			
	I	M	U	N
Rural	13.1	18.3	14.8	53.8
Urban	30.6	44.2	1.7	23.5
Combined	16.9	24.0	11.9	47.2

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 , 1989

Age groups	Assam								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	14.1	13.8	14.0	9.9	9.3	9.6	13.8	13.5	13.7
5-9	12.9	13.5	13.2	10.2	9.2	9.7	12.7	13.2	12.9
10-14	11.5	11.6	11.6	9.8	9.5	9.6	11.4	11.5	11.4
15-19	11.2	11.8	11.5	9.7	13.0	11.3	11.1	11.9	11.5
20-24	10.4	11.6	11.0	10.3	14.0	12.1	10.4	11.8	11.1
25-29	8.8	8.8	8.8	9.9	11.6	10.7	8.9	9.0	9.0
30-34	6.8	6.2	6.5	9.1	8.3	8.8	6.9	6.4	6.7
35-39	5.5	5.1	5.3	7.7	6.1	6.9	5.7	5.1	5.4
40-44	4.6	4.5	4.6	6.1	5.0	5.6	4.7	4.6	4.6
45-49	4.0	3.8	3.9	5.0	4.1	4.6	4.1	3.8	4.0
50-54	3.3	3.1	3.2	4.1	3.2	3.7	3.4	3.1	3.3
55-59	2.5	2.2	2.4	3.0	2.5	2.8	2.6	2.2	2.4
60-64	1.9	1.7	1.8	2.1	1.6	1.8	1.9	1.7	1.8
65-69	1.2	1.0	1.1	1.4	1.2	1.3	1.2	1.0	1.1
70+	1.2	1.1	1.1	1.6	1.5	1.5	1.2	1.1	1.2

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	Assam		
	Rural	Urban	Combined
15-19	64.7	27.9	61.8
20-24	200.8	120.3	193.9
25-29	182.3	126.9	177.1
30-34	141.3	79.5	135.4
35-39	78.1	33.9	74.4
40-44	38.4	9.7	36.1
45-49	2.1	0.5	2.0
Crude birth rate	30.0	21.7	29.4
General fertility rate	118.8	71.4	114.8
Total fertility rate	3.5	2.0	3.4
Gross reproduction rate	1.7	0.9	1.7

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	Assam		
	Rural	Urban	Combined
15-19	370.9	174.4	356.5
20-24	381.9	356.4	380.5
25-29	259.0	298.0	261.2
30-34	178.7	151.2	176.9
35-39	95.5	93.1	95.4
40-44	49.0	28.1	48.3
45-49	3.1	1.6	3.0
General marital fertility rate	208.2	207.9	208.2
Total marital fertility rate	6.7	5.5	6.6

TABLE-4

Estimated age-specific death rates by sex, 1989

Age groups	Assam								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	30.0	29.9	30.0	21.3	22.2	21.7	29.6	29.5	29.6
5-9	4.5	4.0	4.3	1.3	3.5	2.3	4.3	4.0	4.2
10-14	2.5	1.7	2.1	0.0	0.2	0.1	2.3	1.6	2.0
15-19	2.6	3.2	2.9	1.6	0.5	1.0	2.6	2.9	2.8
20-24	1.7	3.8	2.8	1.0	1.2	1.1	1.7	3.6	2.7
25-29	3.0	4.8	3.9	1.8	2.6	2.2	2.9	4.6	3.8
30-34	4.5	4.8	4.6	1.6	0.7	1.2	4.2	4.4	4.3
35-39	4.7	3.5	4.1	4.8	3.2	4.1	4.7	3.4	4.1
40-44	10.1	4.1	7.2	9.0	4.9	7.2	10.0	4.2	7.2
45-49	12.5	8.5	10.6	12.5	5.8	9.5	12.5	8.3	10.5
50-54	20.3	13.8	17.2	10.6	4.5	8.0	19.4	13.1	16.5
55-59	23.6	19.1	21.6	20.1	24.9	22.2	23.3	19.6	21.6
60-64	52.0	32.6	43.1	30.9	12.4	23.0	50.3	31.2	41.6
65-69	56.1	39.5	48.7	40.0	65.7	51.7	54.8	41.7	48.9
70+	92.8	84.4	89.0	103.1	99.7	101.5	93.7	85.9	90.2
All ages	11.4	9.8	10.6	8.2	6.9	7.6	11.2	9.6	10.4

TABLE-5

Mortality Indicators, 1989

Indicators	Assam		
	Rural	Urban	Combined
Crude death rate	10.6	7.6	10.4
Infant mortality rate	93	63	91
Neo-natal mortality rate	63.5	40.3	62.3
Post-natal mortality rate	29.0	23.2	28.7
Peri-natal mortality rate	53.7	41.2	53.0
Still birth rate	11.9	12.4	11.9

TABLE 6

Percent distribution of sample births by type of medical attention at birth, 1989

Assam				
Sector	Type of medical attention at birth			
	I	T	U	O
Rural	11.6	8.8	79.1	0.5
Urban	49.5	13.9	36.4	0.2
Combined	17.3	9.5	72.8	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 7

Percent distribution of sample deaths by type of medical attention received before death, 1989

Assam				
Sector	Type of medical attention at death			
	I	M	U	N
Rural	4.7	56.5	5.6	33.2
Urban	20.6	67.5	3.6	8.3
Combined	7.0	58.1	5.3	29.6

- 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 , 1989

Age groups	Bihar								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	15.5	15.8	15.6	13.1	14.5	13.8	15.3	15.7	15.4
5-9	13.3	12.7	13.0	12.9	14.1	13.5	13.2	12.9	13.1
10-14	14.4	12.7	13.6	13.1	13.7	13.4	14.2	12.8	13.6
15-19	12.5	9.3	11.0	11.6	10.8	11.2	12.4	9.4	11.0
20-24	8.4	7.6	8.0	8.9	8.8	8.9	8.4	7.7	8.1
25-29	6.7	7.5	7.0	7.6	7.3	7.5	6.8	7.5	7.1
30-34	5.4	6.5	5.9	6.4	7.3	6.8	5.5	6.6	6.0
35-39	4.9	6.0	5.4	6.1	6.7	6.4	5.1	6.0	5.5
40-44	4.2	5.0	4.6	5.6	5.6	5.6	4.4	5.0	4.7
45-49	3.8	4.3	4.1	5.0	1.1	3.2	3.9	4.0	4.0
50-54	3.0	3.3	3.2	3.4	3.1	3.2	3.0	3.3	3.2
55-59	2.5	2.8	2.6	2.4	2.2	2.3	2.5	2.7	2.6
60-64	1.9	2.3	2.1	1.5	1.7	1.6	1.8	2.2	2.0
65-69	1.7	2.2	1.9	1.3	1.4	1.3	1.7	2.1	1.9
70+	1.7	2.1	1.9	1.1	1.6	1.3	1.7	2.0	1.8

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	Bihar		
	Rural	Urban	Combined
15-19	109.9	60.6	104.4
20-24	251.8	209.4	247.4
25-29	253.6	222.8	250.6
30-34	196.3	129.7	189.0
35-39	135.2	89.1	130.2
40-44	69.3	42.5	66.4
45-49	28.3	17.7	27.4
Crude birth rate	35.1	27.6	34.3
General fertility rate	161.6	119.2	157.2
Total fertility rate	5.2	3.9	5.1
Gross reproduction rate	2.5	1.9	2.4

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	Bihar		
	Rural	Urban	Combined
15-19	211.7	220.5	212.3
20-24	274.9	278.1	275.1
25-29	263.4	239.0	261.1
30-34	204.4	135.3	198.9
35-39	143.6	92.9	141.2
40-44	76.1	46.6	75.8
45-49	33.0	19.5	34.9
General marital fertility rate	190.5	156.3	190.5
Total marital fertility rate	6.0	5.2	6.0

TABLE-4

Estimated age-specific death rates by sex, 1989

Age groups	Bihar								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	30.5	38.3	34.1	20.6	22.0	19.4	29.6	36.8	32.8
5-9	3.8	5.7	4.7	2.4	2.2	2.3	3.7	5.3	4.5
10-14	1.6	2.6	2.0	0.7	1.7	1.2	1.5	2.5	1.9
15-19	1.7	4.1	2.6	1.7	2.5	2.0	1.7	3.9	2.6
20-24	3.4	4.5	3.9	2.5	3.4	2.9	3.3	4.3	3.8
25-29	3.0	5.3	4.1	4.0	1.8	3.0	3.1	4.9	4.0
30-34	3.3	3.8	3.5	2.6	1.4	2.0	3.2	3.5	3.4
35-39	5.5	5.9	5.7	3.6	2.5	3.1	5.3	5.6	5.4
40-44	6.5	6.0	6.2	5.6	5.4	5.5	6.4	5.9	6.1
45-49	9.5	8.2	8.9	7.3	29.4	10.8	9.2	8.7	9.0
50-54	12.7	10.5	11.6	11.5	17.5	14.1	12.6	11.1	11.9
55-59	18.3	17.1	17.7	20.0	15.5	18.0	18.5	17.0	17.7
60-64	36.0	24.5	30.1	16.9	17.0	16.9	34.4	23.9	29.1
65-69	45.5	49.8	47.7	42.2	33.8	38.1	45.2	48.8	47.1
70+	99.2	96.4	97.8	117.7	92.4	103.6	100.4	96.1	98.2
11 ages	11.3	13.9	12.5	7.8	8.5	7.9	10.9	13.4	12.1

TABLE-5

Mortality Indicators, 1989

Indicators	Bihar		
	Rural	Urban	Combined
Crude death rate	12.5	7.9	12.1
Infant mortality rate	93	63	91
Neo-natal mortality rate	59.0	29.4	56.7
Post-natal mortality rate	34.5	33.9	34.4
Peri-natal mortality rate	45.1	26.3	43.6
Still birth rate	11.2	8.0	10.9

TABLE 6

Percent distribution of sample births by type of medical attention at birth, 1989

Bihar

Sector	Type of medical attention at birth			
	I	T	U	O
Rural	9.3	12.1	77.3	1.3
Urban	27.4	27.7	44.2	0.7
Combined	11.3	13.8	73.7	1.2

- 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 7

Percent distribution of sample deaths by type of medical attention received before death, 1989

Bihar

Sector	Type of medical attention at death			
	I	M	U	N
Rural	10.0	21.5	64.5	4.0
Urban	38.4	41.1	15.8	4.7
Combined	12.6	23.2	60.1	4.1

- 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 , 1989

Gujarat

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	11.6	10.9	11.3	12.1	12.0	12.0	11.8	11.3	11.5
5-9	12.5	12.0	12.3	11.4	11.2	11.3	12.2	11.8	12.0
10-14	12.6	11.8	12.3	11.3	10.7	11.0	12.2	11.5	11.9
15-19	11.7	10.3	11.1	10.6	9.9	10.3	11.4	10.2	10.9
20-24	9.9	10.5	10.2	9.7	10.3	10.0	9.9	10.5	10.1
25-29	8.5	8.8	8.7	10.4	9.7	10.0	9.0	9.1	9.1
30-34	6.8	6.7	6.7	8.0	7.8	7.9	7.1	7.1	7.1
35-39	5.6	6.1	5.8	6.7	6.5	6.6	5.9	6.2	6.0
40-44	4.7	4.7	4.7	5.2	4.8	5.0	4.8	4.7	4.8
45-49	4.2	4.7	4.4	4.5	4.5	4.5	4.3	4.6	4.5
50-54	3.6	3.7	3.7	3.2	3.4	3.3	3.5	3.6	3.6
55-59	2.9	2.9	2.9	2.6	3.0	2.8	2.8	2.9	2.9
60-64	2.0	2.2	2.1	1.7	2.2	1.9	1.9	2.2	2.0
65-69	1.5	2.0	1.8	1.4	2.0	1.7	1.5	2.0	1.7
70+	1.7	2.5	2.0	1.3	2.1	1.7	1.6	2.4	1.9

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	Gujarat		
	Rural	Urban	Combined
15-19	43.2	31.0	39.4
20-24	288.0	242.3	273.6
25-29	231.5	184.7	215.5
30-34	132.6	86.0	116.1
35-39	56.9	35.2	49.6
40-44	22.1	11.5	18.6
45-49	6.0	2.9	5.0
Crude birth rate	29.6	26.6	28.7
General fertility rate	132.8	103.9	123.4
Total fertility rate	3.9	3.0	3.6
Gross reproduction rate	1.8	1.4	1.7

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	Gujarat		
	Rural	Urban	Combined
15-19	119.9	197.3	132.7
20-24	364.4	364.1	364.3
25-29	258.1	220.2	245.7
30-34	138.7	100.1	125.9
35-39	60.3	41.7	54.5
40-44	23.9	14.1	21.0
45-49	6.9	4.4	6.3
General marital fertility rate	170.0	156.3	166.0
Total marital fertility rate	4.9	4.7	4.8

TABLE-4

Estimated age-specific death rates by sex, 1989

Gujarat

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	29.0	39.3	33.2	18.2	22.7	20.4	25.9	33.6	29.2
5-9	2.1	4.1	3.0	3.1	1.4	2.3	2.4	3.3	2.8
10-14	1.2	1.6	1.4	0.7	0.8	0.7	1.1	1.3	1.2
15-19	1.8	2.4	2.0	2.2	2.1	2.2	1.9	2.3	2.1
20-24	1.5	3.7	2.5	3.7	2.4	3.1	2.1	3.3	2.7
25-29	2.1	4.0	2.9	1.9	2.2	2.0	2.0	3.4	2.6
30-34	3.5	3.9	3.7	2.4	1.1	1.8	3.1	2.9	3.0
35-39	3.5	3.8	3.7	2.2	2.7	2.5	3.1	3.5	3.3
40-44	7.4	4.2	6.0	3.6	2.5	3.1	6.3	3.6	5.1
45-49	7.6	4.6	6.3	7.7	6.5	7.1	7.7	5.2	6.5
50-54	11.2	11.6	11.4	21.0	14.7	17.8	13.7	12.6	13.2
55-59	17.7	15.3	16.6	19.4	17.0	18.1	18.1	15.8	17.1
60-64	33.7	18.2	26.6	62.2	23.8	41.7	41.0	20.0	30.9
65-69	48.8	34.7	41.8	79.0	45.6	59.7	56.5	38.2	46.9
70+	89.1	79.1	84.0	114.0	92.9	101.4	94.9	83.1	88.5
All ages	9.3	10.8	10.0	9.1	8.7	8.9	9.3	10.1	9.7

TABLE-5

Mortality Indicators, 1989

Gujarat

Indicators	Gujarat		
	Rural	Urban	Combined
Crude death rate	10.0	8.9	9.7
Infant mortality rate	92	70	86
Neo-natal mortality rate	62.1	41.7	56.4
Post-natal mortality rate	30.2	28.3	29.7
Peri-natal mortality rate	46.9	33.9	43.3
Still birth rate	5.6	6.6	5.9

TABLE 6

Percent distribution of sample births by type of medical attention at birth, 1989

Gujarat				
Sector	Type of medical attention at birth			
	I	T	U	O
Rural	15.1	35.6	33.6	15.7
Urban	59.7	15.4	22.4	2.5
Combined	21.6	32.6	32.0	13.8

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 7

Percent distribution of sample deaths by type of medical attention received before death, 1989

Gujarat				
Sector	Type of medical attention at death			
	I	M	U	N
Rural	8.5	24.9	28.7	37.9
Urban	31.8	30.0	27.2	11.0
Combined	12.0	25.7	28.4	33.9

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 , 1989

Age groups	Haryana								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	15.4	15.4	15.4	13.3	13.3	13.3	14.9	15.0	15.0
5-9	12.4	12.4	12.4	12.3	12.2	12.2	12.4	12.4	12.4
10-14	12.6	12.1	12.4	11.1	10.8	11.0	12.3	11.8	12.1
15-19	12.1	11.5	11.8	10.3	10.3	10.3	11.7	11.2	11.5
20-24	10.1	9.7	9.9	9.4	11.6	10.5	10.0	10.1	10.0
25-29	7.5	7.7	7.6	10.8	9.3	10.1	8.2	8.0	8.1
30-34	6.2	6.6	6.4	8.0	8.0	8.0	6.6	6.9	6.8
35-39	4.6	5.0	4.8	6.2	5.6	5.9	4.9	5.2	5.0
40-44	4.3	4.7	4.5	4.1	4.1	4.1	4.2	4.6	4.4
45-49	3.3	3.3	3.3	4.0	3.8	3.9	3.5	3.5	3.5
50-54	3.0	3.2	3.1	2.9	2.8	2.8	3.0	3.1	3.0
55-59	2.6	2.7	2.7	2.5	2.7	2.6	2.6	2.7	2.6
60-64	2.0	2.1	2.1	1.6	1.9	1.7	1.9	2.1	2.0
65-69	1.8	1.6	1.7	1.5	1.7	1.6	1.7	1.6	1.7
70+	2.1	1.8	1.9	2.0	1.9	1.9	2.1	1.8	1.9

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	Haryana		
	Rural	Urban	Combined
15-19	93.0	50.7	84.2
20-24	337.2	246.5	313.9
25-29	262.7	205.4	247.9
30-34	136.2	107.2	128.7
35-39	73.1	34.6	63.6
40-44	33.2	8.8	28.3
45-49	7.5	0.0	5.6
Crude birth rate	36.6	30.1	35.2
General fertility rate	160.8	120.8	151.3
Total fertility rate	4.7	3.3	4.4
Gross reproduction rate	2.2	1.5	2.0

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	Haryana		
	Rural	Urban	Combined
15-19	227.0	286.1	233.0
20-24	350.6	323.3	344.7
25-29	258.0	216.3	247.8
30-34	144.0	110.1	135.1
35-39	78.7	36.0	68.0
40-44	36.8	9.6	31.2
45-49	8.6	0.0	6.4
General marital fertility rate	195.6	160.1	187.7
Total marital fertility rate	5.5	4.9	5.3

TABLE-4

Estimated age-specific death rates by sex, 1989

Haryana

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	23.6	29.0	26.1	12.7	19.9	16.1	21.4	27.2	24.1
5-9	1.8	1.7	1.8	1.6	1.3	1.4	1.8	1.6	1.7
10-14	1.1	1.0	1.1	2.0	0.5	1.3	1.3	0.9	1.1
15-19	1.7	2.5	2.1	1.3	1.0	1.1	1.7	2.2	1.9
20-24	1.9	2.5	2.2	1.9	0.4	1.2	1.9	2.0	1.9
25-29	2.5	1.7	2.1	0.8	1.1	1.0	2.0	1.5	1.8
30-34	2.2	3.1	2.6	1.7	1.3	1.5	2.1	2.6	2.3
35-39	4.3	1.5	2.9	4.4	3.6	4.1	4.3	2.0	3.2
40-44	3.8	3.8	3.8	4.4	2.5	3.5	4.0	3.5	3.8
45-49	6.5	0.9	3.9	8.0	2.8	5.6	6.9	1.4	4.3
50-54	7.6	4.5	6.1	7.7	5.6	6.7	7.6	4.7	6.2
55-59	13.5	19.5	16.3	23.5	8.1	16.0	15.6	16.9	16.3
60-64	24.3	21.3	22.9	38.1	29.2	33.4	26.8	23.0	24.9
65-69	41.0	29.4	35.9	43.5	28.0	35.7	41.5	29.0	35.8
70+	95.6	79.8	88.8	69.3	70.2	69.7	90.0	77.5	84.6
All ages	9.1	9.0	9.0	6.9	6.4	6.6	8.6	8.4	8.5

TABLE-5

Mortality Indicators, 1989

Haryana

Indicators	Rural	Urban	Combined
Crude death rate	9.0	6.6	8.5
Infant mortality rate	88	58	82
Neo-natal mortality rate	56.6	20.4	49.7
Post-natal mortality rate	31.3	37.6	32.5
Peri-natal mortality rate	49.8	18.3	43.8
Still birth rate	14.9	8.7	13.7

TABLE 6

Percent distribution of sample births by type of medical attention at birth, 1989

Haryana

Sector	Type of medical attention at birth			
	I	T	U	O
Rural	16.2	65.3	17.3	1.2
Urban	24.3	60.2	14.9	0.6
Combined	17.9	64.2	16.8	1.1

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 7

Percent distribution of sample deaths by type of medical attention received before death, 1989

Haryana

Sector	Type of medical attention at death			
	I	M	U	N
Rural	7.6	48.0	7.9	36.5
Urban	21.8	40.4	4.0	33.8
Combined	10.2	46.6	7.2	36.0

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 field practitioner.

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

N- If the death occurred at home and was attended by a professional doctor/hakim/vaidya attended.

TABLE 1

Percent distribution of estimated population
by age-group and sex , 1989

Himachal Pradesh

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	14.2	12.9	13.5	10.5	10.4	10.5	14.0	12.7	13.3
5-9	13.1	12.1	12.6	10.6	11.4	11.0	12.9	12.0	12.5
10-14	12.5	11.5	12.0	10.1	11.5	10.7	12.4	11.5	11.9
15-19	11.8	10.6	11.2	9.2	9.1	9.1	11.6	10.5	11.1
20-24	8.0	10.0	9.0	9.0	10.0	9.5	8.1	10.0	9.0
25-29	6.7	7.8	7.3	9.0	10.4	9.6	6.9	8.0	7.4
30-34	5.6	6.8	6.2	9.3	9.2	9.3	5.9	7.0	6.4
35-39	4.6	5.4	5.0	7.5	6.6	7.1	4.8	5.5	5.1
40-44	4.4	4.9	4.7	6.6	5.3	6.0	4.6	4.9	4.8
45-49	3.7	4.2	4.0	5.4	4.1	4.8	3.9	4.2	4.0
50-54	3.8	4.0	3.9	4.6	3.4	4.0	3.9	4.0	3.9
55-59	3.1	2.9	3.0	2.9	2.4	2.7	3.1	2.9	3.0
60-64	2.9	2.4	2.6	2.2	1.9	2.1	2.8	2.4	2.6
65-69	2.4	1.9	2.2	1.3	1.5	1.4	2.3	1.9	2.1
70+	3.1	2.5	2.8	1.9	2.6	2.2	3.0	2.5	2.7

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Himachal Pradesh

Age-group	Rural	Urban	Combined
15-19	44.5	17.9	42.9
20-24	276.5	199.8	271.5
25-29	178.9	139.7	175.5
30-34	99.0	65.7	96.1
35-39	40.2	23.4	38.8
40-44	15.9	5.4	15.2
45-49	2.1	4.6	2.3
Crude birth rate	28.3	20.4	27.7
General fertility rate	113.0	80.8	110.7
Total fertility rate	3.3	2.3	3.2
Gross reproduction rate	1.6	1.1	1.6

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Himachal Pradesh

Age-group	Rural	Urban	Combined
15-19	391.4	279.1	387.7
20-24	379.1	349.9	377.6
25-29	200.8	162.6	197.6
30-34	112.5	70.5	108.7
35-39	46.6	25.8	44.8
40-44	20.0	6.1	18.9
45-49	3.0	5.4	3.1
General marital fertility rate	170.3	116.6	166.3
Total marital fertility rate	5.8	4.5	5.7

TABLE-4

Estimated age-specific death rates by sex, 1989

Himachal Pradesh

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	15.0	25.7	20.1	5.1	7.9	6.4	14.4	24.7	19.3
5-9	1.4	1.2	1.3	1.2	1.3	1.3	1.4	1.2	1.3
10-14	1.4	1.3	1.4	0.0	0.0	0.0	1.3	1.2	1.3
15-19	0.8	1.2	1.0	2.9	3.4	3.1	1.0	1.3	1.1
20-24	2.1	2.0	2.0	2.9	1.5	2.2	2.2	1.9	2.1
25-29	2.1	1.5	1.8	0.0	2.7	1.3	1.9	1.6	1.7
30-34	6.2	1.9	3.8	0.0	0.0	0.0	5.4	1.8	3.4
35-39	1.1	2.7	2.0	6.7	0.0	3.8	1.8	2.5	2.2
40-44	3.4	3.3	3.4	5.9	0.0	3.5	3.7	3.1	3.4
45-49	4.8	9.7	7.4	4.2	0.0	2.5	4.8	9.0	7.0
50-54	11.6	6.8	9.1	18.3	4.5	13.0	12.3	6.6	9.4
55-59	11.0	8.8	9.9	0.0	55.7	23.3	10.2	11.4	10.8
60-64	26.9	17.8	22.7	22.9	28.8	25.4	26.6	18.4	22.9
65-69	46.2	29.7	38.8	63.5	10.1	37.3	47.0	28.7	38.7
70+	99.1	84.3	92.3	98.8	75.2	86.1	99.1	83.6	92.0
All ages	9.3	8.5	8.9	6.4	5.9	6.1	9.1	8.4	8.7

TABLE-5

Mortality Indicators, 1989

Himachal Pradesh

Indicators	Himachal Pradesh		
	Rural	Urban	Combined
Crude death rate	8.9	6.1	8.7
Infant mortality rate	78	33	75
Neo-natal mortality rate	40.0	14.3	38.7
Post-natal mortality rate	37.6	18.7	36.6
Peri-natal mortality rate	28.5	14.5	27.8
Still birth rate	10.9	5.2	10.6

TABLE 6

Percent distribution of sample births by
type of medical attention at birth, 1989

Himachal Pradesh

Sector	Type of medical attention at birth			
	I	T	U	O
Rural	16.5	19.5	63.3	0.7
Urban	48.7	41.1	9.9	0.3
Combined	21.9	23.1	54.4	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 7

Percent distribution of sample deaths by type
of medical attention received before death, 1989

Himachal Pradesh

Sector	Type of medical attention at death			
	I	M	U	N
Rural	6.5	65.6	1.6	26.3
Urban	23.3	67.8	0.0	8.9
Combined	9.1	65.9	1.3	23.7

- 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 , 1989

Jammu & Kashmir

Age groups	Jammu & Kashmir								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	14.4	14.8	14.6	11.0	11.2	11.1	13.5	14.2	13.9
5-9	11.5	11.5	11.5	9.3	9.7	9.5	11.0	11.2	11.1
10-14	12.7	12.8	12.8	11.2	11.7	11.4	12.3	12.6	12.5
15-19	11.9	11.6	11.8	11.8	12.0	11.9	11.9	11.7	11.8
20-24	9.3	9.9	9.7	10.8	12.1	11.4	9.7	10.3	10.0
25-29	7.1	7.1	7.1	10.1	9.4	9.8	7.9	7.5	7.6
30-34	6.2	6.4	6.3	8.1	7.3	7.7	6.7	6.5	6.6
35-39	5.3	5.6	5.5	6.4	5.8	6.1	5.6	5.6	5.6
40-44	4.5	4.9	4.7	4.7	5.0	4.8	4.6	4.9	4.7
45-49	4.4	4.2	4.3	4.6	4.7	4.7	4.5	4.3	4.4
50-54	3.5	3.3	3.4	3.7	3.9	3.8	3.5	3.4	3.5
55-59	3.3	2.8	3.0	3.1	2.8	3.0	3.2	2.8	3.0
60-64	1.7	1.6	1.7	1.9	1.6	1.7	1.7	1.6	1.7
65-69	1.9	1.6	1.7	1.6	1.4	1.5	1.9	1.6	1.7
70+	2.2	1.9	2.0	1.5	1.4	1.5	2.0	1.8	1.9

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Jammu & Kashmir

Age-group	Rural	Urban	Combined
15-19	42.2	34.5	40.9
20-24	178.5	184.0	179.6
25-29	211.1	151.4	198.2
30-34	136.6	73.7	124.5
35-39	89.8	35.2	80.2
40-44	40.9	18.0	36.9
45-49	7.9	6.7	7.7
Crude birth rate	31.8	23.3	30.1
General fertility rate	107.9	87.6	104.0
Total fertility rate	3.5	2.5	3.3
Gross reproduction rate	1.7	1.2	1.6

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Jammu & Kashmir

Age-group	Rural	Urban	Combined
15-19	296.9	450.1	312.7
20-24	287.7	403.5	306.0
25-29	238.2	193.5	229.4
30-34	146.5	77.8	133.2
35-39	97.1	37.2	86.3
40-44	45.1	19.7	40.6
45-49	94.8	7.8	33.6
General marital fertility rate	179.0	141.9	171.8
Total marital fertility rate	6.0	5.9	5.7

TABLE-4

Estimated age-specific death rates by sex, 1989

Age groups	Jammu & Kashmir								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	27.6	15.9	20.6	11.6	18.7	15.0	24.4	16.2	19.6
5-9	2.0	2.5	2.3	1.2	0.0	0.7	1.8	2.1	2.0
10-14	1.4	0.7	1.0	1.8	1.7	1.7	1.5	0.9	1.1
15-19	1.6	1.1	1.3	0.0	0.0	0.0	1.2	0.9	1.0
20-24	3.8	1.2	2.2	2.4	0.8	1.6	3.4	1.1	2.1
25-29	1.4	1.5	1.5	0.9	1.1	1.0	1.2	1.4	1.3
30-34	2.6	2.0	2.2	1.1	1.8	1.4	2.1	2.0	2.0
35-39	2.9	3.5	3.3	5.0	6.2	5.5	3.5	4.0	3.8
40-44	7.0	3.2	4.7	6.1	2.7	4.4	6.8	3.1	4.6
45-49	10.9	3.4	6.5	10.7	6.2	8.5	10.8	3.9	7.0
50-54	12.3	9.7	10.8	21.7	6.1	14.1	14.8	9.0	11.5
55-59	27.5	11.7	18.7	17.5	15.1	16.4	25.1	12.3	18.2
60-64	29.0	15.2	21.0	23.2	49.7	34.6	27.4	21.0	23.9
65-69	39.4	18.3	27.8	21.3	39.8	29.3	35.4	21.6	28.1
70+	78.9	71.4	74.7	54.6	96.8	74.0	74.4	74.8	74.6
All ages	10.5	6.2	7.9	6.1	6.8	6.4	9.4	6.3	7.6

TABLE-5

Mortality Indicators, 1989

Indicators	Jammu & Kashmir		
	Rural	Urban	Combined
Crude death rate	7.9	6.4	7.6
Infant mortality rate	68	55	66
Neo-natal mortality rate	42.6	42.1	42.6
Post-natal mortality rate	25.6	12.9	23.6
Peri-natal mortality rate	43.0	40.6	42.6
Still birth rate	18.0	14.4	17.5

TABLE 6

Percent distribution of sample births by
type of medical attention at birth, 1989

Jammu & Kashmir

Sector	Type of medical attention at birth			
	I	T	U	O
Rural	8.7	16.7	74.0	0.6
Urban	37.6	31.6	30.6	0.2
Combined	14.6	19.8	65.1	0.5

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 7

Percent distribution of sample deaths by type
of medical attention received before death, 1989

Jammu & Kashmir

Sector	Type of medical attention at death			
	I	M	U	N
Rural	8.7	56.9	26.1	8.3
Urban	24.9	61.8	10.7	2.6
Combined	12.2	58.0	22.8	7.0

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 , 1989

Age groups	Karnataka								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	12.5	12.4	12.5	11.3	11.2	11.3	12.2	12.1	12.2
5-9	12.3	12.0	12.1	12.4	11.8	12.1	12.3	11.9	12.1
10-14	12.5	12.0	12.3	11.8	11.6	11.7	12.3	11.9	12.1
15-19	11.0	11.0	11.0	10.8	11.2	11.0	11.0	11.1	11.0
20-24	9.1	9.7	9.4	9.1	10.6	9.8	9.1	9.9	9.5
25-29	7.6	7.2	7.4	9.4	9.5	9.5	8.1	7.8	8.0
30-34	6.7	6.9	6.8	8.0	7.7	7.8	7.0	7.1	7.1
35-39	5.5	5.9	5.7	7.0	5.9	6.4	5.9	5.9	5.9
40-44	5.0	5.0	5.0	5.2	5.0	5.1	5.1	5.0	5.0
45-49	4.5	4.3	4.4	4.2	3.7	4.0	4.4	4.2	4.3
50-54	3.8	3.5	3.6	3.5	3.2	3.4	3.7	3.4	3.6
55-59	3.3	3.3	3.3	2.5	2.6	2.5	3.1	3.1	3.1
60-64	2.0	2.0	2.0	1.8	2.3	2.0	2.0	2.1	2.0
65-69	2.0	2.3	2.1	1.4	1.7	1.6	1.8	2.1	2.0
70+	2.1	2.4	2.3	1.6	1.8	1.7	2.0	2.3	2.1

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	Karnataka		
	Rural	Urban	Combined
15-19	96.7	53.3	85.0
20-24	253.2	206.2	239.9
25-29	179.0	152.5	170.4
30-34	97.1	81.4	92.5
35-39	49.4	35.7	45.8
40-44	23.3	12.0	20.3
45-49	6.5	4.5	6.0
Crude birth rate	29.1	25.1	28.0
General fertility rate	118.1	96.0	111.9
Total fertility rate	3.5	2.7	3.3
Gross reproduction rate	1.7	1.3	1.6

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	Karnataka		
	Rural	Urban	Combined
15-19	296.2	352.2	304.4
20-24	353.1	325.6	345.9
25-29	211.0	179.4	200.8
30-34	117.4	89.5	108.7
35-39	60.7	39.8	54.8
40-44	30.5	13.9	25.7
45-49	9.1	5.9	8.3
General marital fertility rate	173.5	143.4	165.2
Total marital fertility rate	5.4	5.0	5.2

TABLE-4

Estimated age-specific death rates by sex, 1989

Karnataka

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
	0-4	29.1	29.1	29.1	15.9	15.0	15.5	25.8	25.6
5-9	1.5	2.4	1.9	1.0	1.3	1.2	1.3	2.1	1.7
10-14	1.3	1.8	1.5	1.1	0.2	0.7	1.2	1.4	1.3
15-19	2.1	1.8	2.0	1.0	2.1	1.6	1.8	1.9	1.9
20-24	2.0	2.5	2.3	2.3	1.0	1.6	2.1	2.0	2.1
25-29	2.1	2.7	2.4	1.6	3.0	2.3	2.0	2.8	2.4
30-34	3.1	1.7	2.4	4.8	1.3	3.1	3.6	1.6	2.6
35-39	4.9	2.1	3.5	4.2	2.0	3.2	4.7	2.1	3.4
40-44	5.9	4.1	5.1	4.6	1.5	3.1	5.6	3.5	4.5
45-49	9.6	4.2	7.0	11.9	4.5	8.5	10.2	4.3	7.4
50-54	12.3	9.7	11.1	11.0	7.5	9.4	12.0	9.2	10.7
55-59	20.1	12.3	16.3	16.8	16.3	16.5	19.4	13.2	16.3
60-64	34.4	17.5	26.2	37.8	12.2	23.5	35.2	15.9	25.5
65-69	41.2	31.4	36.0	44.0	27.3	35.1	41.8	30.5	35.8
70+	95.6	61.4	77.6	74.1	78.2	76.2	90.9	65.0	77.3
All ages	10.4	8.7	9.6	7.2	5.8	6.5	9.6	7.9	8.8

TABLE-5

Mortality Indicators, 1989

Karnataka

Indicators	Rural		U		Combined	
Crude death rate	9.6		6.5		8.8	
Infant mortality rate	89		53		80	
Neo-natal mortality rate	63.7		39.5		57.9	
Post-natal mortality rate	25.0		14.0		22.3	
Peri-natal mortality rate	66.3		48.3		62.0	
Still birth rate	21.6		18.2		20.8	

TABLE 6

Percent distribution of sample births by
type of medical attention at birth, 1989

Karnataka				
Sector	Type of medical attention at birth			
	I	T	U	O
Rural	20.1	30.0	42.0	7.9
Urban	62.6	16.8	13.7	6.9
Combined	30.3	26.8	35.2	7.7

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 7

Percent distribution of sample deaths by type
of medical attention received before death, 1989

Karnataka				
Sector	Type of medical attention at death			
	I	M	U	N
Rural	12.7	25.5	16.4	45.4
Urban	32.8	26.6	6.2	34.3
Combined	16.8	25.7	14.3	43.2

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 , 1989

Kerala

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	10.9	10.4	10.6	10.5	9.9	10.2	10.8	10.3	10.5
5-9	10.5	9.6	10.0	9.8	10.3	10.1	10.4	9.7	10.0
10-14	11.1	10.2	10.6	9.7	10.0	9.9	10.9	10.2	10.5
15-19	11.4	10.6	11.0	10.4	10.1	10.2	11.2	10.5	10.8
20-24	10.2	10.9	10.5	10.6	10.9	10.8	10.3	10.9	10.6
25-29	9.0	9.0	9.0	9.7	10.1	9.9	9.1	9.2	9.2
30-34	7.2	7.3	7.3	8.0	7.7	7.8	7.4	7.4	7.4
35-39	6.0	6.2	6.1	6.9	6.3	6.6	6.1	6.2	6.2
40-44	5.0	5.3	5.2	5.6	5.2	5.3	5.1	5.3	5.2
45-49	4.2	4.4	4.3	4.4	4.3	4.4	4.2	4.4	4.3
50-54	3.9	4.2	4.1	3.8	4.0	3.9	3.9	4.1	4.0
55-59	3.2	3.4	3.3	3.3	3.4	3.3	3.2	3.4	3.3
60-64	2.7	2.9	2.8	2.6	2.7	2.7	2.7	2.9	2.8
65-69	2.1	2.3	2.2	2.0	2.2	2.1	2.1	2.3	2.2
70+	2.7	3.3	3.0	2.5	3.0	2.8	2.7	3.2	3.0

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	Kerala		
	Rural	Urban	Combined
15-19	26.4	29.8	27.0
20-24	169.7	144.1	164.8
25-29	132.8	121.3	130.4
30-34	56.2	49.9	54.9
35-39	19.3	17.0	18.8
40-44	7.4	6.8	7.3
45-49	2.2	0.7	1.9
Crude birth rate	20.2	20.5	20.3
General fertility rate	72.7	66.4	71.4
Total fertility rate	2.1	1.8	2.0
Gross reproduction rate	1.0	0.9	1.0

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	Kerala		
	Rural	Urban	Combined
15-19	231.5	272.5	238.8
20-24	300.8	310.9	302.5
25-29	202.2	240.1	208.6
30-34	76.0	80.2	76.7
35-39	23.9	26.9	24.4
40-44	9.5	9.9	9.6
45-49	2.7	2.4	2.7
General marital fertility rate	124.6	145.7	128.0
Total marital fertility rate	4.2	4.7	4.3

TABLE-4

Estimated age-specific death rates by sex, 1989

Kerala

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
	0-4	7.4	6.2	6.3	5.2	4.5	4.8	7.0	5.9
5-9	0.7	0.5	0.6	0.8	0.6	0.7	0.7	0.6	0.6
10-14	0.3	0.5	0.4	0.0	0.0	0.0	0.2	0.4	0.3
15-19	0.9	1.1	1.0	1.5	0.3	0.8	1.0	0.9	1.0
20-24	1.3	1.6	1.7	0.7	0.5	0.6	1.6	1.4	1.5
25-29	1.4	1.0	1.2	2.0	0.3	1.0	1.5	0.9	1.2
30-34	2.0	0.9	1.4	2.4	1.1	1.7	2.1	1.0	1.5
35-39	3.3	1.0	2.1	3.3	2.0	2.6	3.3	1.2	2.2
40-44	3.1	2.2	2.6	4.3	0.6	2.2	3.3	1.9	2.5
45-49	8.2	2.4	5.1	6.5	4.7	5.5	7.9	2.8	5.2
50-54	12.0	2.3	6.8	10.4	2.3	5.7	11.8	2.3	6.6
55-59	16.1	6.7	11.1	15.2	13.5	14.2	16.0	8.0	11.7
60-64	27.6	10.4	18.4	44.8	10.7	25.2	30.3	10.4	19.5
65-69	37.4	25.4	30.9	56.7	22.6	36.8	40.4	24.8	31.9
70+	92.1	74.0	81.8	119.9	68.8	88.6	96.4	73.0	83.0
All ages	7.2	5.1	6.0	8.2	4.5	6.1	7.3	5.0	6.1

TABLE-5

Mortality Indicators, 1989

Kerala

Indicators	Kerala		
	Rural	Urban	Combined
Crude death rate	6.0	6.1	6.1
Infant mortality rate	23	15	21
Neo-natal mortality rate	15.2	9.7	14.2
Post-natal mortality rate	7.6	5.1	7.2
Peri-natal mortality rate	23.4	21.9	23.1
Still birth rate	12.4	13.7	12.6

TABLE 6

Percent distribution of sample births by type of medical attention at birth, 1989

Kerala				
Sector	Type of medical attention at birth			
	I	T	U	O
Rural	84.3	6.4	7.8	1.5
Urban	92.0	4.5	3.3	0.2
Combined	85.7	6.1	6.9	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 7

Percent distribution of sample deaths by type of medical attention received before death, 1989

Kerala				
Sector	Type of medical attention at death			
	I	M	U	N
Rural	43.9	30.5	5.7	19.9
Urban	48.1	40.8	0.6	10.5
Combined	44.6	32.4	4.8	18.2

- 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 , 1989

Madhya Pradesh

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
	0-4	14.9	14.4	14.7	13.5	12.5	13.0	14.7	14.0
5-9	12.2	12.0	12.1	11.3	10.8	11.1	12.0	11.8	11.9
10-14	12.6	12.4	12.5	12.1	10.6	11.3	12.5	12.0	12.3
15-19	11.1	9.9	10.5	11.2	9.7	10.4	11.1	9.9	10.5
20-24	8.8	8.1	8.5	9.8	10.1	9.9	9.0	8.5	8.7
25-29	7.1	7.5	7.3	8.9	8.4	8.7	7.4	7.7	7.6
30-34	6.4	6.6	6.5	7.3	6.5	6.9	6.5	6.6	6.6
35-39	5.2	5.3	5.3	6.1	5.4	5.8	5.4	5.4	5.4
40-44	4.6	4.7	4.7	5.0	4.1	4.5	4.7	4.6	4.7
45-49	3.9	4.4	4.2	4.2	3.8	4.0	4.0	4.3	4.1
50-54	3.8	4.0	3.9	3.3	3.2	3.3	3.7	3.8	3.8
55-59	3.3	3.1	3.2	2.7	2.6	2.6	3.2	3.0	3.1
60-64	2.2	2.4	2.3	1.6	1.8	1.7	2.1	2.3	2.2
65-69	1.9	2.3	2.1	1.5	1.6	1.6	1.8	2.2	2.0
70+	2.0	2.9	2.4	1.5	9.0	5.3	1.9	4.1	3.0

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Madhya Pradesh

Age-group	Rural	Urban	Combined
15-19	140.9	67.0	125.5
20-24	317.8	237.9	297.7
25-29	244.1	184.3	230.3
30-34	157.1	99.2	145.0
35-39	95.2	43.0	83.9
40-44	44.7	14.5	38.9
45-49	12.2	3.2	10.5
Crude birth rate	36.7	30.3	35.5
General fertility rate	163.3	115.3	152.8
Total fertility rate	5.1	3.2	4.7
Gross reproduction rate	2.4	1.6	2.2

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Madhya Pradesh

Age-group	Rural	Urban	Combined
15-19	194.6	282.5	201.6
20-24	342.6	318.2	337.4
25-29	275.2	239.2	267.8
30-34	166.7	119.4	157.8
35-39	103.7	47.0	91.5
40-44	48.1	23.6	44.8
45-49	13.1	5.0	12.0
General marital fertility rate	185.6	175.3	183.8
Total marital fertility rate	5.7	5.2	5.6

TABLE-4

Estimated age-specific death rates by sex, 1989

Madhya Pradesh

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	44.4	50.8	47.4	22.9	23.4	23.2	40.7	45.6	43.0
5-9	3.7	5.1	4.4	2.1	2.1	2.1	3.4	4.5	3.9
10-14	2.3	2.2	2.3	0.6	0.6	0.6	2.0	1.9	2.0
15-19	1.6	2.6	2.1	1.3	2.0	1.6	1.6	2.5	2.0
20-24	1.9	4.2	3.0	2.5	2.5	2.5	2.0	3.8	2.9
25-29	3.2	4.4	3.8	4.8	1.1	2.9	3.5	3.6	3.6
30-34	4.2	4.5	4.4	1.9	2.4	2.2	3.8	4.1	3.9
35-39	3.9	3.7	3.8	3.4	1.2	2.3	3.8	3.2	3.5
40-44	4.8	5.8	5.3	7.9	3.1	5.6	5.4	5.3	5.3
45-49	9.4	8.5	8.9	11.9	3.2	7.5	9.9	7.5	8.6
50-54	8.9	8.2	8.5	9.4	5.0	7.1	8.9	7.6	8.3
55-59	16.6	13.4	15.2	27.4	6.0	16.5	18.4	12.1	15.4
60-64	41.0	23.6	32.2	40.4	29.6	34.4	40.9	24.6	32.5
65-69	50.5	37.1	43.5	46.9	28.7	37.0	50.0	35.8	42.5
70+	92.6	66.5	77.5	119.6	150.0	132.0	96.6	73.1	83.4
All ages	13.6	14.3	13.9	9.6	7.5	8.6	12.8	13.0	12.9

TABLE-5

Mortality Indicators, 1989

Madhya Pradesh

Indicators	Rural	Urban	Combined
Crude death rate	13.9	8.6	12.9
Infant mortality rate	125	78	117
Neo-natal mortality rate	72.8	37.9	67.0
Post-natal mortality rate	52.4	39.8	50.3
Peri-natal mortality rate	57.2	37.2	54.0
Still birth rate	12.6	11.3	12.4

TABLE 6

Percent distribution of sample births by
type of medical attention at birth, 1989

Madhya Pradesh

Sector	Type of medical attention at birth			
	I	T	U	O
Rural	4.1	12.0	81.5	2.4
Urban	48.9	16.2	33.6	1.3
Combined	11.5	12.7	73.6	2.2

- 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 7

Percent distribution of sample deaths by type
of medical attention received before death, 1989

Madhya Pradesh

Sector	Type of medical attention at death			
	I	M	U	N
Rural	4.9	22.4	24.4	48.3
Urban	25.2	51.2	5.8	17.8
Combined	7.5	26.1	22.0	44.4

- 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 , 1989

Maharashtra

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	14.2	12.7	13.4	11.2	15.7	13.5	13.1	13.7	13.4
5-9	11.6	10.8	11.2	11.0	10.2	10.6	11.4	10.6	11.0
10-14	11.7	11.0	11.3	10.5	9.9	10.2	11.3	10.6	10.9
15-19	10.6	10.1	10.3	10.5	9.4	10.0	10.6	9.8	10.2
20-24	8.9	8.9	8.9	9.8	8.6	9.2	9.2	8.8	9.0
25-29	7.4	7.3	7.4	10.2	8.5	9.3	8.4	7.7	8.1
30-34	6.4	7.2	6.8	8.2	7.8	8.0	7.0	7.4	7.2
35-39	5.6	7.4	6.5	6.9	6.1	6.5	6.1	7.0	6.5
40-44	5.1	5.0	5.0	5.7	5.9	5.8	5.3	5.3	5.3
45-49	4.3	4.7	4.5	4.7	3.6	4.1	4.4	4.3	4.4
50-54	4.3	4.4	4.3	3.7	4.4	4.1	4.1	4.4	4.2
55-59	3.4	3.2	3.3	3.1	3.2	3.2	3.3	3.2	3.3
60-64	2.6	2.7	2.7	2.0	2.6	2.3	2.4	2.7	2.5
65-69	2.0	2.1	2.0	1.1	2.2	1.6	1.7	2.1	1.9
70+	2.0	2.5	2.2	1.0	2.0	1.5	1.6	2.3	2.0

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	Maharashtra		
	Rural	Urban	Combined
15-19	104.7	64.8	91.4
20-24	278.8	257.0	271.3
25-29	202.3	162.6	187.1
30-34	93.8	69.1	84.8
35-39	28.7	25.6	27.8
40-44	14.2	8.0	11.8
45-49	2.0	1.3	1.8
Crude birth rate	30.6	24.6	28.5
General fertility rate	118.1	99.2	111.6
Total fertility rate	3.6	2.9	3.4
Gross reproduction rate	1.7	1.5	1.6

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	Maharashtra		
	Rural	Urban	Combined
15-19	235.6	326.8	252.2
20-24	306.3	360.0	321.8
25-29	222.1	188.9	209.8
30-34	105.8	73.7	93.7
35-39	32.7	27.7	31.1
40-44	15.5	8.6	12.8
45-49	3.3	2.5	3.1
General marital fertility rate	150.8	138.8	146.9
Total marital fertility rate	4.6	4.9	4.6

TABLE-4

Estimated age-specific death rates by sex, 1989

Maharashtra

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	20.8	21.6	21.2	13.3	11.1	12.0	18.5	17.5	18.0
5-9	1.5	2.9	2.2	0.2	1.8	1.0	1.1	2.5	1.8
10-14	1.2	1.0	1.1	0.2	1.0	0.6	0.9	1.0	0.9
15-19	1.5	2.1	1.8	0.0	1.7	0.8	1.0	2.0	1.4
20-24	1.8	3.1	2.5	1.3	3.3	2.3	1.6	3.2	2.4
25-29	2.7	2.1	2.4	2.8	1.7	2.3	2.7	1.9	2.4
30-34	2.8	1.6	2.1	3.1	1.2	2.2	2.9	1.4	2.1
35-39	3.8	2.6	3.1	3.9	2.3	3.2	3.9	2.5	3.1
40-44	5.2	3.5	4.3	5.9	2.8	4.3	5.5	3.2	4.3
45-49	8.8	5.2	6.9	7.5	3.1	5.6	8.3	4.6	6.5
50-54	11.4	4.4	7.8	11.4	6.8	8.9	11.4	5.2	8.2
55-59	17.6	12.3	14.9	22.2	8.7	15.3	19.1	11.0	15.1
60-64	29.0	22.7	25.7	24.8	12.1	17.6	27.7	19.1	23.1
65-69	56.8	35.6	45.6	43.9	26.6	32.6	53.6	32.4	41.6
70+	92.9	67.4	78.5	128.3	63.7	85.4	100.9	66.3	80.4
All ages	9.6	8.2	8.9	6.6	5.9	6.3	8.5	7.4	8.0

TABLE-5

Mortality Indicators, 1989

Maharashtra

Indicators	Maharashtra		
	Rural	Urban	Combined
Crude death rate	8.9	6.3	8.0
Infant mortality rate	66	44	59
Neo-natal mortality rate	46.1	26.1	40.0
Post-natal mortality rate	19.6	17.6	19.0
Peri-natal mortality rate	47.3	26.7	41.0
Still birth rate	17.9	9.0	15.2

TABLE 6

Percent distribution of sample births by
type of medical attention at birth, 1989

Maharashtra

Sector	Type of medical attention at birth			
	I	T	U	O
Rural	20.1	12.5	58.9	8.5
Urban	74.8	17.6	3.9	3.7
Combined	33.3	13.8	45.6	7.3

- 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 7

Percent distribution of sample deaths by type
of medical attention received before death, 1989

Maharashtra

Sector	Type of medical attention at death			
	I	M	U	N
Rural	22.1	27.3	27.1	23.5
Urban	41.9	55.9	1.3	0.9
Combined	26.5	33.6	21.4	18.5

- 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 , 1989

Age groups	Orissa								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	13.4	12.7	13.1	11.6	11.7	11.7	13.2	12.6	12.9
5-9	10.5	10.4	10.4	11.0	11.3	11.2	10.6	10.4	10.5
10-14	12.5	12.3	12.4	11.4	12.3	11.9	12.4	12.3	12.4
15-19	10.9	11.1	11.0	11.0	11.5	11.2	10.9	11.1	11.0
20-24	9.3	10.1	9.7	9.2	10.5	9.8	9.2	10.2	9.7
25-29	7.6	7.6	7.6	8.9	9.5	9.2	7.7	7.8	7.7
30-34	7.2	6.8	7.0	7.6	7.8	7.7	7.3	6.9	7.1
35-39	5.3	5.3	5.3	7.2	6.6	6.9	5.5	5.4	5.5
40-44	5.2	5.2	5.2	6.0	4.7	5.4	5.3	5.2	5.2
45-49	4.4	4.5	4.4	5.0	3.9	4.5	4.4	4.4	4.4
50-54	4.0	4.1	4.0	3.8	3.0	3.4	4.0	4.0	4.0
55-59	3.4	3.2	3.3	2.8	2.4	2.6	3.3	3.1	3.2
60-64	2.5	2.4	2.4	1.7	1.5	1.6	2.4	2.3	2.3
65-69	1.8	2.0	1.9	1.2	1.5	1.4	1.8	2.0	1.9
70+	2.1	2.4	2.2	1.5	1.7	1.6	2.1	2.3	2.2

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	Orissa		
	Rural	Urban	Combined
15-19	72.1	45.4	69.5
20-24	235.7	199.1	232.2
25-29	219.2	177.8	214.5
30-34	123.1	86.8	119.2
35-39	60.2	25.5	56.3
40-44	24.6	7.2	23.1
45-49	6.5	7.1	6.5
Crude birth rate	31.1	25.0	30.5
General fertility rate	121.8	95.6	119.2
Total fertility rate	3.7	2.7	3.6
Gross reproduction rate	1.8	1.3	1.8

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	Orissa		
	Rural	Urban	Combined
15-19	262.5	337.6	266.2
20-24	313.2	336.4	315.0
25-29	220.8	206.7	219.4
30-34	130.1	91.6	125.9
35-39	64.0	27.0	59.8
40-44	28.5	8.0	26.7
45-49	8.0	8.5	8.1
General marital fertility rate	163.4	140.6	161.3
Total marital fertility rate	5.1	5.1	5.1

TABLE-4

Estimated age-specific death rates by sex, 1989

Age groups	Orissa								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	40.4	42.3	41.3	24.2	21.9	23.1	38.9	40.5	39.7
5-9	2.6	4.4	3.5	3.6	1.0	2.3	2.7	4.1	3.4
10-14	2.2	2.7	2.4	2.0	1.0	1.5	2.2	2.5	2.3
15-19	2.3	3.6	3.0	1.6	3.5	2.5	2.3	3.6	3.0
20-24	3.2	4.9	4.1	3.0	2.2	2.6	3.1	4.6	3.9
25-29	3.1	3.5	3.3	2.5	2.0	2.3	3.0	3.3	3.2
30-34	3.9	3.6	3.8	2.8	0.7	1.8	3.8	3.3	3.5
35-39	5.0	4.3	4.7	3.4	2.6	3.1	4.8	4.1	4.5
40-44	6.8	5.1	5.9	5.6	4.8	5.3	6.7	5.1	5.9
45-49	9.4	6.0	7.7	8.6	2.9	6.2	9.3	5.8	7.5
50-54	12.5	10.4	11.4	18.1	7.2	13.5	13.0	10.2	11.6
55-59	25.0	17.7	21.4	25.1	19.1	22.5	25.0	17.8	21.5
60-64	33.0	27.1	30.1	26.2	22.4	24.5	32.5	26.8	29.7
65-69	46.4	46.2	46.3	51.0	35.5	42.8	46.7	45.4	46.0
70+	109.5	89.4	98.8	85.5	79.8	82.6	107.7	88.7	97.7
All ages	13.4	13.0	13.2	9.1	7.1	8.1	12.9	12.5	12.7

TABLE-5

Mortality Indicators, 1989

Indicators	Orissa		
	Rural	Urban	Combined
Crude death rate	13.2	8.1	12.7
Infant mortality rate	125	78	121
Neo-natal mortality rate	77.5	52.7	75.5
Post-natal mortality rate	47.3	25.0	45.5
Peri-natal mortality rate	65.7	38.8	60.7
Still birth rate	18.6	12.9	15.2

TABLE 6

Percent distribution of sample births by
type of medical attention at birth, 1989

Orissa				
Sector	Type of medical attention at birth			
	I	T	U	O
Rural	4.8	13.9	73.1	8.2
Urban	31.8	25.8	39.4	3.0
Combined	8.4	15.5	68.6	7.5

- 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 7

Percent distribution of sample deaths by type
of medical attention received before death, 1989

Orissa				
Sector	Type of medical attention at death			
	I	M	U	N
Rural	7.6	16.1	13.8	62.5
Urban	15.6	29.6	3.1	51.7
Combined	8.5	17.5	12.6	61.4

- 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 , 1989

Age groups	Punjab								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	11.6	11.6	11.6	11.3	11.6	11.5	11.5	11.6	11.6
5-9	11.6	11.6	11.6	11.5	11.3	11.4	11.6	11.6	11.6
10-14	11.1	10.8	11.0	10.4	9.8	10.1	10.9	10.5	10.7
15-19	10.5	9.7	10.1	9.9	7.9	8.9	10.4	9.2	9.8
20-24	10.1	10.7	10.4	9.3	10.3	9.8	9.8	10.6	10.2
25-29	8.4	8.3	8.4	9.8	10.1	9.9	8.8	8.8	8.8
30-34	7.0	6.9	7.0	8.5	8.3	8.4	7.4	7.3	7.3
35-39	5.5	6.0	5.7	7.0	6.6	6.8	5.9	6.2	6.0
40-44	5.0	5.0	5.0	5.0	5.1	5.1	5.0	5.1	5.0
45-49	4.5	4.4	4.4	4.5	4.8	4.7	4.5	4.5	4.5
50-54	3.6	3.9	3.7	3.6	3.6	3.6	3.6	3.8	3.7
55-59	3.4	3.1	3.3	3.1	3.3	3.2	3.3	3.2	3.2
60-64	2.5	2.8	2.7	2.3	2.3	2.3	2.5	2.7	2.6
65-69	2.4	2.2	2.3	1.9	2.4	2.1	2.2	2.3	2.3
70+	2.9	2.9	2.9	2.0	2.5	2.2	2.6	2.8	2.7

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	Punjab		
	Rural	Urban	Combined
15-19	21.8	19.3	21.2
20-24	250.5	227.3	244.3
25-29	227.8	215.3	223.9
30-34	117.2	93.6	109.9
35-39	52.3	30.9	46.0
40-44	20.3	9.2	17.2
45-49	0.9	0.0	0.7
Crude birth rate	28.7	27.5	28.3
General fertility rate	117.9	107.0	114.8
Total fertility rate	3.5	3.0	3.3
Gross reproduction rate	1.6	1.5	1.6

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	Punjab		
	Rural	Urban	Combined
15-19	269.5	222.2	257.8
20-24	378.9	346.4	370.3
25-29	247.0	247.7	247.2
30-34	122.7	99.3	115.5
35-39	54.1	34.5	48.6
40-44	20.8	10.6	18.2
45-49	1.3	0.0	0.9
General marital fertility rate	167.6	147.4	161.8
Total marital fertility rate	5.5	4.8	5.3

TABLE-4

Estimated age-specific death rates by sex, 1989

Age groups	Punjab								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	25.2	23.0	24.1	15.2	16.5	15.8	22.5	21.2	21.9
5-9	1.9	1.1	1.5	0.4	0.9	0.6	1.5	1.1	1.3
10-14	1.1	1.7	1.3	2.7	0.5	1.7	1.5	1.4	1.4
15-19	2.9	2.2	2.6	3.3	4.6	3.9	3.0	2.8	2.9
20-24	3.4	2.2	2.8	2.0	0.5	1.2	3.0	1.8	2.4
25-29	3.6	3.5	3.5	0.9	2.0	1.4	2.8	3.0	2.9
30-34	2.3	1.7	2.1	3.1	1.2	2.2	2.6	1.6	2.1
35-39	3.5	3.4	3.4	3.9	0.9	2.5	3.6	2.7	3.1
40-44	9.3	1.1	5.4	1.9	0.0	1.0	7.3	0.8	4.2
45-49	6.3	2.5	4.5	6.0	3.8	4.9	6.2	2.9	4.6
50-54	9.8	12.8	11.2	4.9	10.1	7.4	8.5	12.1	10.2
55-59	11.0	13.0	11.9	25.4	6.0	15.7	14.6	11.0	12.9
60-64	21.3	17.7	19.5	22.9	13.9	18.5	21.7	16.8	19.3
65-69	21.7	24.7	23.1	41.9	27.0	33.8	26.3	25.4	25.8
70+	82.4	62.1	72.7	73.8	64.6	68.9	80.6	62.7	71.8
All ages	9.5	8.0	8.7	7.3	6.2	6.8	8.9	7.5	8.2

TABLE-5

Mortality Indicators, 1989

Indicators	Punjab		
	Rural	Urban	Combined
Crude death rate	8.7	6.8	8.2
Infant mortality rate	71	44	64
Neo-natal mortality rate	45.9	21.0	39.4
Post-natal mortality rate	25.3	23.0	24.7
Peri-natal mortality rate	52.6	28.1	46.2
Still birth rate	26.5	15.8	23.7

TABLE 6

Percent distribution of sample births by
type of medical attention at birth, 1989

Punjab				
Sector	Type of medical attention at birth			
	I	T	U	O
Rural	4.0	76.6	15.7	3.7
Urban	13.6	82.2	2.7	1.5
Combined	6.8	78.2	12.0	3.0

- 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 7

Percent distribution of sample deaths by type
of medical attention received before death, 1989

Punjab				
Sector	Type of medical attention at death			
	I	M	U	N
Rural	8.7	61.6	4.0	25.7
Urban	13.9	62.6	1.7	21.8
Combined	9.9	61.8	3.5	24.8

- 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 , 1989

Age groups	Rajasthan								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	14.5	14.4	14.5	12.9	12.5	12.7	14.2	14.0	14.1
5-9	13.2	13.4	13.3	12.2	12.6	12.4	13.1	13.3	13.2
10-14	13.4	12.5	13.0	11.9	11.6	11.8	13.1	12.3	12.7
15-19	11.6	10.3	11.0	11.8	10.7	11.3	11.6	10.4	11.0
20-24	9.1	8.5	8.8	9.2	9.4	9.3	9.1	8.6	8.9
25-29	6.9	7.6	7.2	8.8	8.9	8.9	7.2	7.9	7.5
30-34	6.6	6.9	6.7	7.1	6.9	7.0	6.6	6.9	6.7
35-39	5.3	5.4	5.3	5.8	6.1	5.9	5.4	5.5	5.4
40-44	4.4	4.6	4.5	4.5	4.5	4.5	4.4	4.6	4.5
45-49	3.9	3.9	3.9	4.1	4.3	4.2	3.9	4.0	3.9
50-54	3.3	3.6	3.4	3.2	3.3	3.3	3.3	3.5	3.4
55-59	2.9	2.7	2.8	2.9	2.8	2.9	2.9	2.7	2.8
60-64	1.7	2.3	2.0	2.0	2.2	2.1	1.8	2.3	2.0
65-69	1.7	2.0	1.8	1.8	2.0	1.9	1.7	2.0	1.9
70+	1.5	2.1	1.8	1.8	2.2	2.0	1.6	2.1	1.8

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	Rajasthan		
	Rural	Urban	Combined
15-19	104.1	63.6	96.5
20-24	293.5	239.7	282.8
25-29	256.4	196.5	244.0
30-34	167.5	125.0	159.7
35-39	102.4	56.3	93.1
40-44	42.7	31.9	40.8
45-49	23.5	4.9	19.8
Crude birth rate	35.4	28.8	34.2
General fertility rate	159.2	119.4	151.5
Total fertility rate	5.0	3.6	4.7
Gross reproduction rate	2.2	1.7	2.1

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	Rajasthan		
	Rural	Urban	Combined
15-19	209.1	227.7	211.2
20-24	312.6	307.9	311.8
25-29	270.2	207.6	257.3
30-34	173.6	130.3	165.8
35-39	109.9	59.5	99.6
40-44	48.3	34.9	45.8
45-49	25.6	5.6	21.8
General marital fertility rate	189.5	155.4	183.4
Total marital fertility rate	5.7	4.9	5.6

TABLE-4

Estimated age-specific death rates by sex, 1989

Age groups	Rajasthan								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	36.3	40.3	38.2	19.2	25.5	22.2	33.6	37.9	35.6
5-9	3.6	3.6	3.6	1.6	1.4	1.5	3.3	3.2	3.2
10-14	1.5	2.8	2.1	2.6	2.0	2.3	1.6	2.6	2.1
15-19	1.7	3.1	2.3	1.2	3.2	2.1	1.6	3.1	2.2
20-24	2.4	4.1	3.2	0.7	1.4	1.1	2.1	3.6	2.8
25-29	3.2	3.6	3.4	2.6	1.7	2.2	3.0	3.2	3.1
30-34	4.0	3.9	3.9	3.2	1.5	2.4	3.8	3.4	3.6
35-39	3.8	4.2	4.0	2.4	2.2	2.3	3.6	3.8	3.7
40-44	4.6	4.4	4.5	2.4	1.5	2.0	4.2	3.9	4.0
45-49	7.8	5.3	6.6	9.8	5.0	7.4	8.1	5.2	6.8
50-54	13.4	9.2	11.3	11.1	8.8	10.0	13.0	9.1	11.1
55-59	14.6	9.7	12.4	21.3	6.7	14.5	15.8	9.1	12.8
60-64	29.9	19.7	24.4	23.7	15.8	19.7	28.7	19.0	23.5
65-69	49.8	31.2	40.4	38.3	30.5	34.4	47.6	31.1	39.2
70+	92.4	73.9	82.2	75.6	69.4	72.3	89.0	73.0	80.3
All ages	11.2	11.6	11.4	7.8	7.7	7.8	10.6	10.9	10.7

TABLE-5

Mortality Indicators, 1989

Indicators	Rajasthan		
	Rural	Urban	Combined
Crude death rate	11.4	7.8	10.7
Infant mortality rate	103	58	96
Neo-natal mortality rate	66.2	30.0	60.6
Post-natal mortality rate	37.1	28.0	35.7
Peri-natal mortality rate	54.5	27.8	50.4
Still birth rate	9.0	8.6	9.0

TABLE 6

Percent distribution of sample births by type of medical attention at birth, 1989

Rajasthan				
Sector	Type of medical attention at birth			
	I	T	U	O
Rural	1.9	14.2	82.7	1.2
Urban	16.2	30.8	51.9	1.1
Combined	4.2	16.9	77.7	1.2

- 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 7

Percent distribution of sample deaths by type of medical attention received before death, 1989

Rajasthan				
Sector	Type of medical attention at death			
	I	M	U	N
Rural	6.9	26.4	34.7	32.0
Urban	19.6	43.1	16.1	21.2
Combined	8.7	28.7	32.0	30.6

- 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 , 1989

Age groups	Tamil Nadu								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	11.2	10.7	10.9	10.0	9.7	9.8	10.8	10.4	10.6
5-9	11.0	10.5	10.7	10.6	10.4	10.5	10.8	10.5	10.7
10-14	11.2	10.6	10.9	10.4	10.0	10.2	10.9	10.4	10.7
15-19	10.2	10.0	10.1	10.1	10.4	10.3	10.2	10.1	10.1
20-24	9.3	9.9	9.6	9.6	11.6	10.6	9.4	10.5	10.0
25-29	8.0	7.9	7.9	9.8	10.0	9.9	8.6	8.6	8.6
30-34	6.8	7.0	6.9	8.4	7.6	8.0	7.4	7.2	7.3
35-39	5.9	6.3	6.1	7.2	6.2	6.7	6.4	6.2	6.3
40-44	5.4	6.3	5.8	5.8	5.8	5.8	5.6	6.1	5.8
45-49	5.3	5.3	5.3	5.0	4.5	4.7	5.2	5.1	5.1
50-54	4.9	4.6	4.8	4.1	4.0	4.1	4.6	4.4	4.5
55-59	3.8	3.7	3.7	3.1	3.2	3.1	3.5	3.5	3.5
60-64	2.8	2.8	2.8	2.4	2.6	2.5	2.7	2.7	2.7
65-69	2.2	2.2	2.2	1.7	2.0	1.8	2.0	2.1	2.1
70+	2.0	2.2	2.1	1.8	2.1	1.9	1.9	2.2	2.0

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	Tamil Nadu		
	Rural	Urban	Combined
15-19	61.6	54.1	59.0
20-24	215.2	190.5	206.1
25-29	153.8	127.6	143.6
30-34	71.5	50.8	64.1
35-39	29.9	15.3	25.1
40-44	7.9	6.0	7.3
45-49	1.3	1.5	1.3
Crude birth rate	23.5	22.4	23.1
General fertility rate	89.5	81.4	86.7
Total fertility rate	2.7	2.2	2.5
Gross reproduction rate	1.3	1.1	1.3

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	Tamil Nadu		
	Rural	Urban	Combined
15-19	307.5	342.6	317.8
20-24	313.5	301.7	309.3
25-29	182.4	147.1	168.4
30-34	79.3	55.3	70.7
35-39	33.2	17.3	28.0
40-44	9.8	7.2	8.9
45-49	2.0	1.9	2.0
General marital fertility rate	131.1	119.0	126.9
Total marital fertility rate	4.6	4.4	4.5

TABLE-4

Estimated age-specific death rates by sex, 1989

Tamil Nadu

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
	0-4	22.4	25.5	23.9	13.8	12.8	13.3	19.7	21.5
5-9	1.8	2.0	1.9	1.0	1.2	1.1	1.5	1.7	1.6
10-14	1.2	1.7	1.5	0.2	0.9	0.6	0.9	1.5	1.2
15-19	1.6	2.7	2.2	1.5	0.9	1.2	1.6	2.1	1.8
20-24	2.5	3.6	3.1	2.0	2.6	2.3	2.3	3.2	2.8
25-29	3.8	2.8	3.3	1.6	1.6	1.6	2.9	2.3	2.6
30-34	4.2	2.8	3.5	2.4	1.5	2.0	3.5	2.4	2.9
35-39	4.7	3.8	4.3	3.3	4.4	3.8	4.2	4.0	4.1
40-44	4.6	4.7	4.7	5.4	1.9	3.7	4.9	3.8	4.3
45-49	8.0	5.0	6.5	10.8	5.4	8.3	8.9	5.1	7.0
50-54	13.3	9.7	11.6	10.5	8.6	9.6	12.4	9.4	11.0
55-59	19.3	14.1	16.7	22.1	11.0	16.5	20.1	13.2	16.7
60-64	26.9	22.2	24.6	25.9	26.7	26.3	26.6	23.6	25.1
65-69	44.6	44.0	44.3	41.4	36.5	38.8	43.7	41.7	42.7
70+	105.6	83.6	94.1	81.8	70.1	75.7	97.9	79.3	88.2
All ages	10.0	9.4	9.7	7.2	6.3	6.8	9.0	8.3	8.7

TABLE-5

Mortality Indicators, 1989

Tamil Nadu

Indicators	Rural	Urban	Combined
Crude death rate	9.7	6.8	8.7
Infant mortality rate	80	43	68
Neo-natal mortality rate	60.4	29.9	50.1
Post-natal mortality rate	19.6	13.5	17.6
Peri-natal mortality rate	58.7	43.8	53.8
Still birth rate	10.6	20.5	13.8

TABLE 6

Percent distribution of sample births by type of medical attention at birth, 1989

Tamil Nadu

Sector	Type of medical attention at birth			
	I	T	U	O
Rural	36.7	22.7	36.0	4.6
Urban	86.7	7.0	5.5	0.8
Combined	48.7	18.9	28.7	3.7

- 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 7

Percent distribution of sample deaths by type of medical attention received before death, 1989

Tamil Nadu

Sector	Type of medical attention at death			
	I	M	U	N
Rural	12.7	17.7	21.7	47.9
Urban	36.1	36.3	6.4	21.2
Combined	17.1	21.2	18.8	42.9

- 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 , 1989

Uttar Pradesh

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	14.8	14.5	14.7	14.5	12.3	13.4	14.8	14.1	14.5
5-9	12.4	12.6	12.5	13.5	11.8	12.6	12.6	12.4	12.5
10-14	13.2	12.5	12.9	12.9	11.2	12.0	13.2	12.3	12.7
15-19	11.6	9.5	10.6	12.7	9.9	11.3	11.8	9.6	10.7
20-24	8.8	8.7	8.7	10.0	9.1	9.5	9.0	8.7	8.9
25-29	6.8	7.4	7.1	1.0	15.7	8.6	5.8	9.1	7.4
30-34	6.2	6.5	6.3	7.4	5.9	6.6	6.4	6.4	6.4
35-39	5.1	5.8	5.4	6.3	5.9	6.1	5.3	5.9	5.6
40-44	4.6	5.0	4.8	5.3	4.2	4.7	4.7	4.8	4.8
45-49	4.1	4.5	4.3	4.7	3.7	4.2	4.2	4.3	4.3
50-54	3.5	3.6	3.5	3.3	2.8	3.0	3.4	3.4	3.4
55-59	3.0	2.8	2.9	2.9	2.4	2.6	3.0	2.7	2.9
60-64	2.0	2.3	2.1	1.9	1.8	1.8	1.9	2.2	2.1
65-69	1.8	2.0	1.9	1.8	1.6	1.7	1.8	1.9	1.9
70+	2.1	2.2	2.2	1.8	1.7	1.8	2.1	2.1	2.1

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Uttar Pradesh

Age-group	Rural	Urban	Combined
15-19	91.7	38.1	79.8
20-24	290.6	192.5	268.8
25-29	277.7	194.0	258.9
30-34	220.7	131.7	202.8
35-39	149.2	90.8	136.5
40-44	79.6	51.7	74.4
45-49	29.8	17.1	27.5
Crude birth rate	38.8	29.2	37.0
General fertility rate	174.9	112.4	161.6
Total fertility rate	5.7	3.6	5.2
Gross reproduction rate	2.7	1.7	2.4

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Uttar Pradesh

Age-group	Rural	Urban	Combined
15-19	205.6	242.0	209.0
20-24	312.8	289.7	308.9
25-29	281.8	214.6	267.6
30-34	232.7	139.6	214.1
35-39	156.1	95.8	143.1
40-44	84.4	56.9	79.3
45-49	35.6	20.1	32.7
General marital fertility rate	208.3	159.6	199.3
Total marital fertility rate	6.5	5.3	6.3

TABLE-4

Estimated age-specific death rates by sex, 1989

Uttar Pradesh

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
	0-4	40.2	51.1	45.2	21.7	23.6	22.7	37.2	45.9
5-9	2.9	5.3	4.0	1.7	2.1	1.9	2.7	4.6	3.6
10-14	2.0	2.1	2.0	1.0	0.8	0.9	1.8	1.8	1.8
15-19	1.7	2.9	2.2	1.5	2.7	2.1	1.7	2.9	2.2
20-24	2.5	5.3	3.8	2.8	2.5	2.7	2.5	4.7	3.6
25-29	2.5	3.0	2.7	1.2	1.6	1.4	2.2	2.7	2.4
30-34	2.6	3.1	2.8	3.5	0.8	2.1	2.7	2.6	2.7
35-39	4.9	4.1	4.5	1.8	1.8	1.8	4.3	3.6	3.9
40-44	6.9	4.1	5.6	8.6	5.6	7.1	7.3	4.4	5.9
45-49	9.6	6.8	8.2	8.4	5.0	6.7	9.3	6.4	7.9
50-54	16.3	10.3	13.4	15.3	8.3	11.8	16.1	9.9	13.1
55-59	22.1	16.8	19.8	25.9	8.1	16.9	22.7	15.2	19.3
60-64	35.1	27.8	31.4	28.6	23.7	26.0	34.1	27.1	30.5
65-69	51.0	42.7	47.0	61.0	23.7	41.4	52.6	39.3	46.0
70+	89.1	78.7	84.1	108.9	48.6	76.7	91.9	73.5	82.9
All ages	13.0	14.4	13.7	9.4	7.1	8.2	12.4	12.9	12.6

TABLE-5

Mortality Indicators, 1989

Uttar Pradesh

Indicators	Uttar Pradesh		
	Rural	Urban	Combined
Crude death rate	13.7	8.2	12.6
Infant mortality rate	126	75	118
Neo-natal mortality rate	74.2	35.3	68.5
Post-natal mortality rate	51.4	39.5	49.6
Peri-natal mortality rate	51.3	22.4	47.1
Still birth rate	10.7	5.9	10.0

TABLE 6

Percent distribution of sample births by type of medical attention at birth, 1989

Uttar Pradesh				
Sector	Type of medical attention at birth			
	I	T	U	O
Rural	2.4	18.1	78.3	1.2
Urban	12.1	53.3	33.5	1.1
Combined	3.9	23.5	71.4	1.2

- 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 7

Percent distribution of sample deaths by type of medical attention received before death, 1989

Uttar Pradesh				
Sector	Type of medical attention at death			
	I	M	U	N
Rural	5.3	52.2	29.7	12.8
Urban	6.4	75.0	8.6	10.0
Combined	5.4	55.0	27.1	12.5

- 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, 1989

West Bengal

Age groups	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
	0-4	14.5	14.6	14.5	9.1	10.0	9.5	12.9	13.3
5-9	11.1	11.1	11.1	9.1	10.3	9.7	10.5	10.9	10.7
10-14	12.2	12.0	12.1	9.9	10.5	10.2	11.5	11.6	11.5
15-19	11.9	11.2	11.6	9.9	10.3	10.1	11.3	11.0	11.2
20-24	8.6	9.3	8.9	9.5	10.4	9.9	8.8	9.6	9.2
25-29	8.4	8.5	8.4	9.5	10.2	9.8	8.7	8.9	8.8
30-34	7.5	6.9	7.2	8.9	8.4	8.7	7.9	7.3	7.6
35-39	6.5	6.1	6.3	8.0	6.7	7.4	6.9	6.3	6.6
40-44	4.7	4.3	4.5	6.3	5.5	5.9	5.2	4.6	4.9
45-49	4.2	4.2	4.2	6.0	4.6	5.4	4.7	4.3	4.5
50-54	3.1	3.3	3.2	4.4	3.8	4.1	3.5	3.4	3.5
55-59	2.9	3.2	3.0	3.7	3.1	3.4	3.1	3.2	3.1
60-64	1.8	1.8	1.8	2.1	2.1	2.1	1.9	1.9	1.9
65-69	1.5	1.7	1.6	1.7	1.9	1.8	1.6	1.8	1.7
70+	1.4	1.8	1.6	1.7	2.3	2.0	1.5	1.9	1.7

TABLE-2

Estimated age-specific fertility rates
and other fertility indicators, 1989

Age-group	West Bengal		
	Rural	Urban	Combined
15-19	98.9	45.5	85.4
20-24	237.8	146.3	211.0
25-29	179.9	114.3	159.8
30-34	124.9	67.7	107.2
35-39	66.5	31.0	56.3
40-44	36.8	8.9	27.8
45-49	11.3	6.2	9.9
Crude birth rate	30.7	18.4	27.2
General fertility rate	125.1	71.5	109.5
Total fertility rate	3.8	2.1	3.3
Gross reproduction rate	1.8	1.0	1.6

TABLE-3

Estimated age-specific marital fertility rates
and other fertility indicators, 1989

Age-group	West Bengal		
	Rural	Urban	Combined
15-19	273.9	290.6	276.0
20-24	301.1	253.8	290.1
25-29	198.6	143.5	183.2
30-34	144.6	76.4	123.1
35-39	82.0	34.3	67.2
40-44	42.2	10.3	31.9
45-49	15.1	7.9	13.0
General marital fertility rate	171.3	106.6	153.6
Total marital fertility rate	5.3	4.1	4.9

TABLE-4

Estimated age-specific death rates by sex, 1989

Age groups	West Bengal								
	Rural			Urban			Combined		
	Male	Female	Person	Male	Female	Person	Male	Female	Person
0-4	24.8	22.6	23.7	13.6	16.0	14.8	22.5	21.3	21.9
5-9	2.7	2.6	2.6	2.0	1.1	1.6	2.5	2.2	2.4
10-14	1.3	1.3	1.3	0.4	0.8	0.6	1.1	1.2	1.2
15-19	1.9	2.8	2.3	1.7	0.6	1.2	1.8	2.2	2.0
20-24	1.9	3.3	2.6	0.8	2.5	1.6	1.5	3.0	2.3
25-29	2.9	3.4	3.1	2.7	2.4	2.6	2.9	3.1	3.0
30-34	1.9	2.9	2.3	1.8	1.9	1.9	1.9	2.6	2.2
35-39	3.3	4.9	4.1	2.6	3.3	2.9	3.1	4.4	3.7
40-44	6.2	4.0	5.2	3.2	3.2	3.2	5.2	3.8	4.5
45-49	8.4	6.0	7.3	4.0	2.9	3.5	6.7	5.1	6.0
50-54	14.7	10.7	12.7	14.0	7.6	11.3	14.4	9.8	12.2
55-59	21.6	15.0	18.2	24.9	16.6	21.5	22.8	15.4	19.2
60-64	32.1	26.4	29.3	34.3	28.8	31.8	32.8	27.1	30.1
65-69	55.2	38.8	46.7	47.0	37.8	42.6	52.6	38.5	45.5
70+	107.5	93.9	100.0	79.3	69.3	74.0	98.1	86.1	91.6
All ages	9.7	9.2	9.5	7.2	6.7	7.0	9.0	8.6	8.8

TABLE-5

Mortality Indicators, 1989

Indicators	West Bengal		
	Rural	Urban	Combined
Crude death rate	9.5	7.0	8.8
Infant mortality rate	83	53	77
Neo-natal mortality rate	49.8	27.4	45.6
Post-natal mortality rate	32.8	25.6	31.4
Peri-natal mortality rate	45.7	28.0	42.3
Still birth rate	16.8	8.3	15.2

TABLE 6

Percent distribution of sample births by
type of medical attention at birth, 1989

West Bengal				
Sector	Type of medical attention at birth			
	I	T	U	O
Rural	22.4	7.5	69.7	0.4
Urban	77.1	10.2	12.6	0.1
Combined	29.6	7.8	62.3	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 7

Percent distribution of sample deaths by type
of medical attention received before death, 1989

West Bengal				
Sector	Type of medical attention at death			
	I	M	U	N
Rural	8.9	32.5	37.3	21.3
Urban	37.8	51.8	4.4	6.0
Combined	13.6	35.6	32.0	18.8

- 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

Crude Birth Rate (CBR)	$\frac{\text{Number of live births during the year}}{\text{Mid-year Population}} \times 1000$
Crude Death Rate (CDR)	$\frac{\text{Number of deaths during the year}}{\text{Mid-year Population}} \times 1000$
Infant Mortality Rate (IMR)	$\frac{\text{Number of infant deaths during the year}}{\text{Number of live births during the year}} \times 1000$
Still Birth Rate (SBR) (IMR)	$\frac{\text{Number of still births during the year}}{\text{Number of live births + still births during the year}} \times 1000$
Peri-natal mortality Rate (PNR)	$\frac{\text{Number of still births + infant deaths of less than 7 days during the year}}{\text{Number of live births + still births during the year}} \times 1000$
Neo-natal mortality Rate (NMR)	$\frac{\text{Number of infant deaths of less than 28 days during the year}}{\text{Number of live births during the year}} \times 1000$
Post Neo-natal Mortality Rate (PNMR)	$\frac{\text{Number of infant deaths of over 28 days during the year}}{\text{Number of live births during the year}} \times 1000$
Age-specific Fertility Rate (ASFR)	$\frac{\text{Number of live births in a particular age-group}}{\text{Mid-year female population of the same age-group}} \times 1000$

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

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

$$\text{Gross Reproduction Rate (GRR)} = \frac{5 \times \sum_{15-19}^{45-49} \text{ASFR for female live births}}{1000}$$

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

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

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

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

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500 Copies — September, 1992

Cover Ptd. at : M/s. Sunlight Printers,
2265, Dr. Sen Marg, Delhi-6 Phone : 233363