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CENSUS OF INDIA 1961

VOLUME V

GUJARAT

PART I-B

REPORT ON VITAL STATISTICS
AND
FERTILITY SURVEY

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CENSUS OF INDIA 1961

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PREFACE

As in several other fields, the 1961 Census has enlarged the scope of the Report on Vital Statistics by including the results of Fertility Survey specially undertaken through trained investigators. Of the three determinants of population growth, migration, a relatively small factor except in highly urbanised areas, is discussed in the General Census Report. Various aspects of vital statistics dealing with the other determinants, viz., birth and death and the resultant survival rates have been traditionally analysed by the Census in the general report. But on the present occasion, along with the vital statistics of the past decade 1951-1960, results of the Fertility Survey conducted for the first time throughout the State on a random sample basis are discussed in a separate publication.

The present volume is in two parts, one on Vital Statistics and the other on Fertility Survey. The defects in the registration and maintenance of vital statistics are patent and not peculiar to Gujarat alone. But this State, including as it does components of three different political units in existence till 31st October 1956 which were carved out from over two hundred princely States and former districts of Bombay Presidency prior to 1948 had the added handicap of not having in most of its areas any system much less a uniform system of registration of births and deaths.

The Fertility Survey forms the second part of the present series. The particulars regarding the selection of the sample, conduct of the survey, the definitions and methodology adopted, etc., are explained in the body of the report.

In addition to inset tables, each of these reports is followed by a set of tables discussed therein.

I must acknowledge the work done by Shri D. C. Mehta, Officer-in-charge, Bureau of Health Intelligence of the Directorate of Health and Medical Services, Government of Gujarat, in preparing the preliminary draft of the report on Vital Statistics in spite of the heavy responsibilities of his own office. Shri U. D. Vora, the Research Officer supervised the compilation of statistics and also prepared the preliminary draft of the report on Fertility Survey. The actual compilation and checking of the various inset and other tables were handled by Shri J. K. Patel, Statistical Assistant, helped by Compilers Sarvashri A. C. Patel and K. C. Desai.

The summary tables on Fertility Survey compiled by the Deputy Registrar General after studying the main Fertility Tables compiled by this office are incorporated in the summary tables on which those printed in the text and Tables of the report are based. My thanks are also due to Shri S. Raghavachari, Senior Research Officer of the office of the Registrar General, India, for going through the draft reports and for some valuable suggestions made by him.

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Superintendent of Census Operations,
Gujarat.

AHMEDABAD,
3rd December, 1965.

PART A

VITAL STATISTICS

CHAPTER I

INTRODUCTION

1 General Background

1.1 A SERIES of tables on vital statistics have been compiled from various sources in the State. One of the major source is the Directorate of Health and Medical Services, Ahmedabad, with which rests the responsibility of collecting,compiling, analysing and publishing the annual vital statistics for Gujarat. Many of the tables are, therefore, extracted from the annual reports published by the Health Directorate. This report is the first attempt of its type in the State to collect and publish available vital statistics over a period of years. Most of the data presented and percentages and rates calculated are liable to underestimate several times the actual occurrences. There are many defects and loop-holes, short-comings and incompleteness which will be discussed in detail in the later part of the Report. The tables are presented with a view to focus the attention of various public agencies utilising vital statistics on the deplorable state of birth and death registration in the State and pinpoint the improvement or deterioration over a period of years.

2 Vital Registration in Other Countries

2.1 The system of registration of vital occurrences was imperfect even in modern countries like England and the United States of America. The inadequacy of vital statistics in England and the spur of a devastating cholera epidemic in 1831-32 which took a toll of nearly 42,000 lives in Great Britain and Ireland led in 1836 to the enactment of registration law and creation of a central registry which undertook the responsibility for the maintenance of records and statistics of births, marriages, and deaths by cause for England and Wales. The Act of 1836 was the prototype of the first State Registration Law in America, which Massachusetts adopted in 1842 and strengthened in 1844. Strong measures to improve vital registration over a period of past 60 years in U.S. has resulted in a vastly improved system which still adopts the same techniques with a view to its further improvement.

3 Attempts to Improve Vital Registration System in India

3.1 The registration system of India dates back to the sixties of the last century. The system has been established in most of the states for many decades. There has been a long series of studies and reports[1] of the actual functioning of the system, which have recognized the defects of the existing system and have made various recommendations for its improvement.

4 Vital Statistics—Their Importance

4.1 Before we go into the somewhat intricate manner in which vital records are collected and processed, it will be useful to get a clear picture of their basic purpose. Vital statistics play an important role in the everyday life of an individual, a community and a nation. Births and deaths represent the two major episodes in the life of an individual. All persons have some kind of personal interest in these records, either in the form of a birth certificate or of a death certificate. The measurement of the level of births and deaths is of great importance in various fields of planning, viz., water-supply, food, housing, etc.

4.2 Educational authorities have to plan for school facilities as the youngsters approach primary school, secondary school and college age. Basic studies on fertility of the population, the age groups of parents in which the greatest

1. The Central Advisory Board of Health (1939), the Health Survey and Development Committee (1949), the WHO Fales Report (1952), the Scheme for the Improvement of Population Data of the Registrar General, India (1952), the Report of the Committee to Study and Report on Pattern of Statistical Units for Health Departments (1960), the Linder Report (1960), the Recommendations of the Conference on Improvement of Vital Statistics held under the auspices of the office of the Registrar General, India (1961), a Programme to Improve the Measurement of Life and Death in India hy Dr. F. E. Linder (1963).

number of children are born, changes in the average size of the family, are some of the important figures obtained through vital registration. The requirements for national planning and family planning have added a new and more urgent need. Institutions of learning, private foundations engaged in research of various kinds, have constant recourse to birth and death data.

4.3 Vital statistics have been called the " eyes and ears " of the Public Health agencies—local, district, State and National—and all sound community planning is based upon them. Only with such data at their fingertips can the health authorities gauge the health needs of the community and organise whatever health services may be necessary. Public health authorities make continuous use of birth statistics in following up new babies for smallpox and vaccination. Immunisation must be provided to protect infants against infectious diseases. A continuous study of mortality data helps in determining where further medical research is needed, and the areas where medical service facilities must be strengthened. Mortality data based on death records play a vital part in pinpointing health signals which no other available factor does so successfully. And no other available data can serve so reliably to direct public attention towards 'danger areas'. In addition, there are deaths caused by accidents, which can be studied both for preventive and curative purposes even without a medical cause of death certificate. The cause of death data collected from non-medical sources has highly limited utility. In short, health authorities make continuous use of vital statistics data in planning and evaluation of their health programmes.

4.4 All Governments must, at some point, gear all planning and operation based on data thus obtained. The list of uses is endless. There is hardly any phase of life which vital statistics do not touch.

4.5 Their collection, compilation and analysis is a huge cooperative endeavour in which a vast number of people take part at all levels of Government.

5 Concepts and Definitions

5.1 Vital statistics to be useful should conform to accepted concepts and definitions. In order to maintain comparability at various levels, the accepted definitions should be uniformly defined. In general the vital events on which data are being collected by registration method are those relating to live births, deaths and foetal deaths (late foetal deaths or still-births). The definition of each such event should conform so far as possible, to the international definitions used for statistical purposes so as to make the data truly comparable. Standard international definitions laid down in this behalf are given in Appendix I.

CHAPTER II

REGISTRATION SYSTEM

1 Changes in State and District Boundaries

1.1 VITAL STATISTICS are presented by calendar, year, according to periods of Gregorian calendar i.e., solar month, quarter or year. Further, they should be based on the exact area under registration, its population and the number of events registered during a specified period. However, in some cases there are changes in boundaries either of talukas and districts. In such cases it is quite essential to lay down correct procedures so that there is close correspondence between the growth of population on the one hand and vital events on the other. In the decade under study, there was no uniform practice regarding reporting of vital events after taking into account changes in territorial boundaries of administrative units. They should be compiled according to the former boundaries during the year of change, but presented according to the new territorial limits, from next calendar year of registration. Detailed territorial transfers between registration areas of towns within the State during the decade 1951–61 are given in Appendix II.

2 Legal Provisions

2.1 The system of registration of births and deaths was different in each of its principal constituents, viz., Gujarat, Saurashtra and Kutch. Gujarat State has followed the registration procedure of the former Bombay State. There were no acts or statutory provisions for the enforcement of vital registration in the rural areas of the former Bombay State (and hence in Gujarat State) where registration is still done by village officials under administrative instructions issued by the Government in the Manual of Revenue Accounts reproduced as Appendix III. In municipal areas, registration of vital events is compulsory. Individual municipalities have framed their own bye-laws for the registration of births and deaths under the powers given to them by the Bombay District Municipal Act or the Bombay Municipal Borough Act or Bombay Municipal Corporation Act.

2.2 Government of India enacted what is called the Births, Deaths and Marriages Act, 1886 to provide for voluntary registration of births and deaths. It extended to the whole of British India and applied also to British subjects in the provinces and princely States. In the former Saurashtra State, the registration of Births, Deaths and Marriages Act, 1886 was adopted in April, 1954, under Saurashtra Government Law and Justice Department Notification No. LD/D/M/65, dated the 7th April, 1954.

3 Urban Registration System

3.1 In urban areas, the municipalities appoint staff for the registration of vital statistics. The registration staff is usually under their Health Department. The actual work is done by clerks, vaccinators or sanitary inspectors, under the supervision of the municipal health officer, who is the registrar of births and deaths. Where there is no health officer, the sanitary inspector is made responsible for registration work in addition to his existing duties and the Secretary or the Executive Officer of the municipality is the registrar. The registration of vital events is compulsory in municipal areas, and bye-laws require the inhabitants residing within municipal limits to report the occurrences of births and deaths. All municipalities maintain registration offices where such events can be registered. In a few large municipalities, there are two or more registration offices located in various parts of the city, so that the inhabitants residing in these areas have not to travel long distances for registration. Some municipalities also employ inspectors who go round the city wards and try to detect unregistered events. In some municipalities, contractors, caretakers, etc., remain present at the cremation and burial grounds and notify

the death of persons disposed of at these places. Generally, a peon of the municipality collects this information once or twice in a fortnight for central records. Hospitals and maternity homes send information about births and deaths to the municipal registration office in prescribed forms.

3.2 Municipalities send their monthly statements of births and deaths in Village Form No. XIV or forms maintained by them directly to the Health Directorate by the 10th of the following month. Municipalities having population 30,000 and over are required to send weekly consolidated statements in the form given at Appendix IV.

4 Defects in Urban Vital Registration System

4.1 The time limit fixed for sending these returns are not followed strictly by the municipalities. There may be many reasons for such delays which need investigation. In only a few municipalities, special staff is appointed to do registration work, but in most of them it is done by a person who is already made responsible for many other works. In the result, registration work is generally neglected and does not receive the attention it deserves.

4.2 Towns that have framed bye-laws under the powers vested under the existing Acts are few. Uniformity in bye-laws and registration system in all the towns of the State hardly needs any stress.

4.3 According to the principles laid down for the recording, reporting and collecting of vital data for statistical purposes, it is necessary to control the receipt of returns from the registration units. Many a municipality defaulted during the decade, by not keeping any of records of births and deaths, and hence it is not possible to include them in the Report. The proportion of unregistered events may vary from an insignificant amount to a deficiency so great that the calculated rates are almost valueless. The rates thus calculated cannot be relied on even as an indication of trends, since there is no reason to believe that the degree of incompleteness of registration remains constant over a period of years. Attempts have been made by several workers in the field to detect omissions of births and deaths. One of the defects is duplication of entries. This can be overcome by slight changes in the existing reporting system and careful checking at the registration office to ensure that registration is made only by place of occurrence. There are some municipalities which register deaths at the place of disposal of dead body. In case of births, name is generally mentioned only as 'Babo' or 'Baby'. This space can be left blank till the naming ceremony is over. In quite a number of cases the name of the baby is left blank permanently even if the baby is alive. Entries about age, sex, etc., are often left blank in the register. The date of birth or death can be forgotten by the informant, if there is considerable delay between the date of registration and the date of occurrence of the event. Such cases should be immediately brought to the notice of the registrar, so that defective entries can be reduced. Misstatements of age are common both in vital statistics as well as Census data. Heaping of ages due to digital preference for multiples of five and two is marked: A series of other misstatements also occur. One which is of most common occurrence relates to infant deaths under 1 year which are sometimes recorded as "one year". It is advisable to check infant deaths under 1 year with their corresponding birth entries. This will serve a dual purpose. It will check underregistration and correct the rate of infant mortality as well.

4.4 A major confusion occurs during recording of still-birth, as there is no separate register for still-births. The existing procedure to enter still-births in the birth register is not discontinued during the decade. Confusion arises when still-births are entered in birth register giving a serial number. A still-birth is neither a birth nor a death. A separate register is very essential for still-births.

5 Rural Registration System

5.1 Registration of births and deaths in rural areas is the responsibility of the Revenue Department. The village official responsible for it is the Police Patel. But in Kutch areas, the revenue accountant or Talati does this work instead with the help of village Kotwal. In recent times in some areas this responsibility has been taken over by Gram Panchayats. It is interesting to note that in some of the Kutch villages,

shopkeepers also collect information on births and deaths which is subsequently transferred to the registration records maintained by the Talati. The registration of births and deaths is done in Village Form No. XIV according to instructions laid down in Revenue Accounts Manual. All the registration of vital events is made by place of occurrence. In practice, Police Patels generally know about such events or are informed of them by other village functionaries. Information about births is also collected from the local *dais* or trained midwives who usually attend deliveries in the village. Primary health centre staff also supply information about deliveries conducted by them in the homes or maternity wards of the centres to the local registrar.

5.2 The procedure for the collection of data is that the Police Patel forwards the extracts of the birth and death register for the whole month to the taluka officer (Mamlatdar) who in turn forwards them as received to the office of the Director of Health and Medical Services for central compilation. The time limit for sending such monthly returns to the taluka office is on or before the 5th of the following month. The taluka officer has to collect all such extracts every month and forward the bunch of extracts to the Health Directorate on or before the 10th of the following month.

6 Defects in Rural Registration System

6.1 There is no special staff in rural areas for the registration of vital events, which is done by the Police Patels or Talaties who are not trained in the registration of vital statistics in addition to their other multifarious duties. The time limits prescribed are not followed strictly either by the village or taluka officials. The result is repeated reminders and avoidable correspondence and delays in preparation of annual vital statistics report. A detailed study as to why the above time limits are not followed by these officers would really prove useful. For adherence to the time limits thus fixed alone can help in timely compilation of vital statistics at the State level.

6.2 In rural areas, failure to send returns on the part of the registration units is an important cause of discrepancies noticed between the registered vital rates and the true ones. The extent of omissions by registration units can be measured by the number of villages for which birth and death extracts have not been supplied by the taluka officer. It was noted that vital returns were tabulated with whatever data received, with no action taken when local units failed to report. The rural registration units not sending monthly returns to the State office were of the order of 20 per cent for the State. A tightening-up of the control of reporting is indicated to ensure immediate and substantial improvement. In some villages even the Police Patel being illiterate the records have to be maintained by the Talaties or the village accountants.

6.3 Besides under-count of vital events another very important defect in rural registration is the lay statements of cause of death reported by the informants or else recorded by the village officers just by guessing it. An urgently needed reform is the phased introduction of the International Form for Medical Certification of cause of death in all the rural health centres (eventually to be extended to deaths attended by private doctors) for deaths among the inpatients of rural health centres.

CHAPTER III

HISTORY OF VITAL STATISTICS UNIT, COLLECTION, COMPILATION AND ANALYSIS

1 CENTRALISED SYSTEM OF COMPILATION OF VITAL STATISTICS

1.1 IN THE FORMER Bombay State the compilation of vital statistics was decentralised till 1954-55. This practice was obtaining in the eleven districts of Gujarat included in the then Bombay State. The Mamlatdars forwarded the individual village monthly returns to the Assistant Director of Public Health of each group of registration districts of which there were three in Bombay State. Each Assistant Director of Public Health consolidated the returns separately for rural circles from the data received from the Mamlatdars and from similar data received directly from municipal areas. The central compilation of vital events aims at eliminating various types of errors which arise from the existing decentralised system. The taluka and district agencies, if relieved from the manual compilation and tabulation work, will be able to devote more time to the improvement of primary data as well as detection of omissions of registration. The central compilation system will help timely detection of villages not reporting vital events. The decentralised system cannot afford costly machinery at divisional levels nor can it have the trained personnel required to do the job well. The centralised system on the other hand can devise methods to maintain proper control over reporting registration units and ensure more accurate estimates of registered birth and death rates by adjusting population to areas submitting vital returns. The central compilation system aims, in the first instance, at obtaining a detailed list of all registration events for every village and town in Gujarat and, secondly, at direct compilation at the Directorate of Health Services with the help of modern mechanical aids.

2 SAURASHTRA AND KUTCH

2.1 In former Saurashtra State, the compilation of vital statistics was decentralised at taluka office (viz., Mamlatdar or Mahalkari). There was no compilation at the district or State level until 1955. For improving registration and for removing various difficulties encountered with regard to the registration of births and deaths, the then Government of Saurashtra had sanctioned the setting up of a self-contained Central Vital Statistics Section in the Health Directorate with separate staff in January,1955. But the appointment of the proposed staff and the implementation of registration of Births, Deaths and Marriages Act throughout the State had not materialised upto the time of reorganisation of States, and even thereafter. During 1955 records were available for 44 municipal areas only and the same are presented in this Report as then compiled. In the former State of Kutch there was no compilation system at the district headquarters. The compilation was done at the taluka level only.

CHAPTER IV

REGISTERED VITAL RATES

1 METHOD OF DATA COMPILATION BY REGION

1.1 AS ALREADY discussed earlier central compilation of vital statistics was started in Saurashtra and Kutch district during 1955 only, and so all the five districts of the former Saurashtra State and district of Kutch are grouped to form a region for presentation of vital statistics in this Report. These districts had a comparatively poorer system of registration than the rest of the districts of Gujarat. For the presentation of vital statistics, the State is divided into two regions. Region I comprises the districts having comparatively better registration system, i.e., areas other than the districts of the former Saurashtra State and Kutch and Region II includes the rest of the districts of the State having a poor registration system. The data compiled for various tables have been presented separately at the end of the report. The Regions I and II throughout this Report correspond to what has been called Mainland Gujarat and Peninsular Gujarat (exclusive of Amreli district). The districts included in each region are as under:

STATEMENT IV.1

Distribution of districts by Region

Region I	Region II
1 Amreli	1 Jamnagar
2 Banaskantha	2 Rajkot
3 Sabarkantha	3 Surendranagar
4 Mehsana	4 Bhavnagar
5 Ahmedabad	5 Junagadh
6 Kaira	6 Kutch
7 Panchmahals	
8 Baroda	
9 Broach	
10 Surat	
11 Dangs	

The regional pattern seems to have worked well, as the tabulation made in this report shows the difference in the registration of the two areas. There are varying degrees of underregistration in practically all the districts which vary from year to year, a fact which does not allow the deficiencies in the registered rates to be removed satisfactorily even by the method adopted.

2 POPULATION ESTIMATES FOR CALCULATION OF RATES

2.1 The presentation of vital statistics has been extended in several directions for the first time in this publication. To help comparative studies, the data are given for 10 years, viz., 1951 to 1960. As the 1961 Census data on population are available it has been possible to estimate post-censal population, for calculating the various rates shown in this publication, as also to interpolate the mid-year population estimates by simple arithmetic progression from the Census figures of 1951 and 1961. The rates for these years already published in Public Health Reports of the State are based on extrapolated estimates from 1941 and 1951 Census data. Normally in the case of large areas refinements in the method of estimation of population do not materially affect the resulting vital statistical rates. Any practicable simple method is good enough. However, the 1961 Census recorded an accelerated growth rate in Gujarat, which is much above the slower increases recorded in any intercensal period between 1921 and 1951. In the circumstances, it is only to be expected that extrapolation should be unsatisfactory. The State, district and town population estimates based on interpolation, taking due note of changes in boundary during 1951-60, have been adopted throughout. The estimates for towns are usually difficult to extrapolate due to their uneven growth, but the interpolation method of estimation of population is particulary satisfactory in leading to true registered vital rates. In this report the urban and total population have been taken completely in accordance with Census demarcations.

3 POPULATION GROWTH AND VITAL RATES

3.1 The population of Gujarat State has increased by more than 110 per cent in last sixty years. The growth is particularly noteworthy and

continuous after 1921. The decennium 1951–60 has shown an increase of 26.88 per cent compared to 3.79 in the decennium 1911–21. The first twenty years (1901–21) have shown a net growth of only 11.9 per cent, the next twenty years (1921–41) of 34.7 per cent and the last twenty years (1941–61) of 50.6 per cent for Gujarat State, while the corresponding figures for all-India are 6.4, 26.8 and 37.8 per cent. In the last twenty years Gujarat growth rate of 50.6 per cent has shown a marked increase compared to the all-India figure of 37.8 per cent. In the last fifty years, the urban population of the State has shown an increase of 196 per cent as against 91 per cnt for the rural. It is clear that urban growth rate, is roughly double the rural growth rate due to the migration of people from rural areas to the urban.

3.2 Tables 1 and 1A show the decennial live birth, death and infant mortality rate along with the components of population growth in the Gujarat State in Regions I and II from 1911–60 for each decennium by urban and total. The information on population and population growth is available from 1911–1960. But information on vital statistics could not be collected from the compiling sources prior to 1951, and hence could not be included in the report. The following Statement IV.2 gives the information on live birth, death and in ant mortality rates for both the Regions for urban and total areas of the State, 1951–60.

3.3 The registered live birth rates and death rates both for urban and rural areas for the region excluding districts of Saurashtra and Kutch are comparatively higher than for the region comprised of Saurashtra and Kutch districts. The higher figures for urban areas suggest that registration in urban areas is more complete than the rural.

STATEMENT IV.2

Decennial live birth, death and infant mortality rate by urban and total by Regions, 1951–60

Region		Rate		
		Live birth	Death	Infant death
1		2	3	4
I Excluding districts of Saurashtra and Kutch	T	32.2	14.1	94.3
	U	39.2	17.0	113.6
II Five districts of former Saurashtra State and Kutch district	T	20.2	9.0	N.A.
	U	23.4	10.0	N.A.

N.A.=Not available

4 Live Birth, Death and Infant Death Rates by Region During 1951 to 1960

4.1 Tables 2 and 2A show live birth, death and infant death rates during 1951–60 by regions in urban and total areas of the State. In Mainland Gujarat the birth rate varied from 35.6 during the year 1955 to 29.5 during the year 1960 in last ten years. The urban birth rate varied from 42.3 to 36.6 during the same period. The urban birth rate is comparatively higher than the total birth rate during all the ten years under study. This again shows a more complete birth registration in towns than in villages. But it should not lead us to conclude that the registration in urban areas is complete.

4.2 The maximum death rate was recorded as 17.1 during the year 1952 and the minimum as 12.3 during the year 1960. The urban death rate has varied from 22.5 during 1952 to 13.9 during 1959. The urban death rate is also higher than the total for all the ten years. It is not implied that the rates given in Tables 2 and 2A represent the true levels of birth and death rates in the State. There are varying degrees of underregistration in practically all the districts under study. It also varies from town to town and from one area to another.

4.3 The infant mortality rate is highly related to both birth and death registration and should be used with caution. The maximum infant mortality rate was recorded as 120.6 during 1952 which fell to 77.8, the minimum during the year 1959. In urban areas the highest infant mortality was recorded during the year 1952 as 150.7 and the lowest during the year 1960 as 89.9. Since registration data are deficient, no significant conclusions or trends from year to year can be drawn for the State.

4.4 Table 2A represents similar data for the years 1951 to 1960 in the districts of Peninsular Gujarat. The rates are comparatively lower in each year compared with the other districts of Gujarat State. This shows a comparatively poorer state of registration in these districts. The extent of registration even from district to district and from one area to another within a district varies considerably. The maximum birth rate and death rate were recorded as 26.5 during 1951 and 12.1 during 1952 in urban areas. The minimum birth

STATEMENT IV.3

Maximum and minimum recorded vital rates by year with the name of the district in Region I and its urban areas during 1951 to 1960

Total Region I

Year	Live birth rate		Death rate		Infant death rate	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
1	2	3	4	5	6	7
1951	Broach (43.1)	Amreli (23.3)	Broach (17.9)	Sabarkantha (8.5)	Dangs (146.7)	Sabarkantha (66.3)
1952	Broach (38.4)	Amreli (21.0)	Ahmedabad (20.8)	Amreli (10.1)	Ahmedabad (168.6)	Baroda (88.9)
1953	Dangs (38.3)	Amreli (20.4)	Kaira (18.0)	Sabarkantha (9.7)	Ahmedabad (146.3)	Panchmahals (67.9)
1954	Dangs (44.2)	Amreli (21.7)	Kaira (15.8)	Amreli (8.8)	Ahmedabad (132.5)	Baroda (68.1)
1955	Dangs (53.3)	Amreli (23.0)	Broach (16.5)	Amreli (8.2)	Ahmedabad (128.4)	Panchmahals (63.2)
1956	Dangs (53.7)	Amreli (22.0)	Broach (16.9)	Amreli (8.8)	Ahmedabad (131.3)	Panchmahals (64.7)
1957	Dangs (50.0)	Amreli (21.0)	Broach (19.4)	Amreli (8.6)	Ahmedabad (136.1)	Panchmahals (69.7)
1958	Dangs (43.2)	Amreli (19.3)	Broach (22.3)	Amreli (10.1)	Ahmedabad (134.6)	Surat (73.5)
1959	Dangs (46.1)	Banaskantha (30.0)	Broach (18.3)	Panchmahals (10.5)	Ahmedabad (106.9)	Panchmahals (56.0)
1960	Dangs (48.5)	Sabarkantha (20.8)	Dangs (17.4)	Sabarkantha (7.7)	Ahmedabad (100·0)	Surat (62.9)
1951-60	Dangs (45.6)	Amreli (23.5)	Broach (18.1)	Sabarkantha (9.9)	Ahmedabad (131.0)	Panchmahals (7 1·1)

Urban Region I

Year	Live birth rate		Death rate		Infant death rate	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
1	8	9	10	11	12	13
1951	Broach (48.6)	Banaskantha (19.8)	Kaira (22.6)	Amreli (9.9)	Banaskantha (176.9)	Panchmahals (74.3)
1952	Kaira (53.1)	Banaskantha (19.4)	Kaira (32.6)	Amreli (11.7)	Banaskantha (221.8)	Broach (97.2)
1953	Kaira (53.6)	Banaskantha (19.4)	Kaira (27.7)	Panchmahals (10.2)	Ahmedabad (159.8)	Panchmahals (66.4)
1954	Kaira (54.8)	Banaskantha (23.9)	Kaira (23.3)	Amreli (8.6)	Ahmedabad (141.2)	Panchmahals (54.3)
1955	Kaira (56.5)	Banaskantha (26.1)	Kaira (22.3)	Panchmahals (9.3)	Ahmedabad (138.7)	Panchmahals (56.9)
1956	Kaira (53.3)	Banaskantha (18.0)	Kaira (22.8)	Banaskantha (8.9)	Ahmedabad (147.7)	Panchmahals (60.6)
1957	Kaira (51.0)	Banaskantha (18.3)	Kaira (24.4)	Banaskantha (8.5)	Ahmedabad (142.3)	Panchmahals (45.7)
1958	Kaira (49.4)	Banaskantha (22.4)	Kaira (25.7)	Amreli (10.2)	Ahmedabad (147.2)	Panchmahals (50.6)
1959	Kaira (51.6)	Banaskantha (18.9)	Kaira (19.9)	Amreli (7.9)	Ahmedabad (114.5)	Panchmahals (39.8)
1960	Kaira (47.3)	Banaskantha (21.1)	Kaira (22.0)	Amreli (7.6)	Ahmedabad (106.9)	Amreli (34.1)
1951-60	Kaira (51.8)	Banaskantha (20.7)	Kaira (24.2)	Amreli (9.4)	Ahmedabad (143.0)	Panchmahals (57.9)

NOTE :

Figures in bracket denote maximum and minimum vital rates.

rate and death rate were recorded as 16.1 and 7.8 respectively during the year 1958 in Region II. Figures to calculate infant mortality rate were not available for preceding years and so this rate could only be calculated from 1957 to 1960. The infant mortality rate during 1957 was recorded as 37.0 which increased to 102.1 during 1958. The increase is inexplicable except that the vital statistics data collected from this region are much more deficient.

5 Vital Rates by Regions, Districts and Urban Areas

5.1 The annual live births, deaths and infant deaths in each district by year, region and its urban areas are shown in Tables 3 and 3A. Corresponding vital rates are calculated and shown in Tables 4 and 4A. The rates indicate that there are large variations in vital rates by regions, rural and urban areas as well as by district. The rates under no case represent the true rates and the maximum or minimum will merely suggest the areas having better registration or poor registration.

5.2 Statement IV.3 on page 11 gives the maximum and minimum recorded vital rates by year for the districts in Region I and its urban areas during 1951 to 1960.

Region I—Mainland Gujarat

6 Birth Rate

6.1 In Region I as shown in Table 4 during the year 1951 and 1952, Broach district had the highest rate of 43.1 and 38.4 respectively. From the year 1953 onwards to 1960 the district of Dangs had the highest registered birth rate. Dangs is a small rural district and the villages have a well-established registration system in charge of the Police Patel at each village. For the ten-year period Dangs district had the highest registered birth rate. Amreli district had minimum registered rates for eight years out of ten years under study. During the years 1959 and 1960, the backward districts of Banaskantha (30.0) and Sabarkantha (20.8) recorded minimum birth rate, but Amreli had the minimum registered birth rate of 19.3 in the year 1958. Dangs recorded the highest birth rate as 53.7 per 1,000 mid-year estimated population during the year 1956. For the period 1951–60, the maximum live birth rate of 45.6 is recorded by the Dangs district and the lowest rate of 23.5 per cent by Amreli.

6.2 Statement IV.4 shows the maximum, median and minimum recorded live birth rates by year in Region I and its urban areas during 1951 to 1960.

STATEMENT IV.4

Maximum, median and minimum recorded vital rates by year in Region I and its urban areas 1951 to 1960

Live Birth Rate

Year	Total Region I			Urban Region I		
	Maximum	Median	Minimum	Maximum	Median	Minimum
1	2	3	4	5	6	7
1951	43.13	33.86	23.31	48.56	40.41	19.83
1952	38.40	32.66	21.00	53.11	39.81	19.41
1953	38.30	32.11	20.40	53.62	38.27	19.39
1954	44.20	32.93	21.70	54.85	36.40	23.92
1955	53.30	36.22	23.00	56.48	37.64	26.14
1956	53.70	34.09	22.00	53.34	37.15	18.02
1957	50.00	32.11	21.00	50.99	37.11	18.34
1958	43.20	30.79	19.30	49.45	35.92	22.41
1959	46.10	34.70	30.00	51.60	37.33	18.91
1960	48.50	28.86	20.80	47.30	35.79	21.15
1951–60	45.60	32.59	23.50	51.70	38.71	20.75

6.3 In the case of "all areas" for Region I, the highest median value is recorded during 1955 followed closely by the years 1956 and 1959. Barring 1959, it appears that from 1955 onwards Region I shows a progressive decline in the birth rate which perhaps accounts for further deterioration in the quality of the registration of births in recent years.

7 DEATH RATE

7.1 Maximum death rates were recorded in the districts of Broach, Ahmedabad, Kaira and Dangs, the highest (22.3) in Broach district during the year 1958. Minimum death rates were recorded in the districts of Sabarkantha, Amreli and Panchmahals, the lowest being 7.7 per 1,000 mid-year estimated population during the year 1960 in Sabarkantha. Between 1951-60 Broach had the highest recorded death rate (18.1) and Sabarkantha the lowest (9.9).

7.2 Statement IV.5 shows the maximum, median and minimum recorded death rates by year in Region I and its urban areas during 1951 to 1960.

STATEMENT IV.5

Maximum, median and minimum recorded vital rates by year in Region I and its urban areas 1951 to 1960

Death Rate

Year	Total Region I			Urban Region I		
	Maximum	Median	Minimum	Maximum	Median	Minimum
1	2	3	4	5	6	7
1951	17.90	14.35	8.50	22.65	17.01	9.89
1952	20.80	15.24	10.10	32.11	18.77	11.72
1953	18.00	14.07	9.70	27.66	16.84	10.20
1954	15.82	12.98	8.81	23.27	15 00	8.57
1955	16.50	13.73	8.20	22.21	14.09	9.33
1956	16.90	13.33	8.80	22.81	15.77	8.92
1957	19.40	14.38	8.60	24.26	15.82	8.50
1958	22.30	14.98	10.10	25.67	16.16	10.19
1959	18.30	13.34	10.50	19.92	13.50	7.86
1960	17.40	12.54	7.70	21.98	13.91	7.58
1951-60	18.10	14.08	9.90	24.17	15.64	9.41

8 INFANT MORTALITY

8.1 Maximum infant mortality rates were recorded in the districts of Dangs and Ahmedabad and the minimum in the districts of Sabarkantha, Baroda, Panchmahals and Surat. During the past decade Ahmedabad district recorded the highest infant mortality rate as 131.0, while the minimum recorded in the Panchmahals was 71.1 per 1,000 live births. Ahmedabad district had the highest infant mortality rate of 168.6 per 1,000 live births during the year 1952 and Surat the lowest (62.9) in 1960. In the same district infant mortality dropped to a significant extent during the year 1960 as 100.00 per 1,000 live births.

8.2 Statement IV.6 shows the maximum, median and minimum recorded infant death rates by year in Region I and its urban areas during 1951 to 1960.

STATEMENT IV.6

Maximum, median and minimum recorded vital rates by year in Region I and its urban areas 1951 to 1960

Infant Death Rate

Year	Total Region I			Urban Region I		
	Maximum	Median	Minimum	Maximum	Median	Minimum
1	2	3	4	5	6	7
1951	146.70	92.49	66.30	176.92	115.97	74.27
1952	168.60	106.87	88.90	221.80	133.77	97.16
1953	146.30	80.03	67.90	159.76	107.76	66.36
1954	132.50	83.80	68.10	141.24	88.57	54.32
1955	128.40	95.28	63.20	138.68	86.68	56.67
1956	131.30	87.20	64.70	147.73	90.57	60.65
1957	136.10	86.89	69.70	142.27	82.21	45.73
1958	134.60	100.72	73.50	147.25	92.04	50.61
1959	106.90	79.74	56.00	114.54	69.89	39.81
1960	100.00	82.91	62.90	106.93	76.93	34.12
1951-60	131.00	95.08	71.10	142.97	90.74	37.90

STATEMENT IV.7

Maximum and minimum recorded vital rates by year with the name of the district in Region II during 1951 to 1960 and its urban areas

Total Region II

Year	Live birth rate		Death rate		Infant death rate	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
1	2	3	4	5	6	7
1951	Junagadh (22.7)	Kutch (13.2)	Junagadh (11.7)	Rajkot (5.3)	N.A.	N.A.
1952	Junagadh (24.1)	Kutch (13.3)	Junagadh (13.3)	Rajkot (6.0)	N.A.	N.A.
1953	Junagadh (21.9)	Kutch (14.0)	Junagadh (12.5)	Rajkot (6.2)	N.A.	N.A.
1954	Junagadh (24.7)	Kutch (14.1)	Junagadh (12.7)	Rajkot (5.5)	N.A.	N.A.
1955	Surendranagar (28.3)	Kutch (15.6)	Junagadh (10.4)	Rajkot (5.1)	N.A.	N.A.
1956	Surendranagar (33.2)	Kutch (15.2)	Junagadh (11.2)	Rajkot (5.0)	N.A.	N.A.
1957	Surendranagar (29.5)	Kutch (15.10)	Junagadh (12.0)	Rajkot (8.5)	Kutch (62.5)	Jamnagar (20.0)
1958	Bhavnagar (20.6)	Kutch (6.9)	Bhavnagar (10.9)	Kutch (3.2)	Jamnagar (117.2)	Kutch (77.7)
1959	Surendranagar (27.2)	Kutch (10.7)	Junagadh (10.8)	Kutch (4.7)	Jamnagar (105.2)	Surendranagar (76.9)
1960	Rajkot (25.2)	Kutch (8.5)	Junagadh (10.3)	Kutch (3.6)	Junagadh (10 43)	Surendranagar (64.2)
1951-60	Surendranagar (24.0)	Kutch (12.6)	Junagadh (11.3)	Rajkot (6.9)	N.A.	N.A.

Urban Region II

Year	Live birth rate		Death rate		Infant death rate	
	Maximum	Minimum	Maximum	Minimum	Maximum	Minimum
1	8	9	10	11	12	13
1951	Rajkot (36.3)	Surendranagar (18.5)	Kutch (18.8)	Rajkot (17.8)	N.A.	N.A.
1952	Rajkot (30.3)	Surendranagar (16.7)	Kutch (20.4)	Rajkot (7.9)	N.A.	N.A.
1953	Rajkot (28.7)	Surendranagar (17.9)	Kutch (16.2)	Rajkot (7.8)	N.A.	N.A.
1954	Rajkot (28.6)	Kutch (15.1)	Kutch (14.2)	Kutch (6.2)	N.A.	N.A.
1955	Rajkot (32.4)	Jamnagar (17.7)	Kutch (14.5)	Rajkot (4.4)	N.A.	N.A.
1956	Rajkot (31.4)	Jamnagar (19.5)	Kutch (16.2)	Rajkot (5.3)	N.A.	N.A.
1957	Rajkot (28.7)	Jamnagar (17.5)	Junagadh (15.1)	Jamnagar (7.4)	Surendranagar (72.5)	Junagadh (28.8)
1958	Bhavnagar (23.5)	Jamnagar (10.5)	Bhavnagar (11.2)	Kutch (4.7)	Junagadh (111.6)	Jamnagar (80.9)
1959	Rajkot (29.4)	Kutch (14.1)	Junagadh (11.4)	Kutch (5.6)	Rajkot (95.2)	Surendranagar (67.0)
1960	Rajkot (28.4)	Kutch (13.9)	Rajkot (10.4)	Kutch (4.9)	Rajkot (84.2)	Jamnagar (60.4)
1951-60	Rajkot (29.3)	Kutch (18.1)	Kutch (12.3)	Rajkot (8.2)	N.A.	N.A.

N.A.=Not available

NOTE :

Figures in brackets denote maximum and minimum vital rates.

REGION II—PENINSULAR GUJARAT

9 BIRTH RATE

9.1 In Region II as shown in Table 4A the maximum birth rates were recorded in the districts of Junagadh, Surendranagar, Bhavnagar and Rajkot and the minimum in Kutch during the entire period under study. Surendranagar had the highest recorded birth rate of 32.2 during the year 1956.

9.2 Statement IV.8 shows the maximum, median and minimum recorded live birth rates by year in Region II during 1951–60 and its urban areas.

STATEMENT IV.8

Maximum, median and minimum recorded vital rates by year in Region II and its urban areas 1951 to 1960

Live Birth Rate

	Total Region II			Urban Region II		
Year	Maximum	Median	Minimum	Maximum	Median	Minimum
1	2	3	4	5	6	7
1951	22.70	18.14	13.20	36.29	23.94	18.47
1952	24.10	17.13	13.30	30.30	21.72	16.72
1953	21.90	18.99	14.00	28.71	21.54	17.91
1954	24.70	20.72	14.10	28.65	18.92	15.09
1955	28.30	21.54	15.60	32.40	21.73	17.67
1956	33.20	22.85	15.20	31.36	23.45	19.54
1957	29.50	21.02	15.00	28.70	21.40	17.50
1958	20.60	17.34	6.90	23.47	19.09	10.48
1959	27.20	25.00	10.70	29.44	25.28	14.07
1960	25.20	21.48	8.50	28.42	23.03	13.95
1951–60	24.00	20.19	12.60	29.34	21.33	18.07

10 DEATH RATE

10.1 Death rates recorded in the districts of Junagadh and Bhavnagar were found to be the highest during the period under review—13.3 in Junagadh during the year 1952 and 10.9 in Bhavnagar during 1958. The 1951–60 death rate for Junagadh was 11.3. The lowest recorded death rate was 3.2 in Kutch district in 1958. Rajkot district recorded minimum death rates for 7 years out of ten years under study. Minimum death rates were recorded in Rajkot and Kutch districts only.

10.2 Statement IV.9 shows the maximum, median and minimum recorded death rates by year in Region II during 1951–60 and its urban areas.

STATEMENT IV.9

Maximum, median and minimum recorded vital rates by year in Region II and its urban areas 1951 to 1960

Death Rate

	Total Region II			Urban Region II		
Year	Maximum	Median	Minimum	Maximum	Median	Minimum
1	2	3	4	5	6	7
1951	11.70	8.13	5.30	18.80	10.71	7.85
1952	13.30	9.32	6.00	20.36	12.28	7.89
1953	12.50	10.61	6.20	16.25	12.28	7.77
1954	12.70	9.52	5.50	14.23	9.73	6.22
1955	10.40	9.44	5.10	14.51	9.96	4.40
1956	11.20	9.95	5.00	16.20	9.59	5.28
1957	12.00	10.10	8.50	15.12	11.72	7.36
1958	10.90	7.51	3.20	11.21	8.92	4.73
1959	10.80	9.40	4.70	11.37	9.66	5.65
1960	10.30	8.08	3.60	10.37	8.10	4.95
1951–60	11.30	8.80	6.90	12.35	10.37	8.25

11 INFANT MORTALITY

11.1 The highest and the lowest infant mortality rate of 117.2 and 20.0 was recorded in Jamnagar district during the year 1958 and 1957 respectively. Figures of infant deaths for the period 1951 to 1956 are not available and hence not included in the Report.

11.2 Statement IV.10 shows the maximum, median and minimum recorded infant death rates by year in Region II during 1957–60 and its urban areas.

STATEMENT IV.10

Maximum, median and minimum recorded vital rates by year in Region II and its urban areas 1957 to 1960

Infant Death Rate

Year	Total Region II			Urban Region II		
	Maximum	Median	Minimum	Maximum	Median	Minimum
1	2	3	4	5	6	7
1957	62.50	38.44	20.00	72.50	54.64	28.82
1958	117.20	102.98	77.70	111.64	95.02	80.88
1959	105.50	86.49	76.90	95.17	74.46	67.01
1960	104.30	78.70	64.20	84.20	61.28	46.09

NOTE: Data for the years 1951–56 are not available.

URBAN AREAS—MAINLAND GUJARAT

12 BIRTH RATE

12.1 In urban areas of Region I, the registration is comparatively more satisfactory than in the rural areas. Towns of the districts of Broach and Kaira recorded the highest birth rates. During the year 1955 towns of Kaira district recorded the birth rate of 56.5 per 1,000 mid-year estimated population. Except the year 1951, Kaira towns had recorded the highest birth rates during all the years. The ten-yearly birth rate for Kaira district is 51.8 which may give a fairly satisfactory picture of the actual rate of birth in towns. Minimum birth rate was recorded only in Banaskantha district for all the ten years which gives a clear indication that the birth registration in the towns of Banaskantha district is not satisfactory compared with other towns in the region. In 1951–60 birth rate recorded in Banaskantha was 20.7.

12.2 In urban areas, Region I would seem to suggest that registration is much better than in other areas. In this area, it is observed that there is a decline in the birth rate which perhaps accounts for the deterioration in the quality of registration in recent years.

13 DEATH RATE

13.1 Similar to birth registration, the death registration is also at the top during all the years 1951–60 in the towns of Kaira district, where the highest death rate was recorded during 1952 as 32.6 which came down to 19.9 during 1959. The ten-yearly death rate for Kaira towns is 24.2. Minimum death rates were recorded in the towns of Amreli, Panchmahals and Banaskantha. The ten-yearly minimum death rate was the lowest in the towns of Amreli district which came to 9.4.

14 INFANT MORTALITY

14.1 The highest infant mortality rate was recorded as 221.8 per 1,000 live births in the towns of Banaskantha district in 1952. Towns of Ahmedabad district recorded an infant mortality rate of 159.8 during 1953 which came down to 106.9 during the year 1960. Low infant mortality rates were recorded in the towns of Panchmahals, Broach and Amreli, the lowest being 34.1 for the towns of Amreli

district during the year 1960. The lowest infant mortality rate should in no way be compared with the true infant mortality, as the index is highly sensitive for both birth as well as death registration.

REGION II—PENINSULAR GUJARAT

15 BIRTH RATE

15.1 In Region II, towns have better registered rates than the rural areas except in the districts of Junagadh, Surendranagar, Jamnagar and Bhavnagar.

Year	Districts having lower urban birth or death rates than rural areas
1	2
1951	Junagadh
1952	Surendranagar, Junagadh
1953	Surendranagar, Junagadh
1954	Jamnagar, Surendranagar, Junagadh
1955	Jamnagar, Surendranagar, Junagadh
1956	Jamnagar, Surendranagar, Junagadh
1957	Jamnagar, Surendranagar
1958	Jamnagar, Junagadh
1959	Jamnagar, Junagadh
1960	Bhavnagar, Junagadh
1951-60	Jamnagar, Surendranagar, Junagadh

15.2 The highest recorded birth rate of 36.3 was found in the towns of Rajkot district in the year 1951, as against 29.3 for 1951-60. The towns of Rajkot and Bhavnagar districts recorded the highest birth rates. Poor birth rates were recorded in the districts of Surendranagar, Kutch and Jamnagar. The ten-yearly birth rate in the towns of Rajkot district was 29.3 while that in Kutch towns 18.1.

16 DEATH RATE

16.1 The maximum death rate was recorded as 20.4 in Kutch towns during the year 1952 which is the highest during the entire ten-year period. Towns of the districts of Kutch, Junagadh, Bhavnagar and Rajkot recorded the maximum death rates while Rajkot, Jamnagar and Kutch recorded minimum death rates. The ten-yearly maximum (12.3) and minimum (8.2) death rates were recorded in the towns of Kutch and Rajkot districts. Towns of Junagadh district recorded the highest infant mortality of 111.6 during the year 1958, while towns of Jamnagar district recorded minimum infant mortality of 28.8 for 1,000 live births during 1957.

17 LIVE BIRTH RATE, DEATH RATE, INFANT DEATH RATE AND MATERNAL DEATH RATE IN TOWNS HAVING POPULATION OF 30,000 AND OVER BY REGIONS

17.1 Table 5 presents data on live births; deaths, infant deaths and maternal deaths for 19 towns in Mainland Gujarat each with population over 30,000 during 1951-60. Similarly Table 5A presents similar data for 15 towns in Region II Peninsular Gujarat each with population over 30,000 during the years 1959 and 1960. Tables 6 and 6A present data on live birth rate, death rate, infant death rate and maternal mortality rate for each town having population over 30,000 in Region I during 1951-60 and in Region II during the years 1959 and 1960. It should be mentioned here that these towns are almost all municipal towns and have no serious problem of collecting returns, as arises in the case of small towns and rural areas. However, the completeness of registration data and hence their rates depends much on the effectiveness of enforcement of registration, which may vary from being good in some towns to very poor in case of some others. These rates differ for towns in Regions I and II and will therefore, be also discussed separately.

17.2 Statement IV.11 gives maximum and minimum recorded live birth, death, infant death and maternal death rates by year with the name of the town with population over 30,000 in Region I during 1951 to 1960 and in Region II during 1959 and 1960.

17.3 In Region I, from 1951 to 1960 Bulsar town recorded the maximum birth rate of 52.4 in the year 1952 during the course of last eight years. Patan town recorded its maximum birth rate (50.7) during 1951 and Petlad town (49.2) during 1958. Of all the towns, Bulsar recorded its highest birth rate of 52.4 per 1,000 population during 1952, while Patan town recorded its minimum birth rate of 15.3 during 1960. It is surprising to note that Patan recorded its maximum birth rate of 50.7 during 1951 and recorded its minimum birth rate of 15.3 after nine years during 1960, a difference of 35.4. This shows that the registration work has deteriorated greatly

STATEMENT IV.11

Maximum and minimum recorded live birth, death, infant death and maternal death rates and with the name of the town with population over 30,000 in Region I during 1951 to 1960 and in Region II during 1959 and 1960

Year	Max./Min.	Live birth rate		Death rate		Infant death rate		Maternal death rate	
		Region I	Region II	Region I	Region II	Region I	Region II	Region I	Region II
1951	Max.	50.7 (Patan)	N.A.	28.6 (Anand)	N.A.	171.9 (Nadiad)	N.A.	6.6 (Viramgam)	N.A.
	Min.	36.2 (Navsari)	N.A.	11.1 (Bulsar)	N.A.	36.0 (Bulsar)	N.A.	1.6 (Bulsar)	N.A.
1952	Max.	52.4 (Bulsar)	N.A.	27.8 (Sidhpur)	N.A.	196.3 (Viramgam)	N.A.	8.4 (Viramgam)	N.A.
	Min.	34.1 (Mehsana)	N.A.	10.8 (Bulsar)	N.A.	26.4 (Bulsar)	N.A.	0.9 (Dabhoi)	N.A.
1953	Max.	52.3 (Bulsar)	N.A.	24.1 (Anand)	N.A.	187.1 (Viramgam)	N.A.	9.6 (Viramgam)	N.A.
	Min.	34.0 (Mehsana)	N.A.	9.2 (Dohad)	N.A.	26.3 (Bulsar)	N.A.	0.5 (Ahmedabad)	N.A.
1954	Max.	49.4 (Bulsar)	N.A.	19.2 (Patan)	N.A.	153.0 (Ahmedabad)	N.A.	8.2 (Viramgam)	N.A.
	Min.	33.4 (Navsari)	N.A.	8.3 (Dohad)	N.A.	27.6 (Bulsar)	N.A.	0.6 (Godhra)	N.A.
1955	Max.	50.0 (Bulsar)	N.A.	17.4 (Nadiad)	N.A.	150.5 (Viramgam)	N.A.	7.9 (Petlad)	N.A.
	Min.	36.7 (Viramgam)	N.A.	7.5 (Dohad)	N.A.	39.2 (Bulsar)	N.A.	0.6 (Ahmedabad)	N.A.
1956	Max.	48.9 (Bulsar)	N.A.	23.0 (Surat)	N.A.	181.7 (Viramgam)	N.A.	7.2 (Viramgam)	N.A.
	Min.	32.9 (Viramgam)	N.A.	8.1 (Dohad)	N.A.	46.2 (Mehsana)	N.A.	0.6 (Ahmedabad)	N.A.
1957	Max.	47.0 (Bulsar)	N.A.	23.5 (Anand)	N.A.	165.0 (Viramgam)	N.A.	7.9 (Cambay)	N.A.
	Min.	32.7 (Mehsana)	N.A.	8.2 (Dohad)	N.A.	36.4 (Bulsar)	N.A.	0.6 (Ahmedabad)	N.A.
1958	Max.	49.2 (Petlad)	N.A.	23.1 (Petlad)	N.A.	156.7 (Surat)	N.A.	12.3 (Cambay)	N.A.
	Min.	34.0 (Viramgam)	N.A.	9.0 (Mehsana)	N.A.	37.1 (Bulsar)	N.A.	1.2 (Petlad)	N.A.
1959	Max.	48.2 (Bulsar)	31.8 (Junagadh) (Mahuva)	19.6 (Petlad)	15.8 (Junagadh)	198.3 (Viramgam)	193.3 (Dhrangadhra	5.3 (Cambay)	9.8 (Surendranagar)
	Min.	28.9 (Viramgam)	10.6 (Dhrangadhra)	6.3 (Dohad)	4.5 (Morvi)	28.0 (Mehsana)	16.3 (Savarkundla)	0.6 (Bulsar)	1.3 (Bhuj)
1960	Max.	47.8 (Bulsar)	32.3 (Junagadh)	23.9 (Petlad)	13.7 (Junagadh)	152.1 (Viramgam)	117.0 (Rajkot)	6.6 (Cambay)	3.3 (Veraval)
	Min.	15.3 (Patan)	2.1 (Veraval)	6.9 (Dohad)	1.9 (Veraval)	20.8 (Amreli)	13.5 (Savarkundla)	0.1 (Ahmedabad)	0.8 (Gondal)

Region I—Registration area formed of the districts excluding the districts of Kutch and former Saurashtra State
Region II—Registration area formed of the districts of former Saurashtra and Kutch States
N.A.=Not available
Names in brackets denote city or town.

during the period under study in Patan. Maximum death rate of 28.6 was recorded in Anand town in 1951; while minimum death rate (6.3) was recorded during the year 1959 in Dohad. Towns of Anand, Sidhpur, Patan, Nadiad, Surat and Petlad recorded comparatively higher rates at least in one year or more during the last decade. Maximum infant mortality rate was recorded in Viramgam town (198·3) during the year 1959, when it recorded the minimum birth rate and maximum death rate, resulting in the inflation of infant mortality rate. Minimum infant mortality rate was recorded in Amreli town as 20.8 in 1960. These rates have varied considerably from town to town and from year to year. Maximum maternal mortality rate of 12.3 was recorded in Cambay town during the year 1959, while the minimum in Ahmedabad city as 0.1 during the year 1960. These rates have also varied due to the underregistration of live births as well as defective reporting of cause of death.

17.4 In Region II, the data could not be made available for the period 1951 to 1958. Data for years 1959 and 1960 are, therefore, presented. The highest birth rate was recorded in Junagadh town during the year 1960 as 32.3 and the lowest in the same year in Veraval town as 2.1. Similar was the pattern of death rate, Junagadh town recorded the highest death rate (15.8) during 1959 and the lowest at Veraval (1.9) during 1960. Registration in Veraval town is extremely poor. Infant mortality rate of 193.3 was recorded in Dhrangadhra town during 1959, while Savarkundla town recorded it as 13.5 per 1,000 live births during 1960. Surendranagar town recorded the maternal mortality rate of 9.8 during the year 1959, the lowest being 0.8 per 1,000 live births during 1960 in Gondal.

17.5 There is a considerable demographic and public health interest in collecting reliable information on the levels of birth, death, infant death and maternal death rates, but unfortunately registration records are particularly deficient in this matter. In order to focus further attention on these rates, registered rates by town and year may be studied by making frequency distributions as in the following categories. The categories are only suggestive and can under no circumstances be final.

Vital Rate	Category
1	2
Birth rate	Below 25, 25-35, 35 and over
Death rate	Below 10, 10-15, 15 and over
Infant mortality rate	Below 90, 90-99, 100-119, 120-149, 150 and over
Maternal mortality rate	Below 2, 2-4, 5-9, 10-14, 15 and over

18 DEATH BY AGE AND SEX

18.1 Table 7 gives deaths registered by age and sex in Region I and its urban areas during 1951-60 and Table 7A gives similar data during 1958-60 for Region II. The following Statement IV.12 shows proportion of total deaths in different age groups by region and its urban areas.

STATEMENT IV.12

Proportion of total deaths in different age groups by Region and its urban areas

Region	Age group						
	Under 1 year	1-4	5-14	15-39	40-59	60+	Age unknown
1	2	3	4	5	6	7	8
Region I (1951 to 1960)							
Total	21.6	27.3	6.1	13.6	12.5	18.7	0.2
Urban	26.2	23.9	5.2	13.1	12.5	19.0	0.1
Region II (1958 to 1960)							
Total	22.2	28.7	6.6	11.3	9.6	19.8	1.8
Urban	20.5	22.2	6.4	13.4	12.5	24.4	0.6

18.2 The State still suffers from heavy infant and child mortality as roughly about half the total deaths at all ages occur under 5 years. The figures are to some extent affected by differential recording of deaths in different age groups, but such a distortion is not likely to be so great as to seriously misrepresent the broad picture. The proportions show that even though there are large variations in the underregistration of deaths in the regions and its urban areas, the proportions of deaths represented in various age groups are more or less comparable except in a few cases.

18.3 Table 8 gives deaths registered by age and sex in Region I and its urban areas during 1951–60 and Table 8A gives similar data during 1958-60 for Region II. Statement IV.13 given below represents proportion of total deaths in different age groups in Region I and its urban areas.

STATEMENT IV.13

Proportion of total deaths in different age groups in Region I and its urban areas, 1951 to 1960

Year	Total/Urban	Age group						
		Under 1 year	1–4	5–14	15–39	40–59	60 plus	Age unknown
1	2	3	4	5	6	7	8	9
1951	T	23.8	25.2	6.2	17.0	14.2	13.6	..
	U	29.7	22.4	5.0	15.5	13.0	14.4	..
1952	T	21.9	28.3	5.6	15.3	14.8	14.1	..
	U	27.6	26.6	4.9	14.1	13.3	13.5	..
1953	T	21.9	26.5	5.8	15.6	15.0	15.2	..
	U	27.0	23.7	4.7	14.4	13.9	16.3	..
1954	T	22.8	28.6	5.6	14.5	13.0	15.5	..
	U	27.0	25.1	5.0	14.2	12.7	16.0	..
1955	T	23.6	26.3	6.0	12.6	11.5	20.0	..
	U	28.4	22.0	5.1	12.4	11.8	20.3	..
1956	T	22.4	27.9	6.1	12.4	11.1	20.1	..
	U	26.9	25.4	5.5	11.4	11.1	19.7	..
1957	T	20.8	27.2	6.3	12.3	11.6	21.8	..
	U	24.8	22.2	5.7	12.1	12.4	22.8	..
1958	T	19.8	30.2	6.7	11.3	10.2	20.7	0.4
	U	24.8	24.9	5.5	11.3	11.8	21.4	0.3
1959	T	20.7	23.8	5.8	13.4	12.7	23.1	0.5
	U	24.5	19.0	4.9	13.2	13.1	24.8	0.5
1960	T	19.2	28.5	6.6	12.3	10.8	21.9	0.7
	U	21.9	26.3	6.1	12.3	10.9	21.9	0.6

18.4 These data disclose that deaths under 1 year are represented more in urban areas than in the rural areas for all the years from 1951 to 1960. The highest proportion of 28.4 of the total deaths was recorded in 1955 and the lowest 21.9 in 1960 for urban areas. The trend of proportion of total deaths under 5 years had remained more or less constant for all the years under study both for the total areas and the urban areas of the region. For all these years, deaths under 5 years represented about half the total deaths at all the remaining ages. During the year 1959, the proportion of deaths under 5 years was 44.5 for total and 43.5 for the urban areas in the region. Proportion of deaths in the age group 5–14 has remained more or less constant during the decade; while the proportion of deaths in the age group 15–39 has been reduced from 17.0 during 1951 to 12.3 during 1960. Similar trend was also observed among deaths in the age group 40–59. Proportion of deaths in the age group 60 and above has increased steadily from 1951 onwards reaching its maximum during the year 1959, while a slight reduction in the proportion was found during 1960. Ages were not reported in a few cases. Their proportions are shown in the Statement IV.14 which represents proportion of total deaths in different age groups in Region II and its Urban areas.

STATEMENT IV.14

Proportion of total deaths in different age groups in Region II and its urban areas, 1958 to 1960

Year	Total/Urban	Age group						
		Under 1 year	1–4	5–14	15–39	40–59	60 plus	Age unknown
1	2	3	4	5	6	7	8	9
1958	T	21.0	30.6	7.2	11.7	9.3	19.0	1.2
	U	21.0	23.8	6.6	12.9	12.4	23.2	0.1
1959	T	23.6	26.7	6.5	11.4	10.2	20.5	1.1
	U	21.6	20.5	6.2	13.6	12.7	24.9	0.5
1960	T	21.6	29.1	6.0	11.1	8.9	20.0	3.3
	U	18.7	22.6	6.4	13.8	12.2	25.1	1.2

18.5 The trend does not show any special fluctuations as in Region I. The proportions of deaths under 5 years are, however, comparable except for the urban areas during the year 1959. Registration of deaths in the age group 5–14 is comparatively better in Region II than in Region I. Urban/total differeces are also larger in Region II than in Region I. The deaths of ages unknown are also proportionately larger in Peninsular Gujarat except in urban areas for the year 1958.

19 Deaths by Month and Region, 1951 to 1960

19.1 Tables 9 and 9A present annual deaths by month and Regions I (1951-60) and Region II (1958-60), further classified into total and urban. There is seasonal cycle of death rate. However, as the present vital statistics are tabulated by date of registration and not by date of occurrence, it is desirable not to draw any specific conclusions regarding the seasonal variations in death rate. Few selected causes of death can, however, provide a better picture for such a seasonal variation. Since the cause of death data are highly unreliable as discussed in the paragraph that follows it was not possible to tabulate the data except those relating to notifiable diseases, viz., smallpox, cholera and plague. These will be discussed in the later part of the report.

20 Death by Cause and Region

20.1 Tables 10 and 10A represent annual deaths by seven abbreviated causes and their proportion to 1,000 total deaths, by region for the year 1951-1960. In addition to the overall defective nature of vital statistics due to underregistration, the cause of death data are mostly faulty. The reporting of cause of death is generally left to the fancy of the registrant or the Police Patel and neither can specify the real cause of death. The data presented are, therefore, crude except in case of deaths due to smallpox, cholera and plague where some amount of reliability can be expected.

20.2 In the districts of Mainland Gujarat, it appears that about 59.6 per cent of the total deaths were reported as fever. This clearly indicates the lack of proper diagnosis and perhaps treatment too. The percentage of fever deaths reported from urban areas are comparatively smaller in number, the minimum reported as 23.0 per cent during the year 1959. But the percentage of deaths reported due to respiratory diseases is greater in urban areas than in the region taken as a whole. The same tendency is noticed also in the reports of dysentery and diarrhoea. Deaths due to other causes accounted for 52.0 per cent in urban areas during the year 1959. Deaths from smallpox reached peak value during 1958, whereas cholera claimed the highest toll during the year 1953.

20.3 Statement IV.15 on page 22 gives the annual death rates per 10,0000 mid-year estimated population by cause and region for total and uaban areas.

20.4 Specific death rates are calculated for the abbreviated causes per 100,000 mid-year estimated population. In Region I, the specific death rate due to cholera was 8.3 during the year 1953. The next peak year was 1958 having a specific death rate of 3.4. In towns the highest death rate due to cholera was also during the year 1953. During the ten year period, the year 1952 was completely free from cholera epidemic. The urban areas were free during the years 1951, 1952 and 1956. Specific death rate due to cholera was reported to be higher in Region II during the year 1959 than in Region I.

20.5 Smallpox death rate varied from the highest 35.2 during the year 1958 in Region II to the lowest 2.4 in urban areas of Region I during the year 1959. Deaths from smallpox occurred in all the ten years under study with a considerable rise in 1952, 1957, 1958 and 1959. Figures for the years 1952 and 1957 for Region II are not available.

20.6 Fortunately, plague has been wiped out from the State and there has been not a single case of death reported from the epidemic during the decade 1951–1960.

20.7 Specific death rates due to dysentery and diarrhoea, respiratory disease, fevers and other causes were also calculated for urban and total for comparison. During all the years the incidence of urban deaths due to dysentery, diarrhoea and respiratory diseases was considerably higher (almost double the total death rate in some of the years) than the total death rate

STATEMENT IV.15

Annual death rates per 100,000 mid-year estimated population by Region and cause for total and urban areas

		Death rate by cause															
		Cholera		Smallpox		Plague		Dysentry and diarrhoea		Respiratory diseases		Fevers		Others		Total	
Year	Area	I	II	I	II	I	II	I	II	I	II	I	II	I	II	I	II
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1951	T	0.05	N.A.	5.52	N.A.	..	N.A.	19.66	N.A.	157.00	N.A.	832.33	N.A.	391.69	N.A.	1,406.25	N.A.
	U	..	N.A.	7.86	N.A.	..	N.A.	60.05	N.A.	328.06	N.A.	739.03	N.A.	651.92	N.A.	1,786.92	N.A.
1952	T	..	N.A.	16.99	N.A.	..	N.A.	27.52	N.A.	206.79	N.A.	1,019.99	N.A.	440.84	N.A.	1,712.13	N.A.
	U	..	N.A.	35.21	N.A.	..	N.A.	75.98	N.A.	465.37	N.A.	873.28	N.A.	800.88	N.A.	2,250.72	N.A.
1953	T	8.28	N.A.	5.91	N.A.	..	N.A.	23.54	N.A.	186.65	N.A.	819.50	N.A.	416.35	N.A.	1,460.23	N.A.
	U	2.58	N.A.	7.28	N.A.	..	N.A.	54.04	N.A.	376.24	N.A.	623.25	N.A.	798.36	N.A.	1,861.75	N.A.
1954	T	0.01	N.A.	2.65	N.A.	..	N.A.	23.84	N.A.	192.24	N.A.	724.27	N.A.	379.54	N.A.	1,322.55	N.A.
	U	0.03	N.A.	2.84	N.A.	..	N.A.	53.49	N.A.	345.29	N.A.	499.61	N.A.	737.14	N.A.	1,638.40	N.A.
1955	T	0.07	N.A.	5.60	N.A.	..	N.A.	30.23	N.A.	233.43	N.A.	648.11	N.A.	414.03	N.A.	1,331.47	N.A.
	U	0.13	N.A.	4.08	N.A.	..	N.A.	61.66	N.A.	342.97	N.A.	405.42	N.A.	758.58	N.A.	1,572.84	N.A.
1956	T	0.04	N.A.	10.55	N.A.	..	N.A.	31.04	N.A.	229.13	N.A.	631.41	N.A.	433.19	N.A.	1,335.36	N.A.
	U	..	N.A.	13.40	N.A.	..	N.A.	63.22	N.A.	351.65	N.A.	448.09	N.A.	812.15	N.A.	1,688.51	N.A.
1957	T	0.18	N.A.	20.26	N.A.	..	N.A.	30.65	N.A.	220.19	N.A.	678.26	N.A.	462.32	N.A.	1,411.86	N.A.
	U	0.44	N.A.	23.04	N.A.	.	N.A.	60.16	N.A.	339.36	N.A.	480.06	N.A.	775.50	N.A.	1,678.56	N.A.
1958	T	3.45	0.06	37.48	55.18	..	..	47.49	32.87	244.67	89.02	757.48	398.04	488.53	205.10	1,579.10	780.27
	U	1.28	0.12	25.77	44.49	..	..	76.47	63.67	344.62	39.54	490.80	293.02	796.10	326.25	1,735.04	867.09
1959	T	0.76	0.86	3.29	19.39	..	..	33.33	45.64	220.73	114.96	565.58	421.85	495.39	300.75	1,319.08	903.45
	U	0.92	1.40	2.40	9.25	..	..	47.69	73.05	296.38	154.24	321.08	309.18	725.76	427.78	1,394.13	974.90
1960	T	0.44	0.05	6.88	9.49	..	..	30.26	33.73	200.40	84.69	562.78	426.24	427.98	272.11	1,227.74	826.31
	U	0.43	..	4.38	4.49	..	..	57.22	55.98	338.87	124.68	396.93	304.78	704.68	379.61	1,502.44	869.61

T—Total

U—Urban

N.A.—Not available

I—Registration area formed of the districts excluding the districts of former Saurashtra and Kutch States

II—Registration area formed of the districts of former Saurashtra and Kutch States

in both the regions. As reported deaths from fever are proportionally lesser from urban areas, the specific death rate due to fevers is lower in towns compared with the total for all the years and in both the regions. In rural areas deaths are for the most part reported as due to fever, but urban reporting being comparatively more accurate owing to better medical care and reporting facilities, the incidence of deaths from fever is low and that under other diseases correspondingly high. The classification of cause of death data in such a general group as "other causes" is obviously unsatisfactory. The table on deaths by cause only tells the type of causes reported and how they were classified. No significant conclusions can, therefore, be drawn except in case of the death rates due to smallpox, cholera and plague.

21 DEATHS BY SELECTED SPECIAL CAUSES

21.1 Annual deaths from special causes in urban areas of Region I (1951-60) and Region II (1958-60) are given in Tables 11 and 11A and for rural areas in Tables 12 and 12A.

21.2 Statement IV.16 gives the specific death rates per 100,000 mid-period estimated population from selected causes in urban and rural areas by region during 1951-60.

STATEMENT IV.16

Specific death rates per 100,000 mid-period estimated population from selected special causes in urban and rural areas by Region

	Region I (1951 to 1960)		Region II (1958 to 1960)	
Cause of death	Urban	Rural	Urban	Rural
1	2	3	4	5
Enteric Fever	11.18	4.38	7.63	2.80
Measles	35.63	10.20	25.55	31.32
Cerebrospinal fever	1.36	0.00	0.59	..
Malaria	14.79	4.23	2.58	1.67
Influenza	0.14	0.17	0.34	0.08
Black water fever	..	..	..	..
Other fevers	453.26	758.02	258.70	430.51
Dysentery	13.15	7.32	7.62	5.39
Diarrhoea	47.72	13.54	55.09	20.02
Pneumonia	124.40	30.20	10.48	2.77
Phthisis	65.70	42.28	42.21	22.62
Whooping Cough	10.17	10.19	8.20	6.66
Other respiratory diseases	150.74	85.24	75.30	4.48
Diphtheria	3.04	0.49	2.24	0.15
Chickenpox	1.69	1.70	0.70	0.73
Poliomyelitis	0.31	0.05	0.33	0.03
Mumps	0.01	..	..	..
Leprosy	0.46	0.69	0.33	0.06
Cancer	16.33	4.22	17.05	3.33

21.3 The specific death rates calculated show how incomplete and inaccurate the cause of death data are reported to the local registrars by the hospital authorities, physicians and registrants. The rates under no case represent the actual specific rates for particular disease. The death rates due to various causes as given in the table showed higher urban rates than the rural rates except for other fevers, measles and malaria in Region II and leprosy in Region I.

21.4 The information on death rate specific for causes is unfortunately more often a hindrance than a help to the understanding of health problems. In a community where every death is certified by a medical practitioner, it is meaningful and useful, provided the causes of the death are classified and coded according to a uniform system, e.g., the International Classification of Diseases (ICD), and the classification is adequately described.

22 DEATH BY MONTH AND SELECTED CAUSES—CHOLERA, SMALLPOX AND PLAGUE

Cholera

22.1 Tables 13 and 13A give deaths due to cholera by month during 1951-1960 in Region I and during 1958 to 1960 in Region II. The data reveal that during the year 1952 not a single death from cholera was reported in Region I. The highest number of such deaths (1,034) was reported during the year 1953. All the deaths have mostly occurred during the period from May to October except a few where more deaths were reported even during November. The month of September seems to be taking the highest toll of human life from cholera when it rages in an epidemic form.

Smallpox

22.2 Tables 14 and 14A give deaths due to smallpox by month during 1951-60 in Region I and during 1958 to 1960 in Region II. It is surprising to note that not a single year or month was free from a death due to smallpox. In Region I, maximum number of deaths (5,263) were reported during the year 1958, while minimum deaths (339) during the year 1954. In Region II, maximum number of deaths (2,993) were also reported during the same year as in Region I. Majority of deaths occurred during winter and summer months.

As the deaths are reported from several epidemics going on in various parts of the State, it is difficult to arrive at any special conclusions from the data under study. They only establish that smallpox still poses a public health problem for the health workers in the State.

Plague

22.3 Tables 15 and 15A give deaths due to plague by month during 1951-60 in Region I and during 1958 to 1960 in Region II. As noted earlier the disease has been completely wiped out from the State and hence not a single death has been reported due to plague during the period under review.

23 DEATHS BY SPECIAL CAUSES IN TOWNS WITH POPULATION OF 30,000 AND OVER

23.1 Tables 16 and 16A present deaths from special causes in individual towns having population 30,000 and over during the decennium 1951-60 for Region I and during the period 1959 and 1960 for Region II. Statement IV.17 given below presents specific death rates per 100,000 mid-period estimated population from selected causes in cities having population one lakh and over and other towns having population 30,000 to 99,999 in Region I for the period 1951-60.

23.2 The specific death rates calculated for Ahmedabad, Baroda and Surat show large variations in rates from one city to another. Specific death rates for dysentery, diarrhoea, diphtheria and phthisis are comparable for the selected cities, while the deaths due to causes like dysentery, diarrhoea and phthisis are comparable with total rates calculated for other towns having population 30,000 to 99,999. Statement IV.18 reptresents specific death rates per 100,000 mid-period estimated population from selected causes in towns having population 30,000 to 99,999 in Region II for the years 1959 and 1960.

STATEMENT IV.17

Specific death rates per 100,000 mid-period estimated population from selected causes in cities having population one lakh and over and other towns having population 30,000 and 99,999 in Region I, 1951–1960

Disease	Ahmedabad	Baroda	Surat	Other towns having population 30,000 to 99,999
1	2	3	4	5
Enteric fever	8.5	15.9	12.5	12.2
Measles	19.3	36.8	65.3	48.7
Cerebrospinal fever	2.3	5.1	0.4	0.5
Malaria	26.0	4.4	20.6	2.9
Influenza	0.1	0.2	0.3	0.2
Other fevers	162.3	456.4	213.3	589.3
Dysentery	14.0	12.1	12.2	13.8
Diarrhoea	65.0	44.8	57.2	41.5
Pneumonia	244.4	87.2	123.6	52.9
Phthisis	54.4	76.1	78.8	59.6
Whooping cough	4.9	11.5	17.8	12.5
Other respiratory diseases	196.1	84.0	132.6	106.0
Diphtheria	4.1	4.8	4.4	2.3
Chickenpox	0.6	0.5	0.9	2.4
Poliomyelitis	0.1	0.2	0.9	0.5
Leprosy	0.2	0.9	0.2	0.7
Cancer	10.1	17.1	33.0	19.1

STATEMENT IV.18

Specific death rates per 100,000 mid-period estimated population from selected causes in cities having population one lakh and over and other towns having population 30,000 to 99,999 in Region II, 1959–60

Disease	Jamnagar	Rajkot	Bhavnagar	Other towns having population 30,000 to 99,999
1	2	3	4	5
Enteric fever	12.2	12.0	11.9	9.6
Measles	7.8	48.3	76.2	17.6
Cerebrospinal fever	1.9	2.4	3.0	0.2
Malaria	5.2	4.0	0.9	2.9
Influenza	..	0.6	..	0.6
Other fevers	163.9	338.4	273.0	260.2
Dysentery	3.3	2.2	10.1	6.1
Diarrhoea	53.9	104.1	94.8	47.8
Pneumonia	15.9	11.5	18.8	10.1
Phthisis	31.4	56.6	82.8	47.4
Whooping cough	5.2	12.3	26.0	5.4
Other respiratory diseases	52.4	84.5	129.8	74.2
Diphtheria	5.9	7.0	3.6	1.5
Chickenpox	0.7	0.6	0.6	0.3
Poliomyelitis	0.3	0.2	..	0.3
Leprosy	..	..	..	0.4
Cancer	28.4	27.9	29.6	15.3

23.3 The trends of specific death rates for the cities of Jamnagar, Rajkot and Bhavnagar are very nearly similar.

24 DEATHS BY RELIGION

24.1 Tables 17 and 17A give annual deaths by religion with their rates during 1951-60 for Region I and during 1958 to 1960 for Region II.

The recorded rates by region broadly show that the death rate among Jains, Christians and other religions was comparatively lower than one noticed among Hindus and Muslims. Between the two, higher death rate was recorded among Hindus. Among the latter the highest and the lowest recorded rates were 17.6 and 12.6 during 1952 and 1960 respectively. Annual death rates by religion, for Region I (1951–60) and Region II (1958–60) are given in the following statement.

STATEMENT IV.19

Annual death rates by religion and Region, 1951-60

Year	Hindu	Muslim	Jain	Christian	Others	All religions
1	2	3	4	5	6	7
Region I						
1951	14.39	12.24	7.33	9.67	7.50	14.06
1952	17.59	14.43	7.39	12.35	7.84	17.12
1953	14.95	12.69	7.28	10.69	6.90	14.60
1954	13.54	11.44	6.47	9.46	7.03	13.22
1955	13.58	11.96	6.09	11.75	7.54	13.31
1956	13.62	12.01	6.46	10.05	7.81	13.35
1957	14.49	12.00	6.02	9.19	5.99	14.12
1958	16.15	14.03	5.77	13.24	7.46	15.79
1959	13.56	10.87	5.04	9.86	9.62	13.19
1960	12.62	10.17	4.98	8.04	7.56	12.28
*Region II**						
1958	8.54	4.08	1.14	2.01	1.01	7.80
1959	9.69	6.10	1.89	1.18	3.35	9.03
1960	8.99	4.60	1.18	1.33	4.36	8.26

*Rates for the years 1951–57 are not available.

25 INFANT MORTALITY BY REGIONWISE DISTRICTS AND PERIOD OF LIFE

25.1 The statistics of infant deaths by their period of life attract special interest of the experts in the field, as such a classification broadly confirms to the nature of causative factors. District-wise infant deaths by age and sex and urban areas during the decennium 1951–60 are given in Table 18 for Region I and for Region II in Table 18A. Deaths during early infancy are to a great extent due to congenital diseases such as immaturity, birth injuries, congenital malformation, whereas those in the later months are mainly due to infectious and parasitic diseases. The latter causes have more easily been controlled by providing appropriate health services to the community. Statement IV.20 on the next page shows proportions of infant deaths reported under 1 year in the four periods of life, namely, (i) within 7 days of birth, (ii) 7 days to under 1 month, (iii) 1 month to 5 months, (iv) 6 months to 11 months of birth by district, region and its urban areas.

25.2 The proportion of infant deaths in the various periods of life vary considerably from district to district in both the regions and for urban areas. Broadly speaking, the number of deaths in the four periods afore-mentioned may be expected to be equal (i.e., 25 per cent each) in most cases. Further if the age reporting under one year is perfect, the total for periods I and II should be equal to half the infant deaths under 1 year. In India, during the period 1956–59 and 1960 the following proportions were obtained in the four periods of life mentioned above.

	1956–59				1960			
Country	I	II	III	IV	I	II	III	IV
India	24	21	28	27	22	21	28	29

STATEMENT IV.20

Proportion of infant deaths under 1 year by age in districts and their urban areas by Region, 1951-60

District	Total/Urban	Infant deaths under 1 year by specified duration			
		Under 7 days	7 days to 1 month	1 month to 5 months	6 months to 11 months
1	2	3	4	5	6
Total/urban					
Region I					
Amreli	T	10	12	38	40
	U	14	14	32	40
Banaskantha	T	16	15	39	30
	U	15	11	33	41
Sabarkantha	T	17	18	32	33
	U	18	15	28	39
Mehsana	T	9	13	38	40
	U	16	15	31	38
Ahmedabad	T	20	13	29	38
	U	24	13	28	35
Kaira	T	14	16	34	36
	U	15	15	32	38
Panchmahals	T	16	19	36	29
	U	20	17	30	33
Baroda	T	13	15	34	38
	U	20	15	30	35
Broach	T	19	20	34	27
	U	19	20	31	30
Surat	T	26	16	34	24
	U	36	13	26	25
Dangs	T	20	24	31	25
*Region II**					
Jamnagar	T	14	14	35	37
	U	14	13	33	40
Rajkot	T	15	15	36	34
	U	20	13	33	34
Surendranagar	T	15	16	31	38
	U	19	16	26	39
Bhavnagar	T	14	14	33	39
	U	20	15	29	36
Junagadh	T	13	12	34	41
	U	18	15	33	34
Kutch	T	11	11	38	40
	U	17	6	33	44

*Figures relate to years 1958-60 as figures for 1951 to 1957 are not available.

25.3 These four periods have a special significance in order to determine the underregistration among infant deaths. Only districts of Surat and Dangs have followed roughly this general pattern, while other districts are marked by deficiency in the registration of deaths under one month. Higher percentages in the periods III and IV clearly show underregistration in the periods I and II.

25.4 Statement IV.21 represents the maximum and minimum percentage of infant deaths by periods with the name of the district by region and urban areas, 1951-1960.

25.5 Infant deaths are generally missed to a greater extent during registration than at higher age groups. The table attempts to show districts where there are larger deficiencies of infant underregistration by period of life. The district having maximum proportion of deaths in periods I or II and minimum in periods III or IV shows comparatively by better registration by period of life for infants as in Surat district. Poor registration is the result where reverse is the case as in the districts of Mehsana and Amreli. Region II as a whole represents comparatively poor state of registration not only for total deaths but even for infant deaths.

STATEMENT IV.21

Maximum and minimum percentage of infant deaths under one year in periods with the name of district by Region and their urban areas, 1951-60

Area	Maximum/ Minimum	Period of life under 1 year: Under 7 days	7 days to 1 month	1 month to 5 months	6 months to 11 months
	1	2	3	4	5
Region I					
Total	Maximum	Surat (26)	Dangs (24)	Banaskantha (39)	Mehsana, Amreli (40)
	Minimum	Mehsana (9)	Amreli (12)	Ahmedabad (29)	Surat (24)
Urban	Maximum	Surat (36)	Broach (20)	Banaskantha (33)	Banaskantha (41)
	Minimum	Amreli (14)	Banaskantha (11)	Surat (26)	Surat (25)
*Region II**					
Total	Maximum	Rajkot, Surendranagar (15)	Surendranagar (16)	Kutch (38)	Junagadh (41)
	Minimum	Kutch (11)	Kutch (11)	Surendranagar (31)	Rajkot (34)
Urban	Maximum	Bhavnagar, Rajkot (20)	Surendranagar (19)	Jamnagar, Rajkot, Junagadh, Kutch (33)	Kutch (44)
	Minimum	Jamnagar (14)	Kutch (6)	Surendranagar (26)	Rajkot, Junagadh (34)

*Figures relate to years 1958-60.

26 Infant Mortality in Towns Having Population of 30,000-99,999 and Cities with Population of 1 Lakh and Above

26.1 Table 19 gives the number of infant deaths under one year by towns having population 30,000 and above during the period 1951-60, for Region I. Table 19A provides similar data for the years 1959 and 1960 for Region II. Statement IV.22 shows proportion of infant deaths under one year by cities having population 100,000 and over and total for other towns having population 30,000 to 99,999.

STATEMENT IV.22

Proportion of infant deaths under one year in cities having population 100,000 and over and total for other urban areas population 30,000 to 99,999 by region

Population size of cities/towns	Infant deaths under 1 year by specified duration: Under 7 days	7 days to 1 month	1 month to 5 months	6 months to 11 months
1	2	3	4	5
Region I (1951 to 1960)				
Cities having population above 100,000				
Ahmedabad	24	13	28	35
Baroda	21	14	30	35
Surat	37	12	26	25
Other towns having population 30,000-99,999				
Other towns combined	19	15	30	36
Region II (1959 and 1960)				
Cities having population above 100,000				
Jamnagar	12	8	35	45
Rajkot	24	12	32	32
Bhavnagar	17	17	28	38
Other towns having population 30,000-99,999				
Other towns combined	19	16	33	32

26.2 There is no comparability in the proportions for cities having population 100,000 and over in both the regions. Ahmedabad, Baroda and Rajkot have comparable proportions during the period of 7 days to 1 month. In other periods there is greater divergence rather than comparability. The highest proportion of infant deaths under 7 days was 37 per cent in Surat and the lowest was 12 per cent in Jamnagar among cities having population 100,000 and over. Regional comparison for towns having population 30,000-99,999 is given in Statement IV.23 below.

STATEMENT IV.23

Proportion of infant deaths under one year for towns having population 30,000 to 99,999 by age groups under one year and Regions

Age group (under 1 year)	Proportion of infant deaths under one year for towns having population 30,000 to 99,999	
	Region I	Region II
1	2	3
Under 1 month	34	35
1 month-11 months	66	65

27 BIRTH ORDER STATISTICS IN CITIES HAVING POPULATION OVER 1 LAKH

27.1 The data on live births by their order registered in four cities, namely, Ahmedabad, Baroda, Surat and Rajkot having population over 1 lakh available for the period 1956 to 1960 are presented in Table 20. No such information was available from Bhavnagar and Jamnagar municipalities. Statement IV.24 represents percentage of live births by birth order in cities each with population over 1 lakh (excluding Bhavngar and Jamnagar towns) during the period 1956 to 1960. The data appear to be quite useful for the purpose of showing fertility pattern or any marked trends in fertility. Fertility has been uncontrolled in these towns and all over the State, but an active family planning programme may reduce higher order of live births.

27.2 The fertility data thus collected through vital statistics relate to women who had a live birth during the years under study.

27.3 In all the towns, higher order births are considerable, a fact which also gives a high crude birth rate. Statement IV.24 presents percentage of live births by their order in cities having population over 1 lakh, 1956-1960.

STATEMENT IV.24

Percentage live births by their order to total live births by cities having population one lakh and over, 1956-60

City	Live birth order											
	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Over 10th	Twins
1	2	3	4	5	6	7	8	9	10	11	12	13
Total	**16.5**	**16.4**	**16.6**	**15.2**	**11.6**	**8.3**	**5.8**	**3.9**	**2.6**	**1.6**	**1.4**	**0.1**
Ahmedabad	15.0	16.4	17.4	16.2	12.3	8.5	5.8	3.7	2.1	1.5	1.1	..
Baroda	17.1	16.0	15.3	14.1	11.4	9.0	6.3	4.4	2.8	1.8	1.5	0.3
Surat	18.6	17.1	16.2	13.7	10.0	7.4	5.4	4.3	3.2	1.8	2.3	..
Rajkot	22.1	16.5	14.8	13.1	10.4	7.4	5.6	3.7	2.6	1.8	2.0	..

27.4 The general level of the proportion of first order births to total live births is the highest in Rajkot (22.0 per cent) and the lowest in Ahmedabad (15.0 per cent). Second order live births percentage varied from 16.0 in Baroda to 17.1 in Surat while the third order live births varied from 14.8 in Rajkot to 17.4 in Ahmedabad. If we take the 1st, 2nd and 3rd under live births together to total live births registered for all these cities, the following order emerges.

City	Percentage of live births 1st, 2nd and 3rd order taken together
1	2
Rajkot	53.4
Surat	51.9
Ahmedabad	48.8
Baroda	48.4

27.5 This shows that approximately half the total live births registered are fourth and over. Rajkot and Surat recorded more than 50 per cent in the first three order live births, but this percentage was less than 50 in Ahmedabad and Baroda. The general level of the proportion of first, second and third order live births had remained more or less constant, if all the four cities are taken together. The observed differences are negligible. There is a reduction in proportion of 1.4 per cent from third to fourth order live births. The maximum reduction in proportion from fourth to fifth order was 3.6 per cent and from fifth to sixth order 3.3 per cent. These differences slowly decline and are practically reduced to zero between 10th and 10th and over order for live births. If these percentages are combined for all these cities from (i) lst to 3rd; (ii) 4th to 6th and (iii) 7th and over, the following proportions are obtained :

Grouping	Percentage live births
1	2
lst to 3rd . .	49.5
4th to 6th . .	35.1
7th and over . .	15.4

27.6 Approximately 50 per cent of the total registered birth rate are claimed by 4th and higher order live births. This pattern is also roughly followed in all the cities of India having population 1 lakh and over and probably in other towns and rural areas. When these percentages are compared with the data available from various countries, it can be concluded that in countries which have a low birth rate, first to third order births account for 75 to 80 per cent of the total live births. These figures indicate that the only way to lower birth rate is to reduce 4th and higher order births which comprise about half the total live births. The family planning workers will do well to concentrate on the reduction of the higher order births.

28 Live Births by Mother's Age in Cities with Population over 1 Lakh

28.1 Table 21 presents live births by age of mother and birth order and Statement IV.25 shows the percentage live births by mother's age in cities having population over 1 lakh, 1956–60.

STATEMENT IV.25

Percentage live births by mother's age in cities having population over one lakh, 1956-60

City	Age of mother								
	Under 15	15–19	20–24	25–29	30–34	35–39	40–44	45 plus	Twins
1	2	3	4	5	6	7	8	9	10
Total	**N**	**7.0**	**30.3**	**29.0**	**20.3**	**10.2**	**2.8**	**0.3**	**0.1**
Ahmedabad	N	6.6	28.5	30.3	30.8	10.5	3.0	0.3	..
Baroda	0.1	7.1	30.4	29.2	20.5	9.6	2.5	0.3	0.3
Surat	N	8.2	33.4	26.0	19.9	9.7	2.4	0.4	..
Rajkot	0.2	7.1	37.3	25.6	16.5	9.5	3.3	0.5	..

N=Negligible

28.2 There seems to be certain measure of uniformity in these figures. The highest proportion of live births is registered in age group 20–24 except in Ahmedabad where the highest proportion was in the age group 25–29. Proportions in the preceding and proceding age groups, viz., 15–19 and 30–34 are very much lower compared with the age groups 20–24 and 25–29. Approximately 60 per cent of all the live births to mothers are in the age groups 20–24 and 25–29, proportions decline sharply in 35–39 and 40–44 age groups while the proportion of live births at ages 45 and over are practically negligible showing that for practical purposes the reproductive period of a Gujarati woman is 15–44. Women whom the family planning programme should aim at bringing under its purview are mothers aged 20–34 when the birth rate seems to be the most prolific.

CHAPTER V

SUMMARY AND CONCLUSIONS

1 Vital statistics appearing in this report are those that have been compiled by the Office of the Director of Health and Medical Services, Ahmedabad, at the direction of the Registrar General, India, and presented in the annual reports published by that Directorate. This report attempts to present the various aspects of vital statistics with a view to focus attention of various public and Government agencies utilising them on the deplorable state of birth and death registration in the State of Gujarat.

2 The report brings out the relative degree of deficiency or otherwise of the existing registration system in the urban and rural areas of the State. For the proper presentation of vital data, the State has been divided into two regions, viz.,Region I and II. Region I comprises the districts having comparatively better registration system than the districts of the former Saurashtra and Kutch States in Region II. This method had worked well by assisting comparisons between two well-defined zones with similar characteristics correlated to the degree of reliability and accuracy of vital registration.

3 The vital statistics data relate to the decade 1951-1960 with the interpolated population base from the 1951 to mid 1960 Census population by arithmetic progression. Population has grown by 110 per cent during last sixty years of which 50.6 per cent has been added in the last twenty years only.

4 The registered live birth and death rates for towns, districts, urban and rural areas of a district suggest that Region I had comparatively higher registered rates than Region II. The urban registration seems to be more complete than the rural. Next to the overall defective under-registration, the cause of death data presented are mostly faulty. The causes presented here are of the crude form except deaths due to smallpox, cholera and plague where some amount of reliability can be expected. Smallpox, cholera and plague are compulsorily notifiable diseases and hence health authorities are always conscious about their occurrence and modulity in any part of the State. Monthly deaths are tabulated by date of registration and not by date of occurrence. Infant deaths are missed to a greater extent during registration than the deaths at higher ages. Study of infant deaths by period under 7 days, 7 days to 1 month, 1 month to 5 months and 6 months to 11 months has shown that the proportion of infant deaths varied considerably from district to district as also for different areas—rural or urban. Deaths by religion showed the highest death rate among Hindus. For all the years under study, deaths under 5 years represent about half the total deaths of all ages. The maternal mortality rates have varied considerably from town to town, district to district and urban to rural and from one year to another, due to underregistration of live births as well as defective reporting of causes of death data due to puerperal causes.

5 Live birth data were studied for four cities having population over 1 lakh except Bhavnagar and Jamnagar. Approximately 50 per cent of the total registered births in these towns is claimed by the 4th and higher order live births. Similar pattern is observed in other cities of India also.

6 The statistics presented in this report show varying degrees of deficiencies both quantitative and qualitative. However, this division clearly indicates the average and poor existing registration system in each region of the State. These shortcomings will have to be borne in mind by those who have an occasion to use them.

ANNEXURE

A SPECIAL STUDY

1 The following study carried out by Dr. Vishvanathan and Dr. T. B. Patel in order to arrive at the most probable cause of death in rural areas during the decade deserves mention.

2 The Public Health Department of the old Bombay State organised a mass revaccination drive in the rural areas of Maharashtra and utilised this occasion to collect through vaccinators and sanitary inspectors information on births and deaths that occurred in the preceding 12 months by house-to-house visits in selected villages. The villages were selected from administrative convenience, and were, therefore, not random samples. The information thus collected was compared with the birth and death registers to find out omissions. In this survey, cause of death was also ascertained.

3 This work was done under the supervision of the District Health Officer, Medical Officer and Senior Sanitary Inspectors. The health staff was given training in the collection of such data and the fixation of cause of death on the basis of replies to a set of questions suggested in 'Abbreviated List of 50 Causes for Tabulating Mortality". The cause of death was initially given by the vaccinator and subsequently checked by the Medical Officer of Health. The Statement on the next page shows the death rate per lakh of enumerated population according to International B List. The causes are shown in order of rates. Corresponding rates shown in column 5 covering deaths recorded in 1960 in the Sirur Health Unit in Maharashtra are also given. For convenience of reference the rates obtained from the revaccination drive source are called 'Field' data in contrast with the Sirur data, which are based on information collected as the death occurred. In both the studies, that "Senility, ill-defined and unknown causes" should occupy the first place is only to be expected in such an approach, where information on cause of death is ascertained after death by para-medical staff through interrogation of the relatives. However, it is remarkable that the 'Field' rate is quite high, compared with the Sirur rate for this cause-group. It is surprising that mortality from 'birth injuries, post-natal asphyxia and atelectasis' was nil in the first compared to 21 per lakh population in 'Field' data. The groups 'other diseases peculiar to early infancy, and immaturity unqualified' 'pneumonia', and 'bronchitis', correctly seem to occupy the high position that they do. Other causes where larger differences were obtained were tuberculosis and respiratory diseases, dysentery, anaemia, typhoid fever, measles, diphtheria and whooping cough. Death from accidents, violence and injuries combined accounted for 1.7 per cent of total deaths in the 'Field' data and 5.1 per cent in Sirur data, the majority being deaths by 'homicide'. The 'malaria' death rate is worth noticing. In short, the statement suggests the contrast between the 'Field' and the Sirur data.

STATEMENT

Death rate per lakh according to Field and Sirur Survey

Sl. No.	List B Code No.	Cause group	Rate per lakh Field	Sirur
1	2	3	4	5
		Total deaths	**5,463**	**1,286**
		Total death rate	**2,093**	**1,230**
1	45	Senility without mention of psychosis, ill-defined and unknown causes	488	233
2	44	Other diseases peculiar to early infancy, and immaturity unqualified	286	90
3	31	Pneumonia	183	197
4	1	Tuberculosis of respiratory system	150	27
5	32	Bronchitis	145	66
6	6	Dysentery, all forms	88	118
7	21	Anaemia	72	32
8	4	Typhoid fever	66	15
9	46	All other diseases	47	188
10	14	Measles	44	18
11	12	Acute poliomyelitis	43	0
12	8	Diphtheria	40	2
13	9	Whooping cough	40	22
14	17	All other diseases classified as infective and parasitic	36	23
15	43	Infections of the newborn	36	17
16 BN	47	Fractures, head injuries and internal injuries 1)		2,
17 BN	48	Burns 2)	35	14, 61
18 BN	49	Effects of poisons 3)		6,
19 BN	50	All other injuries 29)		39,
20	2	Tuberculosis, other forms	32	12
21	30	Influenza	28	0
22	27	Other diseases of heart	27	16
23	24	Rheumatic fever	23	2
24	40	Deliveries and complications of pregnancy, childbirth, and the puerperium	23	12
25	42	Birth injuries, postnatal asphyxia and atelectasis	21	0
26	36	Gastritis, duodenitis, enterities, and colities, except diarrhoea of the new born	20	14
27	34	Appendicities	17	20
28	16	Malaria	15	21
29	25	Chronic rheumatic heart disease	13	0
30	26	Arteriosclerotic and degenerative heart disease	13	0
31	33	Ulcer of stomach and duodenum	13	0
32	15	Typhus and other rickettsial diseases	11	0
33	20	Diabetes mellitus	7	0
34	22	Vascular lesions affecting central nervous system	7	0
35	41	Congenital malformations	6	0
36	18	Malignant neoplasms, including neoplasms of lymphatic and haemato-poietic tissues	5	9
37	35	Intestinal obstruction and hernia	5	3
38	13	Smallpox	4	1
39	38	Nephritis and nephrosis	4	1
40	10	Meningococcal infections	4	0
41	28	Hypertension with heart disease	4	0
42	29	Hypertension without mention of heart	3	0
43	19	Benign neoplasms and neoplasms of unspecified nature	1	1
44	37	Cirrhosis of liver	1	3
45	23	Non-meningococcal meningitis	1	0
46	39	Hyperplasia of prostate	1	0
47	3	Syphilis and its sequelae	0	1
48	5	Cholera	0	0
49	7	Scarlet fever and streptococcal sore throat	0	0
50	11	Plague	0	0

Source :

Vital Statistics of India, 1960

APPENDIX I

Standard International Definitions of Vital Events

1 *Live Birth*

1.1 Live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart; pulsation of the umbilical cord, or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached; each product of such a birth is considered live born.

1.2 All live born infants should be registered and counted as such, whether alive or dead at the time of registration and irrespective of the period of gestation. If they die at any time following birth they should also be counted as deaths.

2 *Death*

2.1 Death is the permanent disappearance of all evidence of life at any time after a live birth has taken place.

2.2 In other words, death is a postnatal cessation of vital functions without capability of resuscitation. The definition, therefore, excludes foetal deaths.

3 *Foetal Death*

3.1 Foetal death is death prior to the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy; the death is indicated by the fact that after such separation the foetus does not breathe or show any other evidence of life, such as beating of the heart, pulsation of the umbilical cord, or definite movement of voluntary muscles.

3.2 If such a product of conception has attained at least 28 weeks of gestation, it may be termed a still-birth.

4 *Maternal Death*

4.1 For the purpose of calculating the maternal mortality rate, a maternal death is defined as a death from a puerperal cause. A cause of death is defined as "puerperal" if it is coded to any one of the code numbers 640–648, 650–652, 670–689, in Section XI of the International Classification of Diseases—"Deliveries and Complications of Pregnancy, Childbirth, and the Puerperium". From the public health standpoint we also want to know about death of mothers during pregnancy, childbirth, or the puerperium from non-puerperal causes, e.g., tuberculosis, because the pregnancy or delivery may have been a contributory factor. When possible, such deaths are tabulated under the heading "Maternal deaths from associated causes".

Source :

1. Principles for a Vital Statistics System, United Nations, Statistical Papers, Series M., No. 19
2. Summary of the Proceeding of the Conference on Improvement of Vital Statistics, New Delhi. 18 April–22 April 1961, issued by the Registrar General, India

APPENDIX II

Population in 1951 of Districts as Constituted in 1961

DISTRICTS SHOWING 1951 POPULATION ACCORDING TO TERRITORIAL JURISDICTION IN 1951, CHANGES IN AREA AND THE POPULATIONS INVOLVED IN THOSE CHANGES

[The State of Gujarat was created on the 1st day of May, 1960 by Union Act XI of 1960 out of the former States of Bombay, Saurashtra and Kutch.]

State/District	Area in 1961		1961 population	Area in 1951		1951 population according to jurisdiction prevailing in 1951	Population in 1951 adjusted to jurisdiction in 1961	Net increase(+) or decrease(—) between Cols. 7 and 8
	Sq. miles	Sq. km.		Sq. Miles	Sq. km.			
1	2	3	4	5	6	7	8	9
GUJARAT STATE	**71,055.8**	**184,034.5**	**20,633,350**	**58,751.0 (+12,304.8)**	**152,165.1 (+31,869.4)**	**16,149,036 (+113,621)**	**16,262,657**	**(+) 113,621×**
Jamnagar **	4,020.1	10,412.1	828,419	3,411.0 (+609.1)	8,834.5 (+1,577.6)	574,472 (+42,424)	616,896	(+) 42,424
Rajkot †	4,270.9	11,061.6	1,208,519	4,417.0 (—146.1)	11,440.0 (—378.4)	1,045,675 (—115,651)	930,024	(—) 115,651
Surendranagar ††	3,927.6	10,172.5	663,206	3,509.0 (+41 8.6)	9,088.3 (+1,084.2)	495,928 (+10,431)	506,359	(+) 10,431
Bhavnagar ‡	3,575.4	9,260.3	1,119,435	3,682.0 (—106.6)	9,536.4 (—276.1)	1,020,130 (—134,536)	885,594	(—) 134,536
Amreli ○	2,478.7	6,419.8	667,823	1,536.0 (+942.7)	3,978.2 (+2,441.6)	317,203 (+221,322)	538,525	(+) 221,322
Junagadh ‡‡	4,100.8	10,621.1	1,245,643	3,427.0 (+673.8) *	8,875.9 (+1,745.2) *	1,001,154 (—13,559)	987,595	(—) 13,559
Kutch	16,567.3	42,909.3	696,440	8,300.0 (+8,267.3) w	21,497.0 (+21,412.3) w	567,606	567,606	..
Banaskantha §	4,648.6	12,039.9	996,144	3,986.0 (+662.6)	10,323.8 (+1,716.1)	748,796 (+25,098)	773,894	(+) 25,098
Sabarkantha	2,735.0	7,083.6	918,587	2,447.0 (+288.0) @	6,337.7 (+745.9) @	684,017	684,017	..
Mehsana §§	3,603.5	9,333.0	1,689,963	4,125.0 (—521.5)	10,683.8 (—1,350.8)	1,471,662 (—78,078)	1,393,584	(—) 78,078
Ahmedabad ‡‡‡	3,443.5	8,918.7	2,210,199	3,401.0 (+42.5)	8,808.6 (+110.1)	1,685,630 (—9,880)	1,675,750	(—) 9,880
Kaira	2,670.8	6,917.4	1,977,540	2,564.0 (+106.8) @	6,640.8 (+276.6) @	1,612,426	1,612,426	..
Panchmahals §§§	3,450.6	8,937.0	1,468,946	3,499.0 (—48.4)	9,062.4 (—125.4)	1,148,432 (—17,189)	1,131,243	(—) 17,189
Baroda ::	3,012.9	7,803.4	1,527,326	2,788.0 (+224.9)	7,220.9 (+582.5)	1,194,746 (+17,189)	1,211,935	(+) 17,189
Broach †††	2,985.2	7,731.7	891,969	2,934.0 (+51.2)	7,599.1 (+132.6)	706,035 (+11,507)	717,542	(+) 11,507
Surat ∴	4,875.9	12,628.6	2,451,624	4,067.0 (+808.9)	10,533.5 (+2,095.1)	1,827,842 (+154,543)	1,982,385	(+) 154,543
Dangs	689.0	1,784.5	71,567	658.0 (+31.0) @	1,704.2 (+80.3) @	47,282	47,282	..

NOTE :

× Columns 5 to 9 do not reflect changes in regard to the State as such between 1951 and 1961, because Gujarat did not exist as a separate unit in 1951. These entries against the State depict only the changes in the districts that constituted the State in 1961.

* This is inclusive of 485·5 sq. miles of Gir forest.

w This is inclusive of 9,000 sq. miles of Rann of Kutch.

@ Though these districts have not shown any increase or decrease in population since 1951, there is an increase in area due to survey of unsurveyed areas.

NOTE–*contd.*

(Figures within brackets represent area in sq. miles)

** Okhamandal taluka (273.3) of Amreli district was transferred to Jamnagar district under Bombay Government Resolution, R. D., No. T. L. C. 3858-C dated 19-6-1959.

† 1 Under Bombay Government Resolution, R. D., No. T. L. C. 3858-C dated 19-6-1959.

(a) Babra taluka (142.4) *minus* the following villages was transferred to Amreli district.

Veraval (1.0), Patiali (2.2), Ankadia (2.8), Somalpur (1.4), Belda (1.0), Sanala (1.4), Sartanpur (1.3), Vanala (1.4), Bhadli (0.6) and Gadhala (1.9).

(b) Kunkavav-Vadia taluka (366.1) *minus* the following 15 villages and 1 town viz., Vasavad (3.6) was transferred to Amreli district.

Devla (4.5), Mota-Khambhalia (4.7), Sajadiali (1.1), Mota-Sakhpur (2.1), Nana-Sakhpur (1.3), Vinjivad (1.9), Sultanpur (11.2), Moti-Khilori (6.8), Derdi (12.2), Ransika (3.8), Ravna (3.6), Dharala (2.0), Pat Khilori (3.0), Kadaya (1.3) and Dangavadar (3.4).

Out of these 15 villages and 1 town viz., Vasavad (3.6), the last two villages were transferred to Dhari taluka of Amreli District.

2 Bheda-Pipalia (2.8) village of Bhesan mahal of Junagadh district was transferred to Jetpur taluka of Rajkot district under Saurashtra Government Notification No. REV/5-Formation-79 dated 20-1-1956.

3 Tajpur-Timba village was transferred to Dhoraji taluka of Rajkot district from Junagadh taluka of Junagadh district under Saurashtra Government, R. D., No. REV/formation 39 dated 29-9-1952

†† Patdi town (14.5) and Kharaghoda (4.5) village were transferred from Viramgam taluka of Ahmedabad district to Dasada taluka of Surendranagar district under Bombay Government Resolution, R. D., No. T. L. C. 3858-C dated 19-6-1959.

‡ 1 Under Bombay Government Resolution, R. D., No. T. L. C. 3858-C dated 19-6-1959.

(a) Entire Ghogho mahal (224.7) was transferred from Amreli district to Bhavnagar district.

(b) Navagam (2.5), Italia(0.9), Ratanpur (4.5), Mevasa (6.7), Monpur (24.4) and Shahpur (4.1) villages of Damnagar mahal of Amreli district were transferred to Vallabhipur mahal of Bhavnager district.

(c) Khijadia (2.8) village of Damnagar mahal of Amreli district was transferred to Gadhada mahal of Bhavnagar district.

(d) Shilana (5.3), Jamka (5.0), Khijadia (3.0), Sanalia (3.0), Halaria (5.0), Hularia (4.0), Bhath (3.0), Gigasan (6.0), Bhayavadar (3.0), Dahida (4.0), Dhasa (Gopalgaon) (8.5), Dholarva (4.0), Manavav (5.0), Padargadh (6.0), Moti-Garamli (4.0), Charkha (8.0) and Kathivadar (3.0) villages of Kundla taluka were transferred to Dhari taluka of Amreli district.

(e) Rajula mahal (292.3) *minus* Biladi (2.5) village was transferred to Amreli district.

(f) Entire Jafrabad mahal (148.6) was transferred to Amreli district.

(g) Entire Lilia mahal (152.1) was transferred to Amreli district.

(h) Lathi mahal (214.8) *minus* the following villages was transferred to Amreli District.

Monapur (6.8), Rikhadia (2.5), Shedubhar (9.0), Haripura (3.1), Surajpur (0.9), Chital (14.9), Anida (2.9), Bhandaria (2.1) Chosla (2.1), Dhasa (6.7), Jalalpur (8.9), Limbala (2.2), Malpara (2.1), Mandva (7.5), Mota-Umrala (3.5), Nana-Umrala (4.5), Patan (4.2) and Rasnal (3.8).

Out of these 18 villages, the first six villages were transferred to Amreli taluka of Amreli district and the remaining 12 villages to Gadhada mahal of Bhavnagar district.

2 Bhalvav (4.6), Bhatvadar (6.3) and Vikalia (5.8) villages of Umrala mahal of Bhavnagar district were transferred to Lathi taluka under Saurashtra Government, Revenue Department, Notification dated 25-8-1949. Subsequently the village Vikalia was transferred to Gadhada mahal of Bhavnagar district under Bombay Government Resolution, R. D., No. T. L. C. 3858-C dated 19-6-1959.

3 Kankot (1.0), Pipalava-Mota (1.4) and Pipalava-Nana (0.6) villages of Rajula mahal of Amreli district were transferred to Mahuva taluka of Bhavnagar district under Bombay Government Resolution, No. T. L. C. 1959/26272-C dated 30-3-1960.

4 Barvala (3.6) and Nani-Kundal (3.9) villages of Gadhada mahal of Bhavnagar disrtict were transferred to Babra taluka under Saurashtra Government Notification No. REV/5 dated 23-4-1951.

o 1 Under Bombay Government Resolution, R. D., No. T. L. C. 3858-C dated 19-6-1959,

(a) Monapur (6.8), Rikhadia (2.5), Shedubhar (9.0), Haripura (3.1), Surajpur (0.9) and Chital (14.9) villages of Lathi mahal of Bhavnagar district were transferred to Amreli taluka.

NOTE-*contd.*

(b) Kunkavav-Vadia taluka (366.1) *minus* the following 15 villages and 1 town viz., Vasavad (3.6) was transferred from Rajkot district to Amreli district.

Devla (4.5), Mota-Khambhalia (4.7), Sajadiali (1.1), Mota-Sakhpur (2.1), Nana-Sakhpur (1.3), Vinjivad (1.9), Sultanpur (11.2), Moti-Khilori (6.8), Derdi (12.2), Ransiki (3.8), Ravna (3.6), Dharala (2.0), Pat Khilori (3.0), Kadaya (1.3) and Dangavadar (3.4).

Out of these 15 villages and 1 town, the last two villages were transferred to Dhari taluka of Amreli district and the remaining 13 villages and 1 town viz., Vasavad (3.6) were transferred to Gondal taluka of Rajkot district.

(c) Haliad-Juni (4.4), Haliad Navi (4.3), Ghantiyan (1.8) and Manekwada-Akalpati and Ranpar pati—(1.4) villages of Bhesan mahal of Junagadh district were transferred to Kunkavav-Vadia taluka of Amreli district.

(d) Nava-Zanzaria (1.4) village of Visavadar taluka of Junagadh district was transferred to Kunkavav-Vadia taluka of Amreli district.

(e) Babra taluka (142.4) *minus* the following villages was transferred from Rajkot district to Amreli district.

Ankadia (2.8), Belda (1.0), Bhadli (0.6), Godhala (1.9), Patiali (2.2), Sanala (1.4), Sultanpur (1.3), Somalpur (1.4), Vanala (1.4) and Veraval (1.0).

These villages were transferred to Jasdan taluka of Rajkot district under the same Resolution

(f) Entire Lilia mahal (152.1) was transferred from Bhavnagar district to Amreli district.

(g) Kagadadi (4.3), Kotha Pipalia (5.7), Bhader (4.7), Monvel (3.8), Kathrota (1.4), Mundia (0.5), Boradi (5.5), Mevasa (0.9) and Malsika (4.3) villages of Visavadar taluka of Junagadh district were transferred to Dhari taluka of Amreli district.

(h) Halaria (5.0), Hularia (4.0), Dhasa (Gopalgaon) (8.5), Dholarva (4.0), Dahida (4.0), Gigasan (6.0), Manavav (5.0), Moti-Garamli (4.0), Charkha (8.0), Kathivadar (3.0), Sanalia (3.0), Jamka (5.0), Shilana (5.3), Khijadia (3.0), Bhayavadar (3.0), Padargadh (6.0) and Bhath (3.0) villages of Kundla taluka of Bhavnagar district were transferred to Dhari taluka of Amreli district.

(i) Dhandhvana (2.4), Dadli (2.9), Pachpachiya (1.5), Salva (2.3), Rabarika (1.5), Ambaliala (3.9) and Piparia (2.2) villages of Una taluka of Junagadh district were transferred to Khambha mahal of Amreli district.

(j) Rajula mahal (292.3) *minus* Biladi (2.5) village was transferred from Bhavnagar district to Amreli district.

(k) Entire Jafrabad mahal (148.6) was transferred from Bhavnagar district to Amreli district

(l) Kerala (1.5), Chitrasar (2.2), Rohisa (6.9) and Dharabandar (1.5) villages of Una taluka of Junagadh district were transferred to Jafrabad mahal of Amreli district.

(m) Entire Ghogho mahal (224.7) was transferred from Amreli district to Bhavnagar district.

(n) Entire Okhamandal taluka (273.3) was transferred from Amreli district to Jamnagar district.

(o) Damnagar mahal was abolished in 1959. Out of 30 villages of this mahal, Navagam (2.5), Italia (0.9), Mevasa (6.7), Monpur (24.4), Ratanpur (4.5) and Shahpur (4.1) villages were transferred to Vallabhipur mahal of Bhavnagar district. Khijadia (2.8) village was transferred to Gadhada mahal of Bhavnagar district and the remaining 23 villages were transferred to Lathi taluka of Amreli distrtict.

(p) Lathi taluka reconstituted by (i) 23 villages of Damnagar mahal as shown at (0) above, (ii) former Lathi mahal (214.8) *minus* 12 villages transferred to Gadhada mahal of Bhavnagar district and (iii) 6 villages as shown at (a) above transferred to Amreli taluka.

2 Barvala (3.6) and Nani-Kundal (3.9) villages of Gadhada mahal of Bhavnagar district were transferred to Babra taluka of Amreli district under Saurashtra Government Notification No.REV/5 dated 23-4-1951.

3 Kankot (1.0), Pipalava-Mota (1.4) and Pipalava-Nana (0.6) villages of Rajula mahal were transferred to Mahuva taluka of Bhavnagar district under Bombay Government Resolution, No. T. L. C 1959/26272-C dated 30-3-1960.

4 Bhalvav (4.6), Vikalia (5.8) and Bhatvadar (6.3) villages of Umrala mahal of Bhavnagar district were transferred to Lathi taluka under Saurashtra Government, Revenue Department, Notification dated 25-8-1949. Subsequently the village Vikalia was transferred to Gadhada mahal of Bhavnagar district under Bombay Government, Resolution, R. D. No. T. L. C. 3858-C dated 19-6-1959.

‡‡ 1 Under Bombay Government Resolution, R. D., No. T. L. C. 3858-C dated 19-6-1959,

(a) Ghantiyan (1.8), Haliad-Juni (4.4), Haliad-Navi (4.3) and Manekwada-Akalpati and Ranpar pati (1.4) villages of Bhesan mahal of Junagadh district were transferred to Kunkavav-Vadia taluka of Amreli district.

(b) Bhader (4.7), Boradi (5.5), Kagadadi (4.3), Kathrota (1.4), Kotha pipalia (5.7), Malsika (4.3), Mevasa (0.9), Monvel (3.8) and Mundia (0.5) villages of Visavadar taluka of Junagadh district were transferred to Dhari taluka of Amreli district.

(c) Nava-Zanzaria (1.4) village was transferred to Kunkavav-Vadia taluka of Amreli disticrt.

(d) Ambaliala (3.9), Dadli (2.9), Dhandhvana (2.4), Pachpachiya (1.5), Piparia (2.2), Rabarika (1.5) and Salva (2.3) villages of Una taluka of Junagadh district were transferred to Khambha mahal of Amreli district.

(e) Chitrasar (2.2), Dharabandar (1.5) Kerala (1.5) and Rohisa (6.9) villages of Una taluka of Junagadh district were transferred to Jafrabad mahal of Amreli district.

NOTE-*contd.*

2 Bheda-Pipalia (2.8) village was transferred to Jetpur taluka of Rajkot district under Saurashtra Government Notification No. REV/5-Formation-79 dated 20-1-1956.

3 Tajpur-Timba village of Junagadh taluka of Junagadh district was transferred to Dhoraji taluka of Rajkot district under Saurashtra Government, R. D., No. REV/Formation 39 dated 29-9-1952.

§ 1 Under Bombay Government Resolution, R. D., No. T. L. C. 1254-R dated 15-4-1958,

(a) All the villages of Radhanpur taluka (268.6) *minus* Dadar (3.8), Kharcharia (2.0), Ranawada (5.0), Mandvi (8.8), Bhamathal (2.0), Gochnath (8.3), Dawoodpur (2.5), Babri (2.5), Bismillabad (1.5) and Chandarani (2.8) villages were transferred to Banaskantha district from Mehsana district.

(b) Santalpur taluka (393.0) of Mehsana district was transferred to Banaskantha district.

2 Abu road taluka (303.8) of Banaskantha district was transferred to Rajasthan State, under Bombay Government, P. and S. D., Notification No. SRI-RCR-11456-T dated 12-10-1956.

§§ 1 Under Bombay Government Resolution, R. D., No. T.L.C. 1254-R dated 15-4-1958,

(a) Radhanpur taluka (268.6) *minus* villages Dadar (3.8), Kharchariya (2.0), Ranawada (5.0), Mandvi (8.8), Bhamathal (2.0), Gochnath (8.3), Dawoodpur (2.5), Babri (2.5), Bismillabad (1.5) and Chandarani (2.8), was transferred to Banaskantha district.

(b) Santalpur taluka (393.0) was transferred to Banaskantha district.

2 Rangpur (2.4) village was transferred from Kadi taluka of Mehsana district to Viramgam taluka of Ahmedabad district under Bombay Government Resolution, R.D., No. E-40/1453 dated 27-11-1953.

‡‡‡ 1 Patdi town (14.5), and Kharaghoda (4.5) villages were transferred to Dasada taluka of Surendranagar district from Viramgam taluka of Ahmedabad district under Bombay Government Resolution, R.D., No. T.L.C. 3858-C dated 19-6-1959.

2 Rangpur (2.4) village was transferred from Kadi taluka of Mehsana district to Viramgam taluka of Ahmedabad district under Bombay Government Resolution, R.D., No. E-40/1453 dated 27-11-53.

§§§ Under Bombay Government Resolution, R.D., No. T.L C. 1857-C dated 16-3-1959,

(a) Khandia (1.3), Pachisgam (2.0), Kharakuva (2.4), Bumbkoi (1.5), Marakhla (4.2), Garol (1.4), Navapura (0.9) Kath Mandua (0.4), Vandarda (3.4) and Khokhariveri (0.4) villages were transferred to Sankheda taluka of Baroda district from Halol taluka of Panchmahals district.

(b) Vasvel (3.1), Ambali (1.5), Dankheda (1.1), Chandpur (0.8), Ghodadra (2.2), Valagod (Rustampura) (0.8), Saidal (3.6), Koba (1.2), Kachhota (1.1), Ghoda (0.9), Noorpuri (1.1), Vedpur (3.2), Asha (0.8), Dharola (0.7), Chipad (0.4), Moti-Manekpur (2.6), Nani-Manekpur (0.2), Goraj (5.5) Valva (1.0), Vesania (1.6), Dundelav (0.9), Gambhirpura (0.9) and Hamirpuri (0.2) villages were transferred to Vaghodia taluka of Baroda district from Halol taluka of Panchmahals district.

:: Under Bombay Government Resolution, R.D., No. T.L.C. 1857-C dated 16-3-1959,

(a) Khandia (1.3), Pachisgam (2.0), Kharakuva (2.4), Bumbkoi (1.5), Marakhla (4.2), Garol (1.4), Navapura (0.9), Kath Mandua (0.4), Vandarda (3.4), and Khokhariveri (0.4) villages were transferred from Halol taluka of Panchmahals district to Sankheda taluka of Baroda district.

(b) Vasvel (3.1) Amboli (1.5), Dankheda (1.1), Chandpur (0.8), Ghodadra (2.2), Valagod (Rustampura) (0.8), Saidal (3.6) Koba (1.2), Kachhota (1.1), Ghoda (0.9), Noorpuri (1.1), Vedpur (3.2), Asha (0.8), Dharola (0.7), Chipad (0.4), Moti Manekpur (2.6), Nani-Manekpur (0.2), Goraj (5.5), Valva (1.0), Vasania (1.6), Dundelav (0.9), Gambhirpura (0.9) and Hamirpuri (0.2) villages were transferred from Halol taluka of Panchmahals district to Vaghodia taluka of Baroda district.

††† 1 There were 114 villages in Sagbara mahal in 1951. Under Bombay Government Notification, R.D., No. T.L.C. 3860-C dated 25-4-1960, 37 villages of Akkalkuva taluka and 43 villages of Taloda taluka of West Khandesh district were transferred to Sagbara mahal of Broach district. The Sagbara mahal thus reconstituted was formed into a taluka with effect from 28-4-1960.

2 Later, under Gujarat Government Notification, Agriculture and Lands Department, No. T.L.C-2660/A-5541-L dated 27-9-1960, 53 villages of Sagbara mahal were transferred to Surat district leaving the following 27 villages out of 80 villages originally transferred from West Khandesh district in the Sagbara mahal.

Bhogwad (0.5), Parodi (0.5), Pana (0.4), Pimparipada (0.5), Barktura (N.A.), Anghat (0.8), Khairpada (2.0), Nevadi (0.8), Kolvan (3.1), Chhoti Korali (0.3), Khokwad (1.2), Umran (1.0), Ranipur (0.9), Uman (0.7), Navagam (1.3), Koktipada (1.2), Vadgaon (2.6), Ranjaniwad (1.8), Palaswada (1.7), Javli (1.6), Kenvada (1.0), Khanore (0.5), Dogaripada (0.3), Langadi (0.6), Chatwad (1.2), Medhi (1.0) and Rundigavan (1.2).

NOTE–*concld.*

∴ 1 Under Bombay Government Resolution, R.D., No. T.L.C-3860-C dated 25-4-1960.

(a) Uchhal mahal was newly constituted of :

Anandpur (2.1), Babarghat (2.1), Bhadbunja (2.8), Bhint B.K. (1.7), Bhint Kh. (4.0), Chacharbunda (2.5), Chapti (2.1), Dhaj (0.7), Haripur (2.4), Jamaki (2.0), Jamane (1.1), Kachali (0.7), Kamalpur (0.2), Katswan (2.4), Khabade (1.2), Manikpur (1.7), Mirkot (2.4), Nanchhal (0.9), Narayanpur (12.3), Nurabad (0.8), Pakhari (1.5), Parchuli (1.4), Pethapur (0.9), Sakarde (1.0), Sase (1.4), Sundarpur (2.1), Shelud (1.8), Thutti (2.8), Uchhal (2.1), Vedde Kh. (2.6), Vadapatal (0.6), Zaranpada (1.9), Abhankuwa Kokambe, Chadhavbunde, Chikhli, Mogarani (Forest) (5.9) and Mogarbara (0.5) villages transferred from Nawapur taluka of West Khandesh district and 28 villages of Songadh taluka of Surat district.

(b) Akkalkuva (0.1), Devariamba (1.2), Kewadamoi (0.3), Parod (1.4), Patipada (1.9), Gangtha (1.7), Itwai (0.8), Umja (0.4), Zapaamli (0.9), and Ziribeda (0.6) villages of Akkalkuva taluka of West Khandesh district were first transferred to Sagbara mahal of Broach district and subsequently transferred to Nizar Mahal.

(c) Amode-Tarf Taloda (1.3), Akkalutar (0.2), Amode-Tarf Satone (2.6), Ashrawe (1.3), Ashte-Tarf-Budhaval (1.0), Asapur (0.3), Bahurupe (2.9), Balade (2.1), Balambe (0.7), Bej (2.7), Borikuwa (0.7), Bhamsal (0.9), Chirmati (0.5), Chokhi-amali (0.2), Fulwadi (2.1), Gadid (1.0), Gorase (1.2), Hatode (1.6), Hol (0.7), Kakurmunde (1.9), Kelani (1.4), Kondaraj (1.2), Mohammadpur (0.5), Matawal (1.1), Mendhpur (0.9), Modale (1.1), Morambe (2.1), Nimbhore (2.4), Pati (1.3), Pisawar (1.9), Pimplas (0.8), Panibara (1.0), Ranaichi (1.1), Rajpur (1.0), Sadgavan (2.8), Satole-Digar (0.8), Tulse (1.7), Torande (1.4), Untawad (0.7), Ubhad (1.2), Vesgaon (0.5), Varpade and Zamkati (0.6), Villages of Taloda taluka of West Khandesh were first transferred to Sagbara mahal of Broach district and subsequently transferred to Nizar mahal.

(d) Adhade (1.7), Anturli (2.0), Bhilbhavali (1.9), Bhil Jamboli (3.7), Borde (1.8), Borathe (4.3), Chinchode (1.7), Chorgaon (1.4), Devhale (2.0), Gamadi (1.0), Gujarpur (0.9), Harduli Digar (0.9), Hathoor-Digar (1.8), Hingani Digar (0.8), Velade (7.9), Kavithe (1.1), Khairave Alias Dhanora (1.4), Khodade (2.1), Kothali B. K. (3.5), Lakhamikhede (2.0), Lekurwali (0.9), Mubarakpur (1.7), Nesarpur (1.8), Nevale (1.3), Nizar (5.9), Pimplod Tarf Nizar (2.1), Raigad (7.2), Ranikhadkale (1.4), Sarvale (1.7), Shale (2.5), Shelu (0.8), Sulvade (0.9), Takikhadkala (1.7), Vadali (3.0), Vake (2.5), Vyawal (2.9), Deo-Mogra Gaibi-Umber (N.A.), and Arkinda (N.A.), villages of Nandurbar taluka of West Khandesh district were first transferred to Songadh taluka and subsequently transferred to Nizar Mahal.

2 Umbergaon taluka reconstituted of :

Achhari (1.8), Ahu (1.2), Anagaon (1.6), Anklas (4.9), Bhilad (2.9), Borigaon Tarf Kachigaon (2.9), Borlai (2.4), Dahad (0.7), Dehali (3.7), Dehari (4.2), Dhanoli (1.5), Eklahare (0.9), Ghimsekakaria (0.5), Govad (2.7), Humran (0.6), Gimbari (1.0), Kachigaon (2.3), Kalai (1.8), Kalgaon (8.2), Karambele (2.1), Bhati Karambeli (1.3), Karambali Pali (1.6), Malav (2.2), Mamakwada (0.9), Manda (0.9), Manikpur (1.9), Mohan (3.6), Nagvas (1.3), Nahuli (1.2), Nandgaon (1.3), Nargol (3.6), Palgaon (2.5), Pali (2.3), Phanse (3.8), Punat (2.2), Sanjan (2.3), Sarai (1.2), Saronda (2.6), Shirgaon (6.3), Solsumbha (2.8), Tadgaon (1.8), Talwada (0.8), Tembhi (1.2), Turb (2.7), Valvada (2.3), Vankas (1.8), and Zaroli (3.6), villages and 3 towns viz., Khattalwada (13.4), Maroli (7.1) and Umbergaon (4.6), were transferred from former Umbergaon taluka of Thana district under Bombay Government Resolution, R. D., No. SL/T. L. C /3860-C dated 22-4-1960.

3 Nizar mahal newly constituted of (1) 10 villages of Sagbara mahal of Broach district as shown at 1 (b), (ii) 43 villages of Sagbara mahal of Broach district shown at (c) and (iii) 38 villages of Songadh taluka shown at (d) under Gujarat Government Notification, No. T.L.C./2660/A-5541-L dated 27-9-60.

APPENDIX III

Village Form XIV and Taluka Form XXI Relating to Vital Statistics

INSTRUCTIONS[1]

A—REMARKS ON V. F. XIV

Whenever an epidemic breaks out, then it will be necessary to write the entries in this form. It is the same form for all the three ordinary epidemics. The disease which is to be recorded will be left and the other two struck out of the heading. As soon as an epidemic commences the Patel will be required to get information not only of the deaths but also of the number of attacks and recoveries. It is important to fill up (8) and (9) by careful inquiry whether the person attacked had been previously vaccinated (in case of small-pox) or inoculated (in case of plague). If any person attacked with the disease leaves the village before it is known whether he recovered or not, "unknown" should be written across (10).

If unfortunately more than one disease break out in the village in the same year, then it will be necessary to open a second (or third) Rgr. The particulars of different diseases must not be mixed.

At the close of each month in which there have been no cases of any disease the Patel should initial the blank Rgr. This is to show that the fact that there are no entries is not due to his negligence, but to the absence of disease. At the end of the year the Rgr. will similarly be totalled; if blank, of course, there is no total. But if there are any entries then the total will be made and the total of those who recovered and the total of those who died will each be divided into previously vaccinated inoculated or not. We shall then be able to know whether the recoveries or deaths have been more or less favourable amongst the vaccinated/inoculated. This total will be sent with the totals of V. F. XIV to M for compilation in T. F. XXI.

1. This form is to be maintained by the Police Patel, but if he is illiterate K or some other competent person under the Patel's instructions must write it. The Police Patel is responsible for custody of the form. If the village has several hamlets, the Patel should arrange for obtaining information from a leading man in the hamlet, and should also visit them himself periodically. Where, however, there is a separate Police Patel for a hamlet, that Patel should maintain a separate Village Form XIV for it.

These statistics are collected solely for use of the Sanitary or Public Health Department. There is a natural and growing tendency to use these entries as evidence of age, parentage and so on. But there is no system of registration corresponding to Somerset house in India. With legislation as to "Age of Consent" and the increasing importance of life insurance and College entry, etc., this task may have to be undertaken; but so far it has not, and officers must not be led into it. Cases have occurred in which long enquiries more suitable for a civil court have been conducted by M or P into the genuineness of entries. When there is any dispute, no such enquiry should be made; the entry should be marked "doubtful". But M and P may correct admitted errors, but no formal enquiry should be opened. [See Sec. 22(3), Act VI of 1886].

This form is a familiar one. There is no change except that a separate column has been ruled for the child's name. This must be left blank until the name is given. A reasonable time after the birth of the child, the Patel should inquire and insert the name. He should never send the Rgr. for record to the taluka until all names in (5a) have been filled in, unless the child has died unnamed. These Rgr. are increasingly important for School and University and G service as evidence of birth and for emigration certificates.

2. In order to secure as complete registration of births and deaths amongst European, Anglo-Indian and other Non-Indian British subjects and foreigners as practicable, entries of births and deaths occurring amongst them should be made

Source :

1. Manual of Revenue Accounts of Village, Taluka and District of the Bombay State, 1948

in this form. When such birth or death is recorded in this form M should send an extract to C who will prepare the monthly returns in duplicate in the form prescribed in Government Resolution General Department, No. 2597, dated 5th October, 1936, and send one copy to the Director of Public Health and the other to the Registrar General of Births, Deaths and Marriages. (G. 2987 of 10-6-1930; 2597 of 5-10-1936 and 12-5-1942).

Care should be taken to give the caste correctly. The occupation, such as weaver or carpenter, is not always the caste. For Muslims the sect or race such as Shia or Bohora or Shekh should be added after Muslims. For other nationalities such as Beni-Israel, Parsi, or European, who do not observe caste, the race and religion such as "German" or "Habshi" or the sect of Christianity if known such as "Roman Catholic" should be written. Converts to Christianity or to Islam should not be described by their old caste names, but as Christian or Muslim.

3. A frequent mistake is to give the name of the mother's father instead of the name of the infant's father. It is common for married women to return to their mother's homes for their confinements. Then one often finds such entries as "a girl born in the house of Raghu Mohan". But Raghu is the father of the infant's mother and not the father of the child. When a child is illegitimate and when the paternity is not admitted or when there is no practice of marriage in the caste, the name of the mother and her father or mother must be given as (5b). The name of the father when admitted should be written in the same column. The entries in the columns should not repeat the heading. One often sees under the heading, boy, (3) "One son" and under the column for caste "Kunbi by caste", and under the column for age "age 50". These entries should be shortened and only "Kunbi" and "50" should be written. For twins, two lines should be provided, one for each name.

4. When death is the result of violence it is not always possible for the Patel to be sure whether any offence has been committed or whether the death is accidental or suicidal. He must, however, fill up the Rgr. according to his judgement, on the facts known within the first few days after the death. He cannot wait until the matter has been decided by the Magistrate or Sessions Court.

The cases of unnatural death which ought to be distinguished are :

Suicide	Snake-bite
Drowning	Dog or Jackal-bite
Hanging	(Rabies)
Wounding	Railway Accidents
Poisoning	Other causes
Wild beasts	

When death is, so far as can be judged, suicidal, then it is not necessary to distinguish which of the kinds of violence (drowning, hanging, poisoning, etc.) was employed.

5. In natural deaths the usual causes of death should be noted, especially deaths of women during and after child birth. All deaths from epidemics such as cholera, smallpox, plague, measles, must be so described. When a child is born dead no entry should be made in the death columns, but a note "Born dead" should be made against the birth which must not be included in total births. If it lives even an hour then the death must go into the death columns and it is counted both as a birth and a death.

6. Whenever a birth or death is discovered by the Patel or by any Inspecting Officer which was not entered on the proper date it should be entered in the current month below the last entry, but if the correct month and date is known, that date should be written in (2) or (9) and the entry must be included in the total of the current month. Make a note also in the back register at or near the place where the omission occurred.

The copying of all the names, etc., seems perhaps unnecessary; but it provides a valuable duplicate, if V. F. XIV is lost; careless Patels often lose it altogether.

7. This form is kept for the calendar year—January to December. At the end of each month the totals of births and deaths are to be made and a complete copy of all entries for the month is sent punctually on the 1st of the following month to M (See also note to V. F. XI-C).

8. This Rgr. is, of course to be permanently preserved, but it should not be sent to the

Taluka Record-room until the expiry of two years from the end of the year to which it relates. If it is sent at once, then the vaccinator or other persons visiting the village to check and to test the Rgr. cannot do so. Therefore, the Rgr. ending 31-12-14 must be kept in the village until 1-1-17. After that it must be sent to Taluka (R. 7084–13).

9. In some villages Sanitary Inspection Books are maintained, but they are supplied in a printed form and are not filled by the village officers.

VILLAGE FORM XIV—C

So long as any epidemic is in existence in the village on every day on which a fresh case or death occurs, this report will be sent to M This form is prepared in a post-card size so that it can be written or printed on a service post-card, if there is a postal communication available

2. It is specially important to send the first report promptly as soon as the existence of the disease is reasonably suspected; if it afterwards turns out to have been some non-epidemic disease, the reports can be withdrawn. But if no report is sent M cannot take steps to send medical aid and advice.

3. At the close of the year the total of V.F. XIV, and the total of XIV-B, for each disease separately, should be reported to M by the Patel. These reports should be sent between the 1st and 10th of January.

When there is no epidemic disease, a certificate to that effect must be given on the monthly copy of V.F.XIV [p 189 (7)] (G.6057-11, 7282-19). When during a plague epidemic inoculation is carried out, the inoculators will fill up Form A (Standardized G. 4953-19). The officers who write V.F.XIV will then fill in Form B and at the close of the epidemic send it to M for transmission to Deputy Sanitary Commissioner.

FORM B

Village
Population

Taluka

Return for month of

( )

(a) Date of first attack ( )
(b) „ last „ ( )
(c) „ first inoculation ( )
(d) „ last inoculation ( )
(e) No. of cases after (d) ( )

Total inoculations	Population remaining uninoculated	Inoculated		Not inoculated		Emigrated among	
		Attacks	Deaths	Attacks	Deaths	Inoculated	Not inoculated
1	2	3	4	5	6	7	8

VILLAGE FORM XIV

REGISTER OF BIRTHS AND DEATHS IN VILLAGE

Population by Census of Males— Females— Total—

Births								Deaths							
		Sex			Father and grandfather	Religion/community if B. C.				Name with father's name or husband's name of married females	Religion/community if B. C.	Age	Sex		Cause of death and remarks
No.	Date	Boy	Girl	Name			Remarks	No.	Date				Male	Female	
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16

VILLAGE FORM XIV-A

VACCINATION REGISTER FOR THE VILLAGE

No.	Name	Father's name, surname and place of residence	Caste	Sex		Age			Date of vaccination	Previously vaccinated	Not previously vaccinated	Signature of vaccinator
				Male	Female	One year and under	Over one year and upto 6 years	Over six years				
1	2	3	4	5	6	7	8	9	10	11	12	13

This form will be filled up by the vaccinator with Patel's help.

VILLAGE FORM XIV-B

Small-pox *)
Cholera *)
Plague *)
Influenza *)
Yellow fever *)
**

Sl. No.	Date of attack	Name of person attacked, father's name and place of residence	Sex		Age	Caste	Whether previously vaccinated† or not/ inoculated§		Date of		Remarks (Whether illness seems to have been brought from another place, if so, from what place, also whether medical relief is being given or other action taken)
			Male	Female			Yes	No	Recovery	Death	
1	2	3	4	5	6	7	8	9	10	11	12

* Whichever is required

**Any other disease declared as having assumed an epidemic form

†Vaccinated in case of small-pox

§Inoculated in case of plague

VILLAGE FORM XIV-C

DAILY (CHOLERA) REPORT

Date of commencement of present outbreak	New				Total from commencement of present outbreak				Remarks
	Cases		Deaths		Cases		Deaths		
	Male	Female	Male	Female	Male	Female	Male	Female	
1	2	3	4	5	6	7	8	9	10

B—REMARKS ON TALUKA FORM XXI—VITAL STATISTICS

M will receive from each Patel whenever there is an epidemic disease in his village daily returns in V. F. XIV-C. He will consolidate these reports and send a daily report to the Assistant D. P. H. This consolidated report will show all the villages reporting the cases and deaths separately. It will be in the same form as V. F. XIV-C. When there are more epidemics than one in the taluka, the return for each disease will be separate.

2. M should make a Rgr. of all the villages in the taluka (arranged as always by Tenure and Survey groups) with the population of each village and should mark each village which reports any epidemic. When the epidemic comes to an end, the last report received from the village will show the total number of cases and deaths from the commencement of the outbreak; or if the outbreak is not ended on the 31st December, the figures up to the 31st December should be taken. Then M should write against each village the number of cases and deaths that have

occurred during calendar year. He can then destroy all daily reports; and he need not keep office copies of his consolidated daily report if he takes trouble to see that each daily report received from the village agrees arithmetically with the last report, i.e., if it brings forward the correct number of cases and deaths from the beginning of the outbreak. It is not the duty of M to investigate epidemics or epizootics, but to take steps to get professional men despatched to deal with them and to give them all help he can.

(These statistics do not go into the General Administration Report but are separately dealt with in the Public Health Department.)

3. Then at the end of the year he will receive from each village in which there has been epidemic disease the totals of V. F. XIV-B which will also show how many cases and deaths occurred amongst the vaccinated/inoculated. He will be able to check these totals with the totals noted from the last daily returns as above described, and also he will then be able to send the consolidated statement to C and to the Deputy Sanitary Commissioner showing the number of villages attacked by the epidemic and the number of villages amongst the vaccinated and inoculated and amongst the unprotected. He will also receive from each village the total of V. F. XIV and can compile this (by posting it against the village in the Rgr. described in the last paragraph) into a taluka total of births and deaths, which he would keep on record. He need not report it to the Hazur because C receives a district summary monthly from the Assistant D. P. R.

4. This is the form in which he should record any significant fact about emigration or depopulation or immigration, e.g.,

"Many people left village through fear of an evil spirit."

"A large number of persons from Hydrabad State immigrated and settled in the scarcity of 1900-01."

"People are emigrating to Bombay to work in the Mills."

Cattle Diseases

T. F. XXI-A—This is the same as V. F. XIV-C and is used to consolidate and transmit reports of epidemics. Only a column for name of village is inserted (R. 7510-24-17-12-1926). Standard Form R. T. 21.

5. On receipt of a first report of the outbreak of a cattle disease, M will endeavour to arrange for vaterinary assistance and will transmit a copy of the report immediately to the Local Veterinary Officer and also to the Superintendent C. V. D.

6. He should add together the total attacks and deaths reported by the Patels, each week on Monday and send a consolidated return (in the same form) to the Local Vaterinary Assistant Surgeon with duplicates (carbon) to P and also to C for information. These latter officers will not compile or preserve the statistics; the information is sent to enable them to take steps to procure assistance or take any other possible measures. The annual statistics for the Administration Report are obtained by C from the Superintendent C. V. D.

T. F. XXI-VITAL STATISTICS

Village	Population by Census of	Births	Deaths	Epidemics small-pox Cases	Epidemics small-pox Deaths	Repeat
				U* — U*		
				V — V		
Taluka Total						

*U=Unvaccinated (or Uninoculated), V=Vaccinated (or Inoculated)

APPENDIX IV

The Statement Showing the Number of Births and Deaths from Principal Diseases in the Towns of Gujarat State, Having Population of 30,000 and Over for the Week Ending . . . . .

Name of town	Mid-year estimated population (000')	Births	Birth rate	Cholera	Small-pox	Plague	Fevers	Dysentery and diarrhoea	Respira-tory diseases	Child births	All other causes	Total deaths	Death rate	Deaths under one year
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

TABLES

TABLE 1—Decennial live births, deaths, infant deaths with their rates along with components of population growth in Gujarat State excluding Saurashtra and Kutch Region

Decennium		Population at the beginning of the decennium	Registered			Rates			Rate of natural increase	Migration rate	Growth rate
			Births	Deaths	Infant deaths	Birth	Death	Infant death			
1		2	3	4	5	6	7	8	9	10	11
1911-20	T	6,899,095	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	5.28
	U	1,159,545	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	9.59
1921-30	T	7,263,673	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	12.43
	U	1,270,721	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	11.18
1931-40	T	8,166,594	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	20.17
	U	1,412,791	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	40.75
1941-50	T	9,813,699	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	19.92
	U	1,988,573	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	31.54
1951-60	T	11768,583	4,274,139	1,866,189	403,200	32.21	14.06	94·33	18.15	8.22	26.37
	U	2,615,691	1,198,362	519,054	136,099	39.19	16.97	113·57	22.22	12.74	34.96

N.A.=Not available

Source:

Directorate of Public Health, Gujarat

TABLE 1A—Decennial live births, deaths, infant deaths with their rates along with components of population growth in Saurashtra and Kutch Region

Decennium		Population at the beginning of the decennium	Registered			Rates			Rate of natural increase	Migration rate	Growth rate
			Births	Deaths	Infant deaths	Birth	Death	Infant death			
1		2	3	4	5	6	7	8	9	10	11
1911-20	T	2,904,492	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	0.23
	U	638,780	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	3.23
1921-30	T	2,911,316	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	14.15
	U	659,442	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	20.79
1931-40	T	3,323,234	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	16.99
	U	796,532	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	32.93
1941-50	T	3,887,852	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	15.59
	U	1,058,805	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	30.68
1951-60	T	4,494,074	1,033,086	458,389	N.A.	20.23	8.98	N.A.	11.25	16·95	28.20
	U	1,383,636	370,132	158,344	N.A.	23.45	10.03	N.A.	13.42	15·70	29.12

N.A =Not available

Source:

Directorate of Public Health, Gujarat

TABLE 2—Annual live births, deaths and infant deaths with their rates in Gujarat State excluding Saurashtra and Kutch Region during 1951–60

Year	Area	Registered			Rates		
		Births	Deaths	Infant death	Birth	Death	Infant death
1	2	3	4	5	6	7	8
1951	T	394,831	166,950	39,718	33.26	14.06	100.59
	U	106,707	47,285	14,060	40.33	17.87	131.76
1952	T	379,092	208,577	45,713	31.12	17.12	120.58
	U	112,897	61,616	17,016	41.24	22.51	150.72
1953	T	381,784	182,422	39,913	30.56	14.60	104.54
	U	113,157	52,670	14,204	40.00	18.62	125.52
1954	T	412,537	169,325	38,649	32.22	13.22	93.69
	U	115,637	47,849	12,901	39.59	16.38	111.56
1955	T	466,865	174,598	41,125	35.60	13.31	88.09
	U	127,379	47,373	13,454	42.29	15.73	105.62
1956	T	447,061	179,253	40,145	33.30	13.35	89.80
	U	122,869	52,401	14,080	39.59	16.88	114.59
1957	T	432,330	193,902	40,377	31.48	14.12	93.39
	U	121,761	53,627	13,317	38.11	16.78	109.37
1958	T	424,677	221,771	43,938	30.24	15.79	103.46
	U	123,153	57,018	14,126	37.47	17.35	114.70
1959	T	502,483	189,347	39,106	35.00	13.19	77.82
	U	127,945	47,093	11,541	37.88	13.94	90.20
1960	T	432,479	180,044	34,516	29.49	12.28	79.81
	U	126,857	52,122	11,400	36.57	15.02	89.86

Source :

Directorate of Public Health, Gujarat

TABLE 2A—Annual live births, deaths and infant deaths with their rates in Saurashtra and Kutch Region during 1951–60

Year	Area	Registered			Rates		
		Births	Deaths	Infant deaths	Birth	Death	Infant death
1	2	3	4	5	6	7	8
1951	T	85,023	37,477	N.A.	18.74	8.26	N.A.
	U	37,065	14,849	N.A.	26.53	10.63	N.A.
1952	T	85,110	44,073	N.A.	18.25	9.45	N.A.
	U	33,211	17,376	N.A.	23.10	12.08	N.A.
1953	T	91,395	47,717	N.A.	19.08	9.96	N.A.
	U	33,915	16,905	N.A.	22.95	11.44	N.A.
1954	T	101,266	46,195	N.A.	20.60	9.39	N.A.
	U	33,439	14,256	N.A.	22.03	9.39	N.A.
1955	T	109,348	43,731	N.A.	21.68	8.67	N.A.
	U	38,712	14,542	N.A.	24.84	9.33	N.A.
1956	T	115,654	46,214	N.A.	22.37	8.94	N.A.
	U	39,796	14,843	N.A.	24.89	9.28	N.A.
1957	T	112,867	53,607	4,176	21.31	10.12	37.00
	U	38,082	18,950	1,982	23.24	11.56	52.04
1958	T	87,185	42,319	8,903	16.07	7.80	102.12
	U	30,650	14,559	3,064	18.25	8.67	99.97
1959	T	128,775	50,145	11,833	23.20	9.03	91.89
	U	43,272	16,762	3,614	25.17	9.75	83.52
1960	T	116,463	46,911	10,162	20.51	8.26	87.25
	U	41,990	15,302	2,860	23.86	8.70	68.11

N.A.=Not available

Sourec :

Directorate of Public Health, Gujarat

TABLE 3—Annual live births, deaths and infant deaths in districts and their urban areas of Gujarat State excluding Saurashtra and Kutch Region during 1951–60

	District	Area	1951			1952			1953		
			Births	Deaths	Infant deaths	Births	Deaths	Infant deaths	Births	Deaths	Infant deaths
	1	2	3	4	5	6	7	8	9	10	11
1	Amreli	T	12,561	4,909	1,133	11,660	5,596	1,332	11,624	6,363	1,369
		U	2,797	1,117	307	3,167	1,359	354	3,062	1,301	335
2	Banaskantha	T	21,448	11,198	2,108	19,505	11,945	2,256	19,404	11,621	2,067
		U	1,040	727	184	1,055	978	234	1,090	791	174
3	Sabarkantha	T	16,436	5,853	1,089	16,721	8,420	1,787	18,974	7,199	1,558
		U	1,298	616	132	1,464	784	195	1,402	646	157
4	Mehsana	T	46,723	20,865	4,039	47,171	28,759	4,881	48,438	21,977	3,896
		U	10,523	4,928	1,374	11,821	7,302	1,588	11,948	5,437	1,157
5	Ahmedabad	T	61,779	28,283	8,418	59,658	36,400	10,060	58,129	30,040	8,505
		U	38,262	18,072	6,211	40,265	23,792	7,250	39,184	19,987	6,260
6	Kaira	T	55,009	25,880	7,042	54,260	34,163	8,363	56,370	30,566	8,221
		U	14,220	6,789	1,805	16,380	10,057	2,787	17,005	8,771	2,372
7	Panchmahals	T	42,189	12,620	2,869	32,786	18,582	3,227	38,852	13,322	2,637
		U	4,780	1,408	355	4,343	1,691	433	4,611	1,316	306
8	Baroda	T	37,648	14,925	2,970	37,743	18,040	3,355	38,648	17,663	3,346
		U	12,428	4,920	1,241	12,563	5,394	1,333	12,357	5,070	1,184
9	Broach	T	31,199	12,925	3,486	28,474	14,738	3,405	27,560	13,624	2,889
		U	5,365	2,203	497	5,681	2,447	552	5,329	2,123	437
10	Surat	T	67,910	28,670	6,281	69,360	31,170	6,862	61,755	29,124	5,226
		U	15,994	6,505	1,954	16,158	7,812	2,290	17,169	7,228	1,822
11	Dangs*	T	1,929	822	283	1,754	764	185	2,030	923	199

	District	Area	1954			1955			1956		
			Births	Deaths	Infant deaths	Births	Deaths	Infant deaths	Births	Deaths	Infant deaths
	1	2	12	13	14	15	16	17	18	19	20
1	Amreli	T	12,604	5,127	1,283	13,697	4,879	1,315	13,397	5,360	1,391
		U	3,294	1,047	276	3,586	1,179	332	3,547	1,235	315
2	Banaskantha	T	22,836	10,398	2,168	26,586	13,220	2,954	24,929	11,933	2,558
		U	1,390	717	180	1,568	677	157	1,115	552	146
3	Sabarkantha	T	17,869	6,806	1,457	22,349	7,662	1,650	21,113	8,196	1,691
		U	1,500	586	121	1,690	562	112	1,560	578	106
4	Mehsana	T	48,832	21,615	3,727	54,698	20,898	3,993	52,891	20,690	3,639
		U	12,523	5,229	1,169	13,993	4,576	1,082	13,036	5,013	1,032
5	Ahmedabad	T	60,859	27,407	8,063	69,107	29,367	8,872	67,437	31,013	8,853
		U	40,124	18,014	5,667	45,054	18,653	6,248	42,963	20,570	6,347
6	Kaira	T	58,512	27,430	6,973	64,134	27,782	6,111	59,282	27,453	5,656
		U	17,871	7,581	1,948	18,893	7,431	1,682	18,306	7,829	1,745
7	Panchmahals	T	42,821	16,146	3,281	48,520	13,957	3,067	46,542	13,277	3,013
		U	4,547	1,282	247	5,135	1,267	291	5,243	1,335	318
8	Baroda	T	46,370	16,512	3,158	51,997	17,774	3,717	48,871	18,234	3,599
		U	13,051	4,493	1,059	14,563	4,699	1,228	13,971	5,132	1,290
9	Broach	T	33,235	12,251	3,215	35,672	13,123	3,537	34,999	13,711	3,400
		U	5,619	1,955	442	6,082	1,996	469	6,095	2,040	475
10	Surat	T	66,150	24,855	5,120	77,026	24,986	5,594	74,366	28,470	6,063
		U	15,718	6,945	1,792	16,815	6,333	1,853	17,033	8,117	2,306
11	Dangs*	T	2,449	778	204	3,079	950	315	3,234	916	282

*Entirely ru

TABLE 3—Annual live births, deaths and infant deaths in districts and their urban areas of Gujarat State excluding Saurashtra and Kutch Region during 1951-60–*contd.*

	District	Area	1957			1958			1959		
			Births	Deaths	Infant deaths	Births	Deaths	Infant deaths	Births	Deaths	Infant deaths
	1	2	21	22	23	24	25	26	27	28	29
1	Amreli	T	13,047	5,319	1,338	12,201	6,400	1,420	22,167	8,567	2,121
		U	3,437	11,177	274	3,489	1,370	306	3,421	1,080	204
2	Banaskantha	T	24,211	1,998	2,204	28,845	16,434	3,238	28,778	12,791	2,680
		U	1,169	542	99	1,471	695	146	1,277	628	111
3	Sabarkantha	T	20,826	8,614	1,648	19,758	9,713	1,990	29,411	9,543	1,999
		U	1,351	603	92	1,462	598	108	1,555	498	80
4	Mehsana	T	50,776	23,967	3,746	50,156	24,053	3,935	56,937	21,021	3,407
		U	12,546	5,478	990	12,782	5,575	1,124	12,929	4,354	818
5	Ahmedabad	T	65,622	32,682	8,932	66,971	33,573	9,014	74,631	29,446	7,979
		U	42,996	20,294	6,117	43,273	21,454	6,372	45,251	17,640	5,183
6	Kaira	T	58,331	30,561	6,109	56,236	36,656	7,204	64,529	28,879	5,417
		U	17,942	8,537	1,820	17,832	9,257	1,996	19,054	7,356	1,456
7	Panchmahals	T	45,758	14,775	3,189	41,471	19,485	3,537	49,685	14,777	2,781
		U	5,511	1,354	252	5,414	1,560	274	5,878	1,239	234
8	Baroda	T	47,287	20,306	4,109	45,410	24,027	4,520	57,012	21,158	4,139
		U	14,076	5,674	1,435	14,729	5,951	1,416	15,267	5,371	1,243
9	Broach	T	33,032	16,043	3,703	31,949	18,838	3,759	38,077	15,820	3,479
		U	5,925	2,401	446	5,933	2,528	470	5,822	2,112	369
10	Surat	T	70,309	28,733	5,146	68,866	31,621	5,060	78,146	26,423	4,856
		U	16,808	7,567	1,792	16,768	8,030	1,914	17,491	6,815	1,843
11	Dangs*	T	3,131	904	253	2,814	971	261	3,110	922	248

	District	Area	1960			1951-60		
			Births	Deaths	Infant deaths	Births	Deaths	Infant deaths
	1	2	30	31	32	33	34	35
1	Amreli	T	18,440	8,265	1,524	141,398	60,785	14,226
		U	3,546	1,066	121	33,346	11,931	2,824
2	Banaskantha	T	26,205	12,583	2,230	242,747	124,121	24,463
		U	1,468	658	111	12,643	6,965	1,542
3	Sabarkantha	T	18,763	6,929	1,726	202,220	78,935	16,595
		U	1,572	589	123	14,854	6,060	1,226
4	Mehsana	T	43,258	19,516	2,785	499,880	223,361	38,048
		U	11,398	4,594	798	123,499	52,486	11,132
5	Ahmedabad	T	68,839	30,809	6,887	653,032	309,020	85,583
		U	47,172	20,621	5,044	424,544	199,097	60,699
6	Kaira	T	56,362	28,872	5,140	583,025	298,242	66,236
		U	17,880	8,307	1,655	175,383	81,915	19,266
7	Panchmahals	T	44,434	12,396	3,176	433,058	149,337	30,777
		U	5,467	1,317	239	50,929	13,769	2,949
8	Baroda	T	42,630	17,153	3,116	453,616	185,792	36,029
		U	14,938	5,648	1,169	137,943	52,352	12,598
9	Broach	T	33,565	14,197	2,783	327,762	145,270	33,656
		U	5,909	2,234	441	57,760	22,039	4,598
10	Surat	T	76,589	28,104	4,819	710,477	282,156	55,027
		U	17,507	7,088	1,699	107,461	72,440	19,265
11	Dangs*	T	3,394	1,220	330	26,924	9,170	2,560

*Entirely rural

Source :

Directorate of Public Health, Gujarat

TABLE 3A—Annual live births, deaths and infant deaths in districts and their urban areas of Saurashtra and Kutch Region during 1951–60

			1951			1952			1953		
	District	Area	Births	Deaths	Infant deaths	Births	Deaths	Infant deaths	Births	Deaths	Infant deaths
	1	2	3	4	5	6	7	8	9	10	11
1	Jamnagar	T	13,377	5,176	N.A.	13,459	5,123	N.A.	13,587	5,178	N.A.
		U	4,688	2,059	N.A.	4,871	2,275	N.A.	5,073	2,318	N.A.
2	Rajkot	T	17,704	4,989	N.A.	15,988	5,811	N.A.	18,515	6,147	N.A.
		U	13,217	2,857	N.A.	11,362	2,960	N.A.	11,072	2,996	N.A.
3	Surendranagar	T	8,916	4,330	N.A.	9,348	4,982	N.A.	10,522	6,481	N.A.
		U	2,740	1,383	N.A.	2,546	1,740	N.A.	2,795	1,784	N.A.
4	Bhavnagar	T	14,862	6,807	N.A.	13,942	8,425	N.A.	17,454	11,223	N.A.
		U	7,127	3,382	N.A.	6,143	4,392	N.A.	6,769	4,063	N.A.
5	Junagadh	T	22,610	11,627	N.A.	24,577	13,580	N.A.	22,935	13,139	N.A.
		U	6,576	3,404	N.A.	6,086	4,012	N.A.	6,109	4,081	N.A.
6	Kutch	T	7,554	4,548	N.A.	7,796	6,152	N.A.	8,382	5,549	N.A.
		U	2,717	1,764	N.A.	2,203	1,997	N.A.	2,097	1,663	N.A.

			1954			1955			1956		
	District	Area	Births	Deaths	Infant deaths	Births	Deaths	Infant deaths	Births	Deaths	Infant deaths
	1	2	12	13	14	15	16	17	18	19	20
1	Jamnagar	T	14,295	5,912	N.A.	15,872	6,324	N.A.	16,056	5,540	N.A.
		U	4,091	2,136	N.A.	4,264	2,050	N.A.	4,895	1,848	N.A.
2	Rajkot	T	19,133	5,605	N.A.	21,742	5,403	N.A.	20,834	5,415	N.A.
		U	11,357	2,466	N.A.	13,191	2,197	N.A.	13,103	2,208	N.A.
3	Surendranagar	T	12,785	5,924	N.A.	16,249	5,722	N.A.	19,596	5,721	N.A.
		U	2,661	1,404	N.A.	3,410	1,328	N.A.	4,050	1,320	N.A.
4	Bhavnagar	T	19,904	9,608	N.A.	19,605	8,460	N.A.	22,732	10,380	N.A.
		U	7,330	3,492	N.A.	8,443	3,685	N.A.	7,979	3,620	N.A.
5	Junagadh	T	26,524	13,602	N.A.	26,139	11,490	N.A.	26,732	12,654	N.A.
		U	6,391	3,241	N.A.	7,280	3,673	N.A.	7,435	3,982	N.A.
6	Kutch	T	8,625	5,544	N.A.	9,741	6,332	N.A.	9,704	6,504	N.A.
		U	1,609	1,517	N.A.	2,124	1,609	N.A.	2,334	1,865	N.A.

TABLE 3A—Annual live births, deaths and infant deaths in districts and their urban areas of Saurashtra and Kutch Region during 1951–60-*contd.*

District	Area	1957			1958			1959		
		Births	Deaths	Infant deaths	Births	Deaths	Infant deaths	Births	Deaths	Infant deaths
1	2	21	22	23	24	25	26	27	28	29
1 Jamnagar	T	18,887	7,265	378	9,165	4,975	1,074	15,997	6,691	1,688
	U	4,546	1,913	131	2,819	1,497	228	6,058	2,340	427
2 Rajkot	T	20,513	9,419	719	19,435	8,061	2,101	31,034	11,182	3,251
	U	12,303	5,128	465	9,094	3,619	945	13,250	4,810	1,261
3 Surendranagar	T	17,901	6,380	405	11,561	4,914	1,004	17,326	6,022	1,332
	U	3,738	1,551	271	3,638	1,683	322	4,895	1,763	328
4 Bhavnagar	T	22,950	10,980	960	21,807	11,546	2,176	25,851	10,114	2,160
	U	8,178	3,752	585	7,840	3,746	796	9,064	3,226	711
5 Junagadh	T	22,853	13,829	1,104	20,663	10,723	2,194	31,366	12,943	2,805
	U	6,983	5,026	413	5,903	3,429	659	8,205	3,900	763
6 Kutch	T	9,763	5,734	610	4,554	2,100	354	7,201	3,193	597
	U	2,334	1,580	117	1,356	585	114	1,800	723	124

District	Area	1960			1951–60		
		Births	Deaths	Infant deaths	Births	Deaths	Infant deaths
1	2	30	31	32	33	34	35
1 Jamnagar	T	14,487	5,737	1,147	145,182	57,921	N A.
	U	5,988	2,143	276	47,293	20,579	N.A.
2 Rajkot	T	30,051	11,679	2,956	214,949	73,711	N.A.
	U	13,099	4,779	1,103	121,048	34,020	N A.
3 Surendranagar	T	15,811	5,105	1,015	140,015	55,581	N.A.
	U	5,027	1,441	250	35,500	15,397	N.A.
4 Bhavnagar	T	22,140	9,222	1,651	201,247	96,765	N.A.
	U	8,117	2,895	515	76,990	36,253	N A.
5 Junagadh	T	28,145	12,669	2,937	252,544	126,256	N.A.
	U	7,915	3,389	607	68,883	38,137	N A.
6 Kutch	T	5,829	2,499	456	79,149	48,155	N.A.
	U	1,844	655	109	20,418	13,958	N.A.

Source : Directorate of Public Health, Gujarat

TABLE 4—Annual live birth, death and infant death rates in districts and their urban areas of Gujarat State excluding Saurashtra and Kutch Region during 1951–60

District	Area	1951			1952			1953		
		Birth rate	Death rate	Infant death rate	Birth rate	Death rate	Infant death rate	Birth rate	Death rate	Infant death rate
1	2	3	4	5	6	7	8	9	10	11
1 Amreli	T	23.31	9.04	89.56	20.98	10.07	114.24	20.44	11.19	117.77
	U	24.77	9.89	109.76	27.30	11.72	111.78	25.72	10.93	109.40
2 Banaskantha	T	27.45	14.33	98.28	24.27	14.86	115.66	23.50	14.07	106.52
	U	19.83	13.86	176.92	19.41	18.00	221.80	19.39	14.07	159 63
3 Sabarkantha	T	23.76	8.46	66.26	23.38	11.77	106.87	25.68	89.74	82.11
	U	29.68	14.09	101.69	32.15	17.21	133.20	29.61	13.64	111.98
4 Mehsana	T	33.29	14.87	86.44	32.91	20.07	103.47	33.11	15.02	80.43
	U	43.55	20.40	130.57	47.73	29.48	134.34	47.10	21.43	96.84
5 Ahmedabad	T	36.48	16.70	136.26	34.15	20.83	168.63	32.28	16.68	146.31
	U	38.60	18.23	162.33	39.18	23.15	180.06	36.82	18.78	159.76
6 Kaira	T	33.86	15.93	128.01	32.66	20.57	154.13	33.20	18.00	145.84
	U	47.44	22.65	126.93	53.11	32.61	170.15	53.62	27.66	139.49
7 Panchmahals	T	36.93	11.05	68.00	27.87	15.80	98.43	32.11	11.01	67.87
	U	39.09	11.51	74.27	34.56	13.46	99.70	35.73	10.20	66.36
8 Baroda	T	30.80	12.21	78.89	30.10	14.39	88.89	30.06	13.74	86.58
	U	43.07	17.05	99.85	41.90	17.99	106.10	39.72	16.30	95.82
9 Broach	T	43.13	17.87	111.73	38.44	19.89	119.58	36.35	17.97	104.83
	U	48.56	19 94	92.64	50.32	21.68	97.16	46.22	18.41	82.00
10 Surat	T	33.99	14.35	92.49	33.92	15.24	98.93	29.52	13.92	84.62
	U	41.73	16.97	122.17	40.43	19.54	141.73	41.26	17.37	106.12
11 Dangs*	T	40.11	17.09	146.71	34.72	15.12	105.47	38.34	17.43	98.03

District	Area	1954			1955			1956		
		Birth rate	Death rate	Infant death rate	Birth rate	Death rate	Infant death rate	Birth rate	Death rate	Infant death rate
1	2	12	13	14	15	16	17	18	19	20
1 Amreli	T	21.67	8.81	101.79	23.04	8.21	96.01	22.05	8.82	103.83
	U	26.97	8.57	83.79	28.64	9.42	92.58	27.65	9.63	88.81
2 Banaskantha	T	26.93	12.26	94.94	30.55	15.19	111.11	27.73	13.37	102.61
	U	23.92	12.34	129.50	26.14	11.28	100.13	18.02	8.92	130.94
3 Sabarkantha	T	23.44	8.93	81.54	28.45	9.75	73.83	26.09	10.13	80.09
	U	30.51	11.92	80.67	33.16	11.03	66.27	29.56	10.95	67.95
4 Mehsana	T	32.72	14.48	76.32	35.94	13.73	73.00	34.09	13.33	68.80
	U	48.21	20.13	93.35	52.65	17.22	77.32	47.96	18.44	79.16
5 Ahmedabad	T	32.93	14.78	132.49	36.23	15.40	128.38	34.39	15.82	131.28
	U	36.46	16.37	141.24	36.62	16.40	138.68	36.61	17.53	147.73
6 Kaira	T	33.74	15.82	119.17	36.22	15.69	95.28	32.80	15.19	95.41
	U	54.85	23.27	109.00	56.48	22.21	89.03	53.34	22.81	95.32
7 Panchmahals	T	34.43	12.98	76.62	37.98	10.92	63.21	35 49	10.12	64.74
	U	34.34	9.68	54.32	37.82	9.33	56.67	37.68	9.59	60.65
8 Baroda	T	35.21	12.54	68.10	38.56	13.18	71.48	35.41	13.21	73.64
	U	40.49	13.94	81.14	43.65	14.08	84.32	40.51	14.88	92.33
9 Broach	T	42.85	15.79	96.73	44.98	16.54	99.15	43.18	16.91	97.14
	U	47.73	16.61	78.66	50.63	16.62	77.11	49.74	16.65	77.93
10 Surat	T	30.93	11.62	77.40	35.24	11.43	72.62	33.31	12.75	81.53
	U	36.34	16.05	114.01	37.45	14.10	110.20	36.59	17.44	135.38
11 Dangs*	T	44.22	14.05	83.30	53.26	16.43	102.30	53.69	15.21	87.20

*Entirely rural

TABLE 4—Annual live birth, death and infant death rates in districts and their urban areas of Gujarat State excluding Saurashtra and Kutch Region during 1951–60–*contd.*

	District	Area	1957			1958			1959		
			Birth rate	Death rate	Infant death rate	Birth rate	Death rate	Infant death rate	Birth rate	Death rate	Infant death rate
	1	2	21	22	23	24	25	26	27	28	29
1	Amreli	T	21.03	8.57	102.55	19.26	10.10	116.38	34.30	13.28	95.68
		U	26.17	8.96	79.72	25.96	10.19	87.70	24.89	7.86	59.63
2	Banaskantha	T	26.47	13.12	91.03	30.79	17.54	112.25	30.00	13.34	93.13
		U	18.34	8.50	84.69	22.41	10.59	99.25	18.91	9.30	86.92
3	Sabarkantha	T	25.01	10.35	79.13	23.08	11.35	100.72	33.44	10.85	67.97
		U	24.75	11.05	68.10	25.93	10.60	73.87	26.72	8.56	51.45
4	Mehsana	T	32.11	15.16	73.77	31.13	14.93	78.45	34.70	12.81	59.84
		U	45.15	19.71	78.91	45.02	19.64	87.94	44.59	15.02	63.27
5	Ahmedabad	T	32.58	16.22	136.11	32.39	16.24	134.59	35.18	13.88	106.91
		U	35.54	16.77	142.27	34.72	17.21	147.25	35.27	13.75	114.54
6	Kaira	T	31.64	16.58	104.73	29.91	19.50	128.10	33.67	15.07	83.95
		U	50.99	24.26	101.44	49.45	25.67	111.93	51.60	19.92	76.41
7	Panchmahals	T	34.02	10.98	69.69	30.07	14.13	85.29	35.17	10.46	55.97
		U	38.67	9.50	45.73	37.11	10.69	50.61	39.38	8.30	39.81
8	Baroda	T	33.50	14.38	86.89	31.46	16.65	99.54	38.66	14.35	72.60
		U	39.52	15.93	101.95	40.08	16.20	96.14	40.31	14.18	81.42
9	Broach	T	39.89	19.37	112.10	37.79	22.28	117.66	44.13	18.33	91.37
		U	47.42	19.21	75.27	46.58	19.85	79.22	44.86	16.27	63.38
10	Surat	T	30.84	12.60	73.19	29.60	13.59	73.48	32.92	11.13	62.14
		U	34.88	15.70	106.61	33.65	16.11	114.14	33.98	13.24	105.37
11	Dangs*	T	49.97	14.43	80.80	43.23	14.92	92.75	46.06	13.65	79.74

	District	Area	1960			1951–60		
			Birth rate	Death rate	Infant death rate	Birth rate	Death rate	Infant death rate
	1	2	30	31	32	33	34	35
1	Amreli	T	27.97	12.54	82.65	23.53	10.11	100.61
		U	25.23	7.58	34.12	26.31	9.41	84.69
2	Banaskantha	T	26.70	12.82	85.10	27.54	14.08	100.77
		U	21.15	9.48	75.61	20.75	11.43	121.96
3	Sabarkantha	T	20.78	7.67	91.99	25.36	9.90	82.06
		U	26.20	9.82	78.24	28.64	11.68	82.54
4	Mehsana	T	25.90	11.68	64.38	32.53	14.53	76.11
		U	38.51	15.52	70.01	45.94	19.53	90.14
5	Ahmedabad	T	31.66	14.17	100.04	33.76	15.98	131.05
		U	35.75	15.63	106.93	36.75	17.23	142.97
6	Kaira	T	28.86	14.78	91.20	32.59	16.67	113.61
		U	47.30	21.98	92.56	51.76	24.17	109.85
7	Panchmahals	T	30.72	8.57	71.48	33.45	11.54	71.07
		U	35.82	8.63	43.72	37.05	10.02	57.90
8	Baroda	T	28.30	11.39	73.09	33.25	13.62	79.43
		U	38.30	14.48	78.26	40.66	15.43	91.33
9	Broach	T	38.13	16.13	82.91	40.87	18.12	102.68
		U	44.70	16.90	74.63	47.60	18.16	79.60
10	Surat	T	31.64	11.61	62.92	32.16	12.77	77.45
		U	32.95	13.34	97.05	36.92	15.84	115.04
11	Dangs*	T	48.52	17.44	97.23	45.62	15.54	95.08

*Entirely rural

Source :

Directorate of Public Health, Gujarat

TABLE 4A—Annual live birth, death and infant death rates in districts and their urban areas of Saurashtra and Kutch Region during 1951–60

District	Area	1951			1952			1953		
		Birth rate	Death rate	Infant death rate	Birth rate	Death rate	Infant death rate	Birth rate	Death rate	Infant death rate
1	2	3	4	5	6	7	8	9	10	11
Jamnagar	T	21.44	8.30	N.A.	20.86	7.94	N.A.	20.39	7.77	N.A.
	U	22.95	10.08	N.A.	22.81	10.66	N.A.	22.77	10.41	N.A.
Rajkot	T	18.85	5.31	N.A.	16.53	6.01	N.A.	18.61	6.18	N.A.
	U	36.29	7.85	N.A.	30.30	7.89	N.A.	28.71	7.77	N.A.
Surendranagar	T	17.42	8.46	N.A.	17.73	9.45	N.A.	19.38	11.94	N.A.
	U	18.47	9.32	N.A.	16.72	11.43	N.A.	17.91	11.43	N.A.
Bhavnagar	T	16.64	7.62	N.A.	15.21	9.19	N.A.	18.56	11.94	N.A.
	U	24.92	11.83	N.A.	20.97	15.00	N.A.	22.58	13.55	N.A.
Junagadh	T	22.70	11.67	N.A.	24.05	13.29	N.A.	21.89	12.54	N.A.
	U	21.88	11.33	N.A.	19.90	13.12	N.A.	19.64	13.12	N.A.
Kutch	T	13.21	7.95	N.A.	13.33	10.52	N.A.	14.02	9.28	N.A.
	U	28.96	18.80	N.A.	22.46	20.36	N.A.	20.49	16.25	N.A.

District	Area	1954			1955			1956		
		Birth rate	Death rate	Infant death rate	Birth rate	Death rate	Infant death rate	Birth rate	Death rate	Infant death rate
1	2	12	13	14	15	16	17	18	19	20
Jamnagar	T	20.79	8.60	N.A.	22.40	8.92	N.A.	22.00	7.59	N.A.
	U	17.63	9.21	N.A.	17.67	8.50	N.A.	19.54	7.38	N.A.
Rajkot	T	18.70	5.48	N.A.	20.69	5.14	N.A.	19.32	5.02	N.A.
	U	28.65	6.22	N.A.	32.40	4.40	N.A.	31.36	5.28	N.A.
Surendranagar	T	22.88	10.60	N.A.	28.29	9.96	N.A.	33.21	9.70	N.A.
	U	16.64	8.78	N.A.	20.82	8.11	N.A.	24.16	7.87	N.A.
Bhavnagar	T	20.66	9.97	N.A.	19.86	8.57	N.A.	22.50	10.27	N.A.
	U	23.91	11.39	N.A.	26.93	11.75	N.A.	24.91	11.30	N.A.
Junagadh	T	24.70	12.67	N.A.	23.77	10.45	N.A.	23.76	11.24	N.A.
	U	20.20	10.24	N.A.	22.63	11.42	N.A.	22.74	12.18	N.A.
Kutch	T	14.13	9.08	N.A.	15.62	10.16	N.A.	15.25	10.22	N.A.
	U	15.09	14.23	N.A.	19.16	14.51	N.A.	20.27	16.20	N.A.

TABLE 4A—Annual live birth, death and infant death rates in districts and their urban areas of Saurashtra and Kutch Region during 1951-60–*contd.*

District	Area	1957			1958			1959		
		Birth rate	Death rate	Infant death rate	Birth rate	Death rate	Infant death rate	Birth rate	Death rate	Infant death rate
1	2	21	22	23	24	25	26	27	28	29
Jamnagar	T	25.15	9.67	20.01	11.87	6.44	117.18	20.17	8.43	105.52
	U	17.50	7.36	28.82	10.48	5.56	80.88	21.77	8.41	70.48
Rajkot	T	18.54	8.51	35.05	17.13	7.11	108.10	26.70	9.62	104.76
	U	28.70	11.96	37.79	20.70	8.24	103.91	29.44	10.69	95.17
Surendranagar	T	29.55	10.54	22.62	18.60	7.91	86.84	27.20	9.45	76.88
	U	21.79	9.04	72.50	20.75	9.60	88.51	27.31	9.84	67.01
Bhavnagar	T	22.20	10.62	41.83	20.63	10.92	99.78	23.92	9.36	83.55
	U	24.99	11.47	71.53	23.47	11.21	101.53	26.63	9.48	78.44
Junagadh	T	19.85	12.01	48.31	17.56	9.11	106.18	26.08	10.76	89.43
	U	21.01	15.12	59.14	17.48	10.16	111.64	23.93	11.37	92.99
Kutch	T	15.04	8.83	62.48	6.88	3.17	77.73	10.67	4.73	82.90
	U	19.55	13.23	50.13	10.96	4.73	84.07	14.07	5.65	68.89

District	Area	1960			1951-60		
		Birth rate	Death rate	Infant death rate	Birth rate	Death rate	Infant death rate
1	2	30	31	32	33	34	35
Jamnagar	T	17.79	7.04	79.17	20.19	8.05	N.A.
	U	20.83	7.45	46.09	19.23	8.37	N.A.
Rajkot	T	25.25	9.81	98.37	20.19	6.92	N.A.
	U	28.42	10.37	84.20	29.34	8.25	N.A.
Surendranagar	T	24.22	7.82	64.19	24.05	9.55	N.A.
	U	27.46	7.87	49.73	21.42	9.29	N.A.
Bhavnagar	T	20.06	8.35	74.57	20.15	9.69	N.A.
	U	23.33	8.32	63.45	24.29	11.44	N.A.
Junagadh	T	22.91	10.31	104.35	22.70	11.35	N.A.
	U	22.73	9.73	76.69	21.24	11.76	N.A.
Kutch	T	8.47	3.63	78.23	12.65	7.64	N.A.
	U	13.95	4.95	59.11	18.07	12.35	N.A.

N.A.=Not available

Source : Directorate of Public Health, Gujarat

TABLE 5—Annual live births, deaths, infant deaths and maternal deaths in towns with population 30,000 and over in Gujarat State excluding Saurashtra and Kutch Region during 1951–60

		1951				1952			
	Town	Births	Deaths	Infant deaths	Maternal deaths	Births	Deaths	Infant deaths	Maternal deaths
	1	2	3	4	5	6	7	8	9
1	Amreli	1,256	532	163	..	1,112	491	140	9
2	Patan	2,167	962	310	11	2,004	1,009	280	9
3	Sidhpur	1,040	534	151	6	949	738	172	2
4	Mehsana	876	432	101	5	823	489	121	3
5	Kalol	1,101	504	155	5	956	641	180	..
6	Ahmedabad	33,288	16,137	5,620	76	34,145	20,313	6,285	34
7	Viramgam	1,368	574	202	9	1,192	801	234	10
8	Nadiad	2,530	1,433	435	8	2,698	1,649	515	6
9	Cambay	1,948	767	127	8	1,542	846	163	4
10	Anand	1,213	751	164	4	1,042	763	129	5
11	Petlad	1,452	645	133	6	1,359	786	155	4
12	Godhra	1,758	539	121	7	1,734	594	157	8
13	Dohad	1,207	341	118	5	1,002	382	142	1
14	Baroda	8,991	3,442	870	39	9,154	3,855	954	34
15	Dabhoi	1,006	434	91	3	1,119	468	102	1
16	Broach	2,898	1,173	251	14	2,966	1,188	241	17
17	Surat	9,450	4,360	1,478	23	9,309	5,391	1,774	31
18	Navsari	1,627	548	133	5	1,701	631	175	5
19	Bulsar	1,222	286	44	2	1,401	290	37	..

		1953				1954			
	Town	Births	Deaths	Infant deaths	Maternal deaths	Births	Deaths	Infant deaths	Maternal deaths
	1	10	11	12	13	14	15	16	17
1	Amreli	1,045	542	146	..	1,205	368	95	1
2	Patan	2,007	968	239	2	1,980	866	196	8
3	Sidhpur	987	496	115	4	1,184	432	100	3
4	Mehsana	853	339	53	2	890	327	84	6
5	Kalol	1,018	403	92	2	1,101	399	139	1
6	Ahmedabad	33,305	16,985	5,420	17	34,010	15,640	5,203	40
7	Viramgam	1,037	691	194	10	1,102	510	168	9
8	Nadiad	2,627	1,340	373	9	2,824	1,143	357	5
9	Cambay	1,885	789	174	10	1,851	668	196	4
10	Anand	1,123	703	120	10	1,359	514	99	6
11	Petlad	1,396	603	145	5	1,436	579	147	1
12	Godhra	1,789	501	136	1	1,700	439	92	1
13	Dohad	1,109	254	66	4	1,070	239	54	2
14	Baroda	8,922	3,595	804	31	9,319	3,240	743	6
15	Dabhoi	1,075	511	140	1	1,198	407	117	1
16	Broach	2,760	1,056	212	10	2,744	1,001	183	7
17	Surat	9,249	4,860	1,389	26	8,927	4,654	1,364	17
18	Navsari	1,651	580	109	5	1,567	587	125	1
19	Bulsar	1,447	350	38	1	1,414	310	39	2

TABLE 5—Annual births, deaths, infant deaths and maternal deaths in towns with population 30,000 and over in Gujarat State excluding Saurashtra and Kutch Region during 1951–60-*contd.*

	Town	1955				1956				1957			
		Births	Deaths	Infant deaths	Maternal deaths	Births	Deaths	Infant deaths	Maternal deaths	Births	Deaths	Infant deaths	Maternal deaths
	1	18	19	20	21	22	23	24	25	26	27	28	29
1	Amreli	1,215	407	109	1	1,189	466	110	2	1,202	391	84	4
2	Patan	2,232	737	175	8	1,991	868	189	10	2,143	895	184	3
3	Sidhpur	1,294	417	121	2	1,156	491	100	5	1,128	516	102	6
4	Mehsana	995	235	53	3	1,061	244	49	3	948	288	54	..
5	Kalol	1,179	327	99	3	1,160	412	108	4	1,030	407	104	1
6	Ahmedabad	38,108	16,030	5,528	22	36,292	17,723	5,588	23	36,290	17,532	5,391	23
7	Viramgam	1,189	557	179	2	1,106	623	201	8	1,176	653	194	7
8	Nadiad	3,050	1,216	357	12	2,890	1,231	290	7	2,849	1,396	365	8
9	Cambay	2,001	624	130	9	1,937	753	193	5	1,902	729	157	15
10	Anand	1,412	477	92	5	1,558	500	100	3	1,548	555	103	4
11	Petlad	1,387	551	120	11	1,536	707	178	2	1,513	779	204	4
12	Godhra	1,994	497	110	8	1,826	522	112	6	2,005	539	101	..
13	Dohad	1,171	224	63	4	1,330	249	75	3	1,289	259	49	1
14	Baroda	10,710	3,394	915	16	10,250	3,802	995	13	10,498	4,212	1,109	21
15	Dabhoi	1,202	415	109	4	1,209	396	108	2	1,168	438	102	2
16	Broach	3,003	1,060	239	10	3,068	1,006	220	14	2,894	1,221	209	10
17	Surat	9,827	4,339	1,432	42	10,088	5,926	1,800	52	9,867	5,216	1,386	47
18	Navsari	1,832	552	134	6	1,765	591	165	2	1,822	651	153	4
19	Bulsar	1,480	345	58	4	1,495	372	71	7	1,482	410	54	3

	Town	1958				1959				1960			
		Births	Deaths	Infant deaths	Maternal deaths	Births	Deaths	Infant deaths	Maternal deaths	Births	Deaths	Infant deaths	Maternal deaths
	1	30	31	32	33	34	35	36	37	38	39	40	41
1	Amreli	1,147	428	86	5	1,231	400	94	5	1,203	428	25	1
2	Patan	2,222	900	212	12	2,278	793	153	3	2,256	948	196	2
3	Sidhpur	1,187	550	99	4	1,253	408	58	4	1,223	443	77	1
4	Mehsana	1,062	271	63	3	1,036	22	29	3	1,004	281	57	6
5	Kalol	1,137	408	103	3	1,201	354	90	..	967	295	41	..
6	Ahmedabad	36,667	18,358	5,579	33	39,727	15,444	4,654	8	42,351	18,434	4,587	5
7	Viramgam	1,222	652	190	7	1,069	669	212	5	1,137	691	173	3
8	Nadiad	2,893	1,381	357	5	2,685	1,165	269	14	2,955	1,280	278	5
9	Cambay	1,784	957	230	22	2,076	765	139	11	1,979	862	186	13
10	Anand	1,605	605	111	3	1,754	519	126	3	1,740	612	160	2
11	Petlad	1,662	779	191	2	1,569	671	149	2	1,554	834	184	2
12	Godhra	1,963	637	76	3	2,179	515	..	6	1,996	508	77	1
13	Dohad	1,372	241	64	2	1,506	213	..	..	1,464	242	70	1
14	Baroda	10,995	4,350	1,061	20	11,433	3,976	940	21	11,435	4,303	883	8
15	Dabhoi	1,172	506	105	..	1,164	438	87	..	1,188	393	73	3
16	Broach	2,854	1,293	212	9	2,970	1,085	167	11	3,040	1,139	198	6
17	Surat	9,674	5,711	1,516	41	10,289	4,704	1,460	24	10,467	5,121	1,390	42
18	Navsari	1,914	572	131	5	1,998	575	106	2	2,130	677	106	5
19	Bulsar	1,588	368	59	4	1,612	354	52	1	1,644	315	42	..

Source :

Directorate of Public Health, Gujarat

TABLE 5A—Annual live births, deaths, infant deaths and maternal deaths in towns with population 30,000 and over in Saurashtra and Kutch Region during 1959–60

	Town	1959				1960			
		Births	Deaths	Infant deaths	Maternal deaths	Births	Deaths	Infant deaths	Maternal deaths
	1	2	3	4	5	6	7	8	9
1	Jamnagar	2,486	1,056	127	19	2,677	1,050	80	6
2	Rajkot	5,510	2,552	720	15	5,581	2,536	653	18
3	Morvi	1,025	217	59	2	999	204	49	3
4	Dhoraji	1,372	500	107	5	1,357	500	88	6
5	Gondal	1,369	401	91	2	1,322	417	76	1
6	Jetpur	822	239	40	2	862	228	34	..
7	Surendranagar	919	344	47	9	1,079	337	35	6
8	Dhrangadhra	331	428	64	2	301	96	14	..
9	Bhavnagar	4,365	2,098	523	22	4,426	2,041	362	14
10	Mahuva	981	284	43	..	194	75	12	..
11	Savarkundla	552	147	9	..	591	96	8	..
12	Porbandar	1,577	974	217	7	1,622	904	125	10
13	Junagadh	2,304	1,146	259	14	2,379	1,006	227	14
14	Veraval	555	449	85	5	99	89	6	3
15	Bhuj	792	423	83	1	762	328	62	1

Source :

Directorate of Public Health, Gujarat

TABLE 6—Annual live birth, death, infant death and maternal death rates in towns with population 30,000 and over in Gujarat State excluding Saurashtra and Kutch Region during 1951–60

	Town	1951				1952			
		Birth rate	Death rate	Infant death rate	Maternal death rate	Birth rate	Death rate	Infant death rate	Maternal death rate
	1	2	3	4	5	6	7	8	9
1	Amreli	44.77	18.96	129.77	..	38.69	17.08	125.90	8.09
2	Patan	50.72	22.51	143.05	5.08	46.06	23.19	139.72	4.49
3	Sidhpur	40.48	20.78	145.19	5.77	35.76	27.81	181.24	2.11
4	Mehsana	37.87	18.68	115.30	5.71	34.14	20.28	147.02	3.64
5	Kalol	48.40	22.15	140.78	4.54	40.34	27.05	188.28	..
6	Ahmedabad	39.27	19.04	168.83	2.28	38.85	23.11	184.07	0.99
7	Viramgam	49.17	20.63	147.66	6.58	41.14	27.65	196.31	8.39
8	Nadiad	40.04	22.68	171.94	3.16	41.62	25.44	190.88	2.22
9	Cambay	49.38	19.44	65.19	4.11	37.91	20.80	105.71	2.59
10	Anand	46.20	28.60	135.20	3.30	37.58	27.52	123.80	4.80
11	Petlad	48.64	21.61	91.60	4.13	44.69	25.85	114.05	2.94
12	Godhra	43.02	13.19	68.83	3.98	41.25	14.13	90.54	4.61
13	Dohad	47.06	13.29	97.76	4.14	37.57	14.32	141.72	1.00
14	Baroda	41.97	16.07	96.76	4.34	41.13	17.32	104.22	3.71
15	Dabhoi	40.00	17.26	90.46	2.98	43.48	18.18	91.15	0.89
16	Broach	45.93	18.59	86.61	4.83	46.21	18.51	81.25	5.73
17	Surat	41.94	19.35	156.40	2.43	40.15	23.25	190.57	3.33
18	Navsari	36.25	12.21	81.74	3.07	37.34	13.85	102.88	2.94
19	Bulsar	47.44	11.10	36.01	1.64	52.43	10.85	26.41	..

	Town	1953				1954			
		Birth rate	Death rate	*Infant* death rate	*Maternal* death rate	Birth rate	Death rate	*Infant* death rate	*Maternal* death rate
	1	10	11	12	13	14	15	16	17
1	Amreli	35.51	18.42	139.71	..	40.01	12.22	78.84	0.83
2	Patan	45.32	21.86	119.08	1.00	43.93	19.21	98.99	4.04
3	Sidhpur	36.05	18.12	116.51	4.05	41.95	15 31	84.46	2.53
4	Mehsana	34.00	13.51	62.13	2.34	34.15	12.55	94.38	6.74
5	Kalol	41.30	16.35	90.37	1.96	43.00	15.58	126.25	0.91
6	Ahmedabad	36.59	18.66	162.74	0.51	36.13	16.61	152.98	1.18
7	Viramgam	34.52	22.94	187.08	9.64	35.23	16.31	152.45	8.17
8	Nadiad	39.53	20.16	141.99	3.42	41.48	16.79	126.42	1.77
9	Cambay	44.99	18.83	92.31	5.30	42.92	15.49	105.89	2.16
10	Anand	38.46	24.08	106.86	8.90	44.32	16 76	72.85	4.41
11	Petlad	45.08	19.47	103.87	3.58	45.55	18.37	102.37	0.70
12	Godhra	41.41	11.60	76.02	0.56	38.31	9.89	54.12	0.59
13	Dohad	40.06	9.17	59.51	3.61	37.28	8.33	50.47	1.87
14	Baroda	38.63	15.57	90.11	3.47	38.94	13.54	79.73	0.64
15	Dabhoi	40.83	19.41	130.23	0.93	44.51	15.12	97.66	0.83
16	Broach	42.28	16.18	76.81	3.62	41.35	15.08	66.69	2.55
17	Surat	38.81	20.39	150.18	2.81	36.47	19.01	152.79	1.90
18	Navsari	35.73	12.55	66.02	3.03	33.43	12.52	79.77	0.64
19	Bulsar	52.27	12.64	26.26	0.69	49.36	10.82	27.58	1.41

TABLE 6—Annual live birth, death, infant death and maternal death rates in towns with population 30,000 and over in Gujarat State excluding Saurashtra and Kutch Region during 1951–60–*contd.*

		1955				1956				1957			
	Town	Birth rate	Death rate	Infant death rate	Maternal death rate	Birth rate	Death rate	Infant death rate	Maternal death rate	Birth rate	Death rate	Infant death rate	Maternal death rate
	1	18	19	20	21	22	23	24	25	26	27	28	29
1	Amreli	39.44	13.21	89.71	0.82	37.76	14.80	92.51	1.68	37.35	12.15	69.88	3.33
2	Patan	48.68	16.07	78.40	3.58	42.70	18.61	94.93	5.02	45.20	18.88	85.86	1.40
3	Sidhpur	44.52	14.35	93.51	1.54	38.65	16.41	86.50	4.32	36.68	16.78	90.42	5.32
4	Mehsana	36.80	8.69	53.27	3.01	37.87	8.71	46.18	2.83	32.70	9.93	56.96	..
5	Kalol	44.40	12.31	83.97	2.54	42.17	14.98	93.10	3.45	36.20	14.30	100.97	2.46
6	Ahmedabad	39.18	16.48	145.06	0.58	36.15	17.65	153.97	0.63	35.05	16.93	148.55	0.63
7	Viramgam	36.67	17.18	150.55	1.68	32.94	18.55	181.73	7.23	33.86	18.80	164.96	5.95
8	Nadiad	43.75	17.44	117.05	3.93	40.51	17.25	100.35	2.42	39.04	19.13	128.11	2.81
9	Cambay	45.12	14.07	64.97	4.50	42.50	16.52	99.64	2.58	40.64	15.58	82.54	7.89
10	Anand	43.94	14.84	65.15	3.54	46.37	14.88	64.18	1.92	44.14	15.82	66.54	2.58
11	Petlad	43.23	17.17	86.52	7.93	47.06	21.66	115.88	1.30	45.58	23.47	134.83	2.64
12	Godhra	43.78	10.91	55.16	4.01	39.09	11.17	61.34	3.28	41.87	11.26	50.37	..
13	Dohad	39.40	7.54	53.80	3.41	43.27	8.10	56.39	2.25	40.60	8.16	38.01	0.77
14	Baroda	43.24	13.70	85.43	1.49	40.03	14.85	97.07	1.27	39.70	15.93	105.64	2.00
15	Dabhoi	43.70	15.09	90.68	3.33	43.03	14.10	89.33	1.65	40.72	15.27	87.33	1.71
16	Broach	44.52	15.71	79.59	3.33	44.76	14.67	71.71	4.56	41.56	17.53	72.22	3.45
17	Surat	39.11	17.27	145.72	4.27	39.14	22.99	178.43	5.15	38.28	19.74	140.47	4.76
18	Navsari	38.53	11.61	73.14	3.27	36.61	12·26	93.48	1.13	37.28	13.32	83.97	2.19
19	Bulsar	49.98	11.65	39.19	2.70	48.90	12.17	47.49	4.68	47.00	13.00	36.44	2.02

		1958				1959				1960			
	Town	Birth rate	Death rate	Infant death rate	Maternal death rate	Birth rate	Death rate	Infant death rate	Maternal death rate	Birth rate	Death rate	Infant death rate	Maternal death rate
	1	30	31	32	33	34	35	36	37	38	39	40	41
1	Amreli	34.90	13.02	74.98	4.36	36.69	11.92	76.36	4.06	35.14	12.50	20.78	0.83
2	Patan	46.11	18.68	95.51	5.40	46.52	16.19	67.16	1.32	15.35	19.06	86.88	0.89
3	Sidhpur	37.56	17.40	83.40	3.37	38.62	12.57	46.29	3.19	36.74	15.31	62.96	0.82
4	Mehsana	35.44	9.04	59.32	2.82	33.48	7.14	27.99	2.89	31.45	8.80	56.77	5.98
5	Kalol	38.66	13.87	90.59	2.64	39.56	11.66	74.94	..	30.89	9.42	42.40	..
6	Ahmedabad	34.38	17.21	152.15	1.80	36.19	14.07	117.15	0.20	37.51	16.33	108.31	0.12
7	Viramgam	34.05	18.17	155.48	5.73	28.86	18.06	198.32	4.68	29.77	18.09	15.215	2.64
8	Nadiad	38.78	18.51	123.40	1.73	35.22	15.28	100.19	5.21	37.95	16.44	94.08	1.69
9	Cambay	37.15	19.93	128.92	12.33	42.15	15.53	66.95	5.30	39.21	17.08	93.99	6.57
10	Anand	43.92	16.56	69.16	1.87	46.15	13.65	71.83	1.71	44.07	15.50	91.95	1.15
11	Petlad	49.24	23.08	114.92	1.20	45.73	19.56	94.96	1.27	44.31	23.92	119.09	1.29
12	Godhra	40.02	12.99	38.72	1.53	43.49	10.25	N.A.	2.75	38.84	9.88	38.58	0.50
13	Dohad	41.87	7.35	46.65	1.46	44.57	6.30	N.A.	..	42.07	6.95	47.81	0.68
14	Baroda	40.30	15.94	96.50	1.82	40.66	14.14	82.22	1.84	39.49	14.96	77.22	0.70
15	Dabhoi	40.04	17.29	89.59	..	38.98	14.67	74.74	..	39.02	12.91	61.45	2.52
16	Broach	40.35	18.28	74.28	3.15	41.35	15.11	56.23	3.70	41.69	15.62	65.13	1.97
17	Surat	35.73	21.09	156.71	4.24	37.11	16.97	141.90	2.33	36.89	18.05	132.80	4.01
18	Navsari	38.64	11.55	68.44	2.61	39.80	11.45	53.05	1.00	41.88	13.31	49.76	2.35
19	Bulsar	48.87	11.32	37.15	2.52	48.18	10.58	32.26	0.62	47.76	9.15	25.55	..

N.A.=Not availab

Source : Directorate of Public Health Gujarat

TABLE 6A—Annual live birth, death, infant death and maternal death rates in towns with population 30,000 and over in Saurashtra and Kutch Region during 1959–60

	Town	1959				1960			
		Birth rate	Death rate	Infant death rate	Maternal death rate	Birth rate	Death rate	Infant death rate	Maternal death rate
	1	2	3	4	5	6	7	8	9
1	Jamnagar	18.60	7.90	51.09	7.64	19.50	7.65	29.88	2.24
2	Rajkot	30.07	13.92	130.67	2.72	29.47	13.39	117.00	3.22
3	Morvi	21.08	4.46	57.56	1.95	20.16	4.12	49.05	3.00
4	Dhoraji	28.53	10.40	77.99	3.64	27.92	10.29	64.85	4.42
5	Gondal	31.31	9.17	66.47	1.46	29.69	9.36	57.49	0.76
6	Jetpur	26.75	7.78	48.66	2.43	27.80	7.35	39.44	..
7	Surendranagar	19.89	7.44	51.14	9.79	22.64	7.07	32.44	5.56
8	Dhrangadhra	10.63	13.75	193.35	6.04	9.47	3.02	46.51	..
9	Bhavnagar	26.37	12.67	119.82	5.04	26.21	12.09	81.79	3.16
10	Mahuva	31.81	9.21	43.83	..	6.19	2.39	61.85	..
11	Savarkundla	19.14	5.10	16.30	..	19.96	3.24	13.54	..
12	Porbandar	21.96	13.56	137.60	4.44	22.09	12.31	77.06	6.16
13	Junagadh	31.83	15.83	112.41	6.08	32.35	13.68	95.42	5.88
14	Veraval	12.19	9.86	153.15	9.01	2.14	1.93	60.61	3.30
15	Bhuj	21.05	11.24	104.80	1.26	19.83	8.54	81.36	1.31

Source :
Directorate of Public Health, Gujarat

TABLE 7—Deaths by age and sex in districts and their urban areas of Gujarat State excluding Saurashtra and Kutch Region during the decennium 1951–60

	District	Area	Under one year		1–5		5–10		10–15		15–20		20–30	
			Total	Males	Total	Males	Total	Males	Total	Males	Total	Males	Total	Males
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Amreli	T	14,226	7,534	20,249	9,818	2,369	1,122	1,319	652	1,176	588	3,005	1,393
		U	2,824	1,473	3,036	1,443	428	206	261	129	281	125	712	322
2	Banaskantha	T	24,463	13,002	36,563	18,422	5,787	2,970	2,848	1,472	2,634	1,413	7,723	3,527
		U	1,542	806	1,478	737	218	99	120	59	142	61	508	208
3	Sabarkantha	T	16,595	8,772	20,419	10,145	3,242	1,667	1,808	928	1,584	776	5,250	2,371
		U	1,226	631	1,246	583	209	103	98	53	130	61	460	191
4	Mehsana	T	38,048	19,504	65,952	32,763	8,417	4,350	4,479	2,268	4,111	2,099	12,646	6,076
		U	11,132	5,585	12,782	6,025	1,809	926	977	476	1,005	496	2,969	1,378
5	Ahmedabad	T	85,583	42,849	88,099	42,213	10,563	5,465	6,060	3,001	5,677	2,709	17,050	7,571
		U	60,699	30,225	52,824	24,761	6,556	3,325	3,736	1,851	3,656	1,700	10,697	4,557
6	Kaira	T	66,236	32,840	77,076	37,322	9,994	5,149	6,209	3,193	5,362	2,751	15,792	7,097
		U	19,266	9,511	19,069	9,097	2,410	1,204	1,460	759	1,310	632	4,228	1,879
7	Panchmahals	T	30,777	16,544	37,109	18,480	7,110	3,596	3,708	1,955	3,406	1,731	11,266	4,953
		U	2,949	1,575	2,534	1,277	552	284	311	165	397	196	1,005	475
8	Baroda	T	36,029	18,149	54,015	26,454	7,731	4,026	3,948	2,090	3,566	1,710	10,563	4,500
		U	12,598	6,298	11,421	5,251	1,866	967	971	506	1,156	519	3,375	1,412
9	Broach	T	33,656	17,695	43,412	21,658	6,266	3,096	3,229	1,625	2,685	1,225	8,130	3,226
		U	4,598	2,362	4,837	2,378	851	452	478	251	496	229	1,368	586
10	Surat	T	55,027	29,295	64,713	32,308	11,818	5,834	5,992	3,081	5,376	2,652	16,615	6,714
		U	19,265	10,170	14,695	6,932	2,811	1,374	1,131	566	1,302	621	3,732	1,578
11	Dangs*	T	2,560	1,349	2,261	1,043	507	263	255	130	240	104	620	274

	District	Area	30–40		40–50		50–60		60+		Age not stated		Total (All ages)	
			Total	Males	Total	Males	Total	Males	Total	Males	Total	Males	Total	Males
	1	2	15	16	17	18	19	20	21	22	23	24	25	26
1	Amreli	T	2,731	1,403	2,536	1,547	3,324	2,047	9,709	5,122	141	73	60,785	31,299
		U	552	298	622	389	785	473	2,404	1,220	26	13	11,931	6,091
2	Banaskantha	T	7,065	3,796	7,098	4,387	8,747	5,363	21,018	10,726	175	83	124,121	65,161
		U	404	221	455	279	628	406	1,467	714	3	..	6,965	3,590
3	Sabarkantha	T	4,937	2,542	4,935	3,031	5,400	3,177	14,615	7,085	150	85	78,935	40,579
		U	385	216	423	272	487	300	1,377	697	19	12	6,060	3,119
4	Mehsana	T	13,121	6,845	13,117	7,868	17,083	10,400	46,108	24,660	279	150	223,361	116,983
		U	3,018	1,541	3,053	1,853	4,155	2,573	11,534	5,903	52	29	52,486	26,785
5	Ahmedabad	T	16,698	8,410	14,856	9,058	17,433	10,855	46,588	24,192	413	190	309,020	156,513
		U	10,592	5,311	9,664	6,014	11,231	7,211	29,281	15,062	161	82	199,097	100,099
6	Kaira	T	17,566	8,765	19,072	10,807	20,290	11,965	60,345	33,273	300	149	298,242	153,311
		U	4,826	2,410	5,392	3,130	6,080	3,820	17,791	9,796	83	41	81,915	42,279
7	Panchmahals	T	10,771	5,427	9,844	5,789	9,970	5,886	25,049	13,109	267	129	149,337	77,599
		U	925	500	953	604	1,154	773	2,913	1,642	76	45	13,769	7,536
8	Baroda	T	11,208	5,669	11,014	6,596	12,816	7,855	34,593	18,206	309	170	185,792	95,425
		U	3,299	1,645	3,357	2,130	3,820	2,554	10,457	5,483	32	12	52,352	26,777
9	Broach	T	7,942	3,649	7,651	4,454	8,704	5,247	23,396	12,515	199	101	145,270	74,491
		U	1,385	700	1,521	980	1,725	1,140	4,748	2,590	32	17	22,039	11,685
10	Surat	T	17,314	8,150	17,532	10,273	21,428	13,481	65,677	34,799	664	360	282,156	146,947
		U	3,538	1,701	3,893	2,423	5,059	3,378	16,839	8,671	175	110	72,440	37,524
11	Dangs*	T	609	304	502	284	519	312	1,090	603	7	3	9,170	4,669

Source :

Directorate of Public Health, Gujarat

*Entirely rural area

TABLE 7A—Deaths by age and sex in districts and their urban areas of Saurashtra and Kutch Region during 1958–60

	District	Area	Under one year		1-5		5–10		10–15		15–20		20–30	
			Total	Males	Total	Males	Total	Males	Total	Males	Total	Males	Total	Males
	1	2	3	4	5	6	7	8	9	10	11	12	13	14
1	Jamnagar	T	3,909	2,001	4,920	2,422	977	509	383	214	280	142	933	445
		U	931	457	1,409	686	364	195	146	90	105	58	437	203
2	Rajkot	T	8,308	4,278	8,352	3,996	1,183	614	572	321	457	248	1,463	627
		U	3,309	1,705	2,877	1,361	543	288	244	136	235	122	720	311
3	Surendranagar	T	3,351	1,733	4,579	2,312	685	361	320	162	276	120	843	388
		U	900	438	1,040	487	217	112	106	51	117	57	310	135
4	Bhavnagar	T	5,987	2,991	9,891	4,755	1,337	675	754	417	544	284	1,459	663
		U	2,022	977	2,324	1,074	406	226	193	109	185	82	530	260
5	Junagadh	T	7,936	4,044	10,343	5,123	1,631	848	834	431	682	346	1,988	928
		U	2,029	986	2,340	1,118	415	216	218	109	203	107	673	324
6	Kutch	T	1,407	745	1,878	950	274	140	177	82	147	68	463	211
		U	347	175	369	181	84	39	48	23	32	13	141	68

	District	Area	30–40		40–50		50–60		60+		Age not stated		Total (All ages)	
			Total	Males	Total	Males	Total	Males	Total	Males	Total	Males	Total	Males
	1	2	15	16	17	18	19	20	21	22	23	24	25	26
1	Jamnagar	T	872	453	630	394	847	568	3,248	1,745	404	211	17,403	9,104
		U	393	223	320	207	417	283	1,440	763	18	12	5,980	3,177
2	Rajkot	T	1,147	586	1,228	741	1,453	1,016	6,001	3,097	758	371	30,922	15,895
		U	619	315	704	448	794	576	3,034	1,545	129	59	13,208	6,866
3	Surendranagar	T	878	486	720	436	804	529	3,287	1,718	298	140	16,041	8,394
		U	336	200	325	206	340	237	1,196	646	..	..	4,887	2,569
4	Bhavnagar	T	1,324	694	1,420	916	1,593	1,046	5,958	3,134	615	311	30,882	15,886
		U	531	275	602	409	698	497	2,348	1,209	28	19	9,867	5,137
5	Junagadh	T	1,645	820	1,624	924	1,941	1,176	7,317	3,783	394	206	36,335	18,629
		U	556	284	572	325	769	460	2,824	1,440	119	71	10,718	5,440
6	Kutch	T	476	230	455	266	548	335	1,881	971	86	55	7,792	4,053
		U	133	63	112	70	148	106	549	252	..	..	1,963	990

TABLE 8—Annual deaths by age and sex in Gujarat State and its urban areas excluding Saurashtra and Kutch Region during 1951–60

Year	Area	Under one year		1–5		5–10		10–15		15–20		20–30	
		Total	Males	Total	Males	Total	Males	Total	Males	Total	Males	Total	Males
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1951	T	39,718	20,628	42,040	21,502	6,204	3,143	4,214	2,134	4,335	2,052	12,702	5,726
	U	14,060	7,151	10,609	5,136	1,305	641	1,029	481	1,187	504	3,137	1,377
1952	T	45,713	23,588	58,994	29,889	7,034	3,657	4,640	2,375	4,878	2,359	13,437	6,143
	U	17,016	8,681	16,415	8,026	1,748	883	1,285	619	1,347	629	3,698	1,634
1953	T	39,913	20,490	48,370	24,204	6,387	3,107	4,187	2,173	4,389	2,148	12,120	5,376
	U	14,204	7,180	12,464	6,050	1,353	645	1,106	559	1,211	566	3,242	1,413
1954	T	38,649	20,088	48,350	24,191	5,881	2,997	3,576	1,865	3,877	1,841	10,369	4,677
	U	12,901	6,608	11,997	5,940	1,428	733	963	513	1,155	514	2,806	1,260
1955	T	41,125	21,150	45,950	22,435	6,860	3,512	3,614	1,834	3,013	1,517	9,537	4,107
	U	13,454	6,707	10,399	4,879	1,618	819	794	400	836	397	2,564	1,099
1956	T	40,145	20,852	49,999	24,053	7,414	3,821	3,665	1,881	2,990	1,502	9,427	4,119
	U	14,080	7,122	13,299	6,066	2,063	1,065	858	453	833	395	2,618	1,158
1957	T	40,377	20,585	52,801	25,681	8,398	4,286	3,915	1,979	2,949	1,567	10,230	4,423
	U	13,317	6,653	11,906	5,493	2,138	1,064	889	457	836	422	2,822	1,211
1958	T	43,938	22,382	66,883	32,434	10,396	5,135	4,463	2,241	3,393	1,733	10,654	4,437
	U	14,126	7,038	14,189	6,443	2,253	1,144	920	467	875	422	2,868	1,174
1959	T	39,106	20,065	45,091	21,516	7,126	3,689	3,878	1,978	3,306	1,700	10,807	4,672
	U	11,541	5,844	8,934	4,039	1,562	785	761	388	808	405	2,667	1,135
1960	T	34,516	17,705	51,390	24,721	8,164	4,191	3,703	1,935	2,687	1,339	9,377	4,022
	U	11,400	5,652	13,710	6,412	2,242	1,161	938	478	787	386	2,632	1,125

Year	Area	30–40		40–50		50–60		60+		Age not stated		Total (All ages)	
		Total	Males	Total	Males	Total	Males	Total	Males	Total	Males	Total	Males
1	2	15	16	17	18	19	20	21	22	23	24	25	26
1951	T	11,391	5,898	10,449	6,075	13,176	7,477	22,721	11,846	..	..	166,950	86,481
	U	2,992	1,509	2,831	1,651	3,328	1,999	6,807	3,502	..	..	47,285	23,951
1952	T	13,711	7,111	13,732	7,866	17,147	9,636	29,291	15,161	..	..	208,577	107,785
	U	3,641	1,844	3,818	2,205	4,364	2,488	8,284	4,144	..	..	61,616	31,153
1953	T	12,074	6,231	12,424	7,460	14,876	8,719	27,682	14,749	..	..	182,422	94,657
	U	3,146	1,657	3,446	2,108	3,920	2,394	8,578	4,496	..	..	52,670	27,068
1954	T	10,370	5,379	10,048	6,007	11,984	7,046	26,221	13,913	..	..	169,325	88,004
	U	2,850	1,467	2,782	1,738	3,316	2,019	7,651	4,038	..	..	47,849	24,830
1955	T	9,516	4,536	9,811	5,746	10,291	6,500	34,881	18,354	..	..	174,598	89,691
	U	2,481	1,224	2,639	1,593	2,956	1,970	9,632	5,017	..	..	47,373	24,105
1956	T	9,633	4,710	9,718	5,870	10,227	6,659	36,035	19,001	..	..	179,253	92,468
	U	2,524	1,236	2,683	1,726	3,113	2,158	10,330	5,355	..	..	52,401	26,734
1957	T	10,549	5,119	10,754	6,590	11,711	7,533	42,218	22,526	..	..	193,902	100,289
	U	2,797	1,377	3,032	1,980	3,636	2,521	12,254	6,574	..	..	53,627	27,752
1958	T	11,126	5,223	11,340	6,623	12,741	8,017	45,998	24,088	839	418	221,771	112,731
	U	2,732	1,244	3,010	1,813	3,701	2,479	12,194	6,311	150	94	57,018	28,629
1959	T	11,445	5,637	11,104	6,519	12,944	8,097	43,648	23,365	892	465	189,347	97,703
	U	2,757	1,388	2,722	1,711	3,430	2,320	11,694	6,214	217	104	47,093	24,333
1960	T	10,147	5,116	8,777	5,338	10,617	6,904	39,493	21,287	1,173	610	180,044	93,168
	U	3,004	1,597	2,370	1,549	3,360	2,280	11,387	6,127	292	163	52,122	26,930

Source :

Directorate of Public Health, Gujarat

TABLE 8A—Annual deaths by age and sex in Saurashtra and Kutch Region and its urban areas during 1958–60

Year	Area	Years: Under one year		1–4		5–9		10–14		15–19		20–29	
		Total	Males	Total	Males	Total	Males	Total	Males	Total	Males	Total	Males
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1958	T	8,903	4,574	12,939	6,506	1,918	1,012	1,142	619	863	417	2,196	1,014
	U	3,064	1,521	3,459	1,621	627	323	335	180	273	130	841	397
1959	T	11,833	6,038	13,372	6,511	2,205	1,148	1,069	573	848	447	2,624	1,223
	U	3,614	1,788	3,434	1,651	729	394	320	185	313	155	1,018	487
1960	T	10,162	5,180	13,652	6,541	1,964	987	829	435	675	353	2,329	1,025
	U	2,860	1,429	3,466	1,635	673	359	300	153	291	154	952	417

Year	Area	Years: 30–39		40–49		50–59		60+		Age not stated		Total (All ages)	
		Total	Males	Total	Males	Total	Males	Total	Males	Total	Males	Total	Males
1	2	15	16	17	18	19	20	21	22	23	24	25	26
1958	T	1,899	978	1,945	1,160	2,001	1,220	8,023	4,038	490	240	42,319	21,778
	U	754	403	894	567	923	626	3,375	1,715	14	6	14,559	7,489
1959	T	2,254	1,133	2,294	1,372	2,826	1,808	10,291	5,352	529	272	50,145	25,877
	U	937	478	936	563	1,187	790	4,180	2,093	94	46	16,762	8,630
1960	T	2,189	1,158	1,838	1,145	2,359	1,642	9,378	5,058	1,536	782	46,911	24,306
	U	877	479	805	535	1,056	743	3,836	2,047	186	109	15,302	8,060

Source :

Directorate of Public Health, Gujarat

TABLE 9—Annual deaths in different months in Gujarat State and its urban areas excluding Saurashtra and Kutch Region during 1951–60

Year		January	February	March	April	May	June	July	August	September	October	November	December	Total
1		2	3	4	5	6	7	8	9	10	11	12	13	14
1951	T	15,595	14,611	15,576	14,915	14,173	12,061	12,363	12,813	14,320	13,248	13,519	13,756	166,950
	U	4,535	3,832	4,454	4,198	4,148	3,406	3,513	3,615	4,085	3,737	3,878	3,884	47,285
1952	T	16,665	17,807	19,733	18,524	16,478	13,875	15,166	18,269	19,674	18,653	17,886	15,847	208,577
	U	5,224	5,101	5,782	6,420	5,406	4,119	4,268	5,490	5,541	4,923	4,813	4,529	61,616
1953	T	14,123	12,934	15,241	14,634	13,786	13,176	14,759	17,962	18,093	17,719	15,809	14,186	182,422
	U	4,308	3,800	4,242	4,181	3,953	3,854	4,274	5,164	5,420	4,917	4,331	4,226	52,670
1954	T	14,241	11,672	14,073	14,315	13,901	12,727	14,667	17,308	15,698	13,601	14,026	13,096	169,325
	U	4,248	3,547	4,290	4,473	4,209	3,466	4,021	4,610	3,850	3,526	3,904	3,705	47,849
1955	T	11,780	11,255	13,687	13,739	14,827	12,721	14,576	15,670	17,287	18,001	17,124	14,931	174,598
	U	3,371	3,140	3,756	3,659	4,316	3,627	3,957	4,217	4,711	4,362	4,206	4,051	47,373
1956	T	13,709	13,140	14,109	16,205	15,847	14,071	14,513	16,016	16,561	15,983	14,380	14,719	179,253
	U	4,141	4,022	4,758	5,556	5,053	4,248	4,134	4,401	4,196	4,145	3,758	3,989	52,401
1957	T	13,279	13,548	16,438	15,902	14,747	14,251	16,008	19,886	18,411	15,752	16,002	19,678	193,902
	U	4,143	4,352	4,919	4,627	4,076	3,867	4,789	5,477	4,881	3,819	4,075	4,602	53,627
1958	T	21,051	19,307	22,044	19,702	18,422	15,528	16,349	21,645	21,203	17,588	15,250	13,682	221,771
	U	4,777	4,824	5,565	5,347	4,949	4,101	4,060	5,642	5,226	4,494	3,998	4,035	57,018
1959	T	14,614	12,889	15,076	15,770	16,226	14,339	15,298	16,990	17,979	17,188	16,645	16,333	139,347
	U	3,834	3,263	3,761	3,631	4,215	3,604	3,860	4,240	4,302	4,066	4,169	4,148	47,093
1960	T	13,069	12,989	15,284	15,597	17,008	15,180	16,700	17,589	15,813	13,626	13,688	13,501	18,044
	U	4,061	4,198	4,951	5,486	5,350	4,154	4,111	4,387	4,085	3,333	3,933	4,073	52,122

Source :

Directorate of Public Health, Gujarat

TABLE 9A—Annual deaths in different months in Saurashtra and Kutch Region and its urban areas during 1958–60

Year		January	February	March	April	May	June	July	August	September	October	November	December	Total
1		2	3	4	5	6	7	8	9	10	11	12	13	14
1958	T	3,800	3,139	3,651	3,725	4,208	3,397	3,330	3,433	2,758	3,551	3,908	3,419	42,319
	U	1,543	1,066	1,301	1,211	1,322	733	1,088	1,079	1,116	1,407	1,449	1,244	14,559
1959	T	3,795	3,050	4,114	4,281	4,749	4,185	4,401	4,680	4,647	3,733	4,232	4,278	50,145
	U	1,244	1,090	1,398	1,417	1,630	1,227	1,361	1,515	1,603	1,353	1,468	1,456	16,762
1960	T	3,564	3,826	4,917	3,959	4,329	4,365	4,446	4,507	3,848	3,254	3,052	2,844	46,911
	U	1,406	1,429	1,568	1,301	1,264	1,215	1,306	1,347	1,257	1,103	1,029	1,077	15,302

Source :

Directorate of Public Health, Gujarat

TABLE 10—Annual deaths by causes and their proportion to total deaths in Gujarat State and its urban areas excluding Saurashtra and Kutch Region during 1951–60

Year	Area	Cause of death: Cholera	Small pox	Plague	Dysentery and diarrhoea	Respiratory diseases	Fever	Others	Total
1	2	3	4	5	6	7	8	9	10
1951	T	6	656	..	2,334	18,639	98,814	46,501	166,950
	U	..	208	..	1,589	8,681	19,556	17,251	47,285
1952	T	..	2,070	..	3,352	25,192	124,259	53,704	208,577
	U	..	964	..	2,080	12,740	23,907	21,925	61,616
1953	T	1,034	738	..	2,941	23,318	102,378	52,013	182,422
	U	73	206	..	1,529	10,644	17,632	22,586	52,670
1954	T	1	339	..	3,052	24,613	92,728	48,592	169,325
	U	1	83	..	1,562	10,084	14,591	21,528	47,849
1955	T	9	735	..	3,964	30,610	84,988	54,292	174,598
	U	4	123	..	1,857	10,330	12,211	22,848	47,373
1956	T	5	1,417	..	4,167	30,757	84,758	58,149	179,253
	U	..	416	..	1,962	10,913	13,906	25,204	52,401
1957	T	25	2,782	..	4,209	30,241	93,151	63,494	193,902
	U	14	736	..	1,922	10,842	15,337	24,776	53,627
1958	T	485	5,263	..	6,670	34,362	106,382	68,609	221,771
	U	42	847	..	2,513	11,325	16,129	26,162	57,018
1959	T	109	472	..	4,785	31,684	81,186	71,111	189,347
	U	31	81	..	1,611	10,011	10,845	24,514	47,093
1960	T	64	1,009	..	4,438	29,388	82,530	62,615	180,044
	U	15	152	..	1,985	11,756	13,770	24,444	52,122

Year	Area	Death rate	Proportion to 1,000 total deaths: Cholera	Small pox	Plague	Dysentery and diarrhoea	Respiratory diseases	Fever	Others
1	2	11	12	13	14	15	16	17	18
1951	T	14.06	0.03	3.93	..	13.98	111.64	591.89	278.53
	U	17.87	..	4.40	..	33.60	183.59	413.58	364.83
1952	T	17.12	..	9.92	..	16.07	120.78	595.75	257.48
	U	22.51	..	15.65	..	38.76	206.76	388.00	355.83
1953	T	14.60	5.67	4.05	..	16.12	127.82	561.22	285.12
	U	18.62	1.39	3.91	..	29.03	202.09	334.76	428.82
1954	T	13.22	0.01	2.00	..	18.02	145.36	547.64	286.97
	U	16.38	0.02	1.73	..	32.64	210.75	304.94	449.92
1955	T	13.31	0.05	4.21	..	22.70	175.32	486.77	310.95
	U	15.73	0.08	2.60	..	39.20	218.06	257.76	482.30
1956	T	13.35	0.03	7.90	..	23.25	171.58	472.84	324.40
	U	16.88	..	7.94	..	37.44	208.26	265.38	480.98
1957	T	14.12	0.13	14.35	..	21.71	155.96	480.40	327.45
	U	16.78	0.26	13.72	..	35.84	202.17	286.00	462.01
1958	T	15.79	2.19	23.73	..	30.08	154.94	479.69	309.37
	U	17.35	0.74	14.85	..	44.07	198.62	282.88	458.84
1959	T	13.19	0.58	2.49	..	25.27	167.33	428.77	375.56
	U	13.94	0.66	1.72	..	34.21	212.58	230.29	520.54
1960	T	12.28	0.35	5.60	..	24.65	163.23	458.39	347.78
	U	15.02	0.29	2.92	..	38.08	225.55	264.19	468.97

Source :

Directorate of Public Health, Gujarat

TABLE 10A—Annual deaths by causes and their proportion to total deaths in Saurashtra and Kutch Region and its urban areas during 1958–60

Year	Area	Cause of death: Cholera	Smallpox	Plague	Dysentery and diarrhoea	Respiratory diseases	Fever	Others	Total
1		2	3	4	5	6	7	8	9
1958	T	3	2,993	..	1,783	4,828	21,588	11,124	42,319
	U	2	747	..	1,069	2,343	4,920	5,478	15,559
1959	T	48	1,076	..	2,533	6,381	23,414	16,693	50,145
	U	24	159	..	1,256	2,652	5,316	7,355	16,762
1960	T	3	539	..	1,915	4,808	24,198	15,448	46,911
	U	..	79	..	985	2,194	5,363	6,681	15,302

Year	Area	Proportion to 1,000 total deaths: Death rate	Cholera	Smallpox	Plague	Dysentery and diarrhoea	Respiratory diseases	Fever	Others
1		10	11	12	13	14	15	16	17
1958	T	7.80	0.07	70.72	..	42.13	114.09	510.13	262.86
	U	8.67	0.14	51.31	..	73.43	160.93	337.93	376.26
1959	T	9.03	0.96	21.46	..	50.51	127.25	466.93	332.89
	U	9.75	1.43	9.49	..	74.93	158.21	317.15	438.79
1960	T	8.26	0.06	11.50	..	40.82	102.49	515.83	329.30
	U	8.70	..	5.16	..	64.37	143.38	350.48	436.61

Source :
Directorate of Public Health, Gujarat

TABLE 11—Annual deaths from special causes in urban areas of Gujarat State excluding Saurashtra and Kutch Region during 1951–60

Year	Cause of death: Enteric fever	Measles	Cerebro-spinal fever	Malaria	Influenza	Black water fever	Other fevers	Dysentery	Diar-rhoea	Pneu-monia	Phthi-sis
1	2	3	4	5	6	7	8	9	10	11	12
1951	197	886	8	618	2	..	17,845	339	1,250	1,339	2,058
1952	312	1,784	7	1,180	..	..	20,624	487	1,593	1,948	2,386
1953	269	640	5	723	..	..	15,995	445	1,084	1,535	1,795
1954	284	932	11	853	1	..	12,510	417	1,145	1,453	1,770
1955	447	406	116	348	2	..	10,892	420	1,437	4,744	1,930
1956	351	1,682	158	425	5	..	11,285	442	1,520	5,420	1,986
1957	398	793	41	154	16	..	13,935	335	1,587	4,605	2,181
1958	474	1,578	7	92	8	..	13,970	523	1,990	5,555	2,132
1959	403	123	7	54	4	..	10,254	311	1,300	4,715	1,937
1960	283	2,071	55	74	4	1	11,282	301	1,684	6,722	1,915

Year	Whooping cough	Other respiratory diseases	Diphtheria	Chickenpox	Polio-myelitis	Mumps	Leprosy	Cancer	Deaths from child birth
1	13	14	15	16	17	18	19	20	21
1951	469	4,815	38	12	1	..	75	319	388
1952	161	8,245	58	4	8	..	4	317	369
1953	322	6,992	72	16	2	..	6	368	279
1954	279	6,582	120	71	5	..	1	467	237
1955	406	3,250	110	52	6	1	5	506	348
1956	394	3,113	104	49	..	1	8	559	352
1957	328	3,728	116	94	..	..	14	563	303
1958	285	3,353	104	93	3	..	11	664	314
1959	222	3,137	117	52	25	1	10	584	252
1960	244	2,875	91	74	44	..	7	646	213

NOTE :
Causes with nil entry in respect of all years have been omitted.

Source :
Directorate of Public Health, Gujarat

TABLE 11A—Annual deaths from special causes in urban areas of Saurashtra and Kutch Region during 1958–60

Year	Enteric fever	Measles	Cerebro-spinal fever	Malaria	Influenza	Other fevers	Dysentery	Diarrhoea	Pneumonia	Phthisis
1	2	3	4	5	6	7	8	9	10	11
1958	87	310	3	52	4	4,464	128	941	177	666
1959	190	264	12	50	14	4,786	166	1,090	199	862
1960	126	775	16	34	..	4,412	108	877	177	700

Year	Whooping cough	Other respiratory diseases	Beriberi	Diphtheria	Chicken-pox	Poliomye-litis	Leprosy	Cancer	Deaths from child birth
1	12	13	14	15	16	17	18	19	20
1958	109	1,391	..	34	9	2	7	264	87
1959	185	1,406	1	39	10	6	6	347	150
1960	139	1,178	..	45	17	9	4	300	128

NOTE : Causes with nil entry in respect of all years have been omitted

Source : Directorate of Public Health, Gujarat

TABLE 12—Annual deaths from special causes in rural areas of Gujarat State excluding Saurashtra and Kutch Region during 1951–60

Year	Enteric fever	Measles	Cerebro-spinal fever	Malaria	Influenza	Other fevers	Dysentery	Diarrhoea	Pneumonia	Phthisis
1	2	3	4	5	6	7	8	9	10	11
1951	311	994	..	389	3	77,561	284	461	1,380	3,222
1952	273	1,703	..	428	..	97,948	536	736	1,801	4,071
1953	345	1,394	..	623	..	82,384	648	764	1,449	3,693
1954	414	782	..	567	..	76,374	776	714	1,465	3,721
1955	500	514	..	622	8	71,133	825	1,282	4,269	4,034
1956	499	884	..	502	6	68,961	794	1,411	3,917	4,163
1957	438	807	4	376	64	76,125	710	1,577	4,489	5,013
1958	571	1,328	..	406	56	87,892	1,409	2,748	4,764	5,414
1959	565	245	..	186	25	69,320	837	2,337	3,470	4,932
1960	556	1,668	1	222	12	66,301	653	1,800	3,837	4,904

Year	Whooping cough	Other respira-tory diseases	Beriberi	Diphtheria	Chicken pox	Polio-myelitis	Mumps	Leprosy	Cancer	Deaths from child birth
1	12	13	14	15	16	17	18	19	20	21
1951	1,056	4,300	..	1	7	..	..	79	253	1,378
1952	628	5,930	..	2	..	2	..	39	253	1,580
1953	953	6,579	..	3	28	1	..	67	294	1,181
1954	631	8,712	..	4	13	1	..	65	307	1,120
1955	1,213	10,764	..	99	254	14	..	60	463	1,784
1956	1,282	10,482	..	138	185	..	..	73	483	1,657
1957	640	9,257	..	44	444	..	..	42	517	1,733
1958	1,445	11,414	..	101	339	5	..	81	508	1,517
1959	1,410	11,861	4	52	201	27	1	103	600	1,535
1960	1,152	7,739	..	54	269	..	..	101	628	1,281

NOTE : Causes with nil entry in respect of all years have been omitted

Source : Directorate of Public Health, Gujarat

TABLE 12A—Annual deaths from special causes in rural areas of Saurashtra and Kutch Region during 1951–60

Year	Cause of death								
	Enteric fever	Measles	Malaria	Influenza	Other fevers	Dysentery	Diarrhoea	Pneumonia	Phthisis
1	2	3	4	5	6	7	8	9	10
1958	80	821	42	3	15,722	193	521	37	652
1959	139	427	82	2	17,448	306	971	123	1,049
1960	102	2,352	68	4	16,309	121	809	158	899

Year	Whooping cough	Other respiratory diseases	Diphtheria	Chicken pox	Poliomyelitis	Leprosy	Cancer	Deaths from child birth
1	11	12	13	14	15	16	17	18
1958	151	1,645	3	36	1	1	77	156
1959	398	2,159	8	16	3	4	154	271
1960	216	1,341	6	31	..	2	120	194

NOTE : Causes with nil entry in respect of all years have been omitted

Source : Directorate of Public Health, Gujarat

TABLE 13—Annual deaths from cholera in different months in Gujarat State excluding Saurashtra and Kutch Region during 1951–60

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1951	..	..	1	2	2	..	..	..	1	..	..	..	6
1952	..	..	..	..	..	..	..	..	..	..	..	..	..
1953	..	..	..	..	160	236	89	245	266	36	2	..	1,034
1954	..	..	..	..	..	..	1	..	..	..	..	..	1
1955	..	..	..	..	2	..	3	4	..	..	..	..	9
1956	..	..	..	1	..	..	..	1	..	3	..	..	5
1957	..	..	..	..	4	1	..	8	6	4	..	2	25
1958	1	2	1	6	5	16	14	139	184	87	21	9	485
1959	1	..	1	2	32	18	21	19	7	6	2	..	109
1960	..	..	5	7	5	16	17	10	4	..	..	..	64

Source : Directorate of Public Health, Gujarat

TABLE 13A—Annual deaths from cholera in different months in Saurashtra and Kutch Region during 1958–60

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1958	..	..	..	..	..	..	..	..	..	2	..	1	3
1959	..	..	1	2	2	1	9	17	5	3	8	..	48
1960	..	..	1	..	1	1	..	..	..	..	..	..	3

Source : Directorate of Public Health, Gujarat

TABLE 14—Annual deaths form smallpox in different months in Gujarat State excluding Saurashtra and Kutch Region during 1951-60

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1951	55	68	98	91	43	24	21	23	9	19	37	168	656
1952	266	381	467	399	173	49	17	7	3	15	69	224	2,070
1953	159	134	164	140	62	32	13	6	2	4	11	11	738
1954	43	24	65	41	53	15	13	10	3	2	23	47	339
1955	74	72	92	84	69	62	53	38	23	22	39	107	735
1956	162	197	269	220	178	91	83	31	30	26	44	86	1,417
1957	265	278	449	324	319	268	192	126	75	82	164	240	2,782
1958	550	863	1,560	986	569	330	186	96	58	34	13	18	5,263
1959	24	63	72	80	66	65	32	27	14	8	10	11	472
1960	9	28	67	106	140	144	94	53	44	33	61	230	1,009

Source :

Directorate of Public Health, Gujarat

TABLE 14A—Annual deaths from smallpox in different months in Saurashtra and Kutch Region during 1958-60

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1958	466	192	418	610	519	334	229	48	26	31	60	60	2,993
1959	103	111	184	148	129	114	107	61	26	21	19	53	1,076
1960	56	34	79	76	75	63	50	49	5	8	18	26	539

Source :

Directorate of Public Health, Gujarat

TABLE 15—Annual deaths from plague in different months in Gujarat State excluding Saurashtra and Kutch Region during 1951-60

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1951													
1952													
1953													
1954													
1955								NIL					
1956													
1957													
1958													
1959													
1960													

Source :

Directorate of Public Health, Gujarat

TABLE 15A—Annual deaths from plague in different months in Saurashtra and Kutch Region during 1958-60

Year	January	February	March	April	May	June	July	August	September	October	November	December	Total
1	2	3	4	5	6	7	8	9	10	11	12	13	14
1958													
1959								NIL					
1960													

Source :

Directorate of Public Health, Gujarat

TABLE 16—Deaths from special causes in towns with population 30,000 and over in Gujarat State excluding Saurashtra and Kutch Region during the decennium 1951-60

	Town	Cause of Death									
		Enteric fever	Measles	Cerebro-spinal fever	Malaria	Influenza	Black water fever	Other fevers	Dysentery	Diarrhoea	Pneumonia
	1	2	3	4	5	6	7	8	9	10	11
1	Amreli	9	122	..	33	..	..	1,567	9	403	9
2	Patan	160	398	3	39	1	..	2,291	154	240	576
3	Sidhpur	52	133	..	4	..	..	2,933	46	100	111
4	Mehsana	31	158	..	2	1	..	1,827	22	28	70
5	Kalol	41	137	..	2	..	..	2,068	49	97	32
6	Ahmedabad	843	1,908	231	2,574	6	1	16,041	1,383	6,424	24,160
7	Viramgam	78	336	..	3	1	..	2,357	38	143	166
8	Nadiad	18	700	1	2	..	..	6,139	54	79	287
9	Cambay	48	177	..	1	1	..	2,185	141	250	541
10	Anand	62	158	3	15	1	..	1,086	80	215	431
11	Petlad	35	285	6	28	1	..	3,058	77	150	256
12	Godhra	52	158	6	3	1	..	2,583	37	114	80
13	Dohad	48	62	2	3	..	..	1,279	14	161	87
14	Baroda	400	927	128	111	4	..	11,497	306	1,129	2,196
15	Dabhoi	3	3	1	..	1	..	1,141	55	238	117
16	Broach	63	134	11	21	3	..	3,104	51	290	390
17	Surat	319	1,663	11	524	7	..	5,428	310	1,455	3,145
18	Navsari	16	7	..	5	..	..	2,935	25	8	59
19	Bulsar	47	26	1	20	..	..	292	14	79	96

	Town	Phthisis	Whooping cough	Other respiratory diseases	Beriberi	Diphtheria	Chicken pox	Polio-myelitis	Mumps	Lep-rosy	Cancer	Deaths from child birth
	1	14	15	16	17	18	19	20	21	22	23	24
1	Amreli	15	22	346	..	5	..	..	..	..	54	27
2	Patan	481	128	707	..	7	14	1	..	9	108	68
3	Sidhpur	184	29	373	..	2	30	..	..	2	43	37
4	Mehsana	155	27	174	..	2	11	1	..	6	35	34
5	Kalol	172	62	181	..	6	1	..	..	..	26	19
6	Ahmedabad	5,377	484	19,577	..	406	61	12	2	25	1,001	281
7	Viramgam	237	34	852	..	5	81	..	..	1	60	70
8	Nadiad	446	30	305	..	7	..	2	..	1	98	79
9	Cambay	321	59	543	..	17	1	4	..	..	137	101
10	Anand	436	33	220	3	15	..	2	..	..	77	45
11	Petlad	295	25	400	..	10	1	3	..	3	64	38
12	Godhra	281	18	210	..	16	2	6	..	2	48	41
13	Dohad	97	21	117	..	8	6	3	..	4	23	23
14	Baroda	1,918	291	2,117	..	122	13	4	..	22	432	209
15	Dabhoi	19	129	1,015	..	..	..	2	..	3	42	17
16	Broach	442	96	847	..	33	3	5	..	2	201	101
17	Surat	2,007	453	3,366	..	113	22	23	..	5	839	345
18	Navsari	33	1	159	..	7	..	1	..	3	80	40
19	Bulsar	113	69	177	..	6	2	..	..	5	100	24

NOTE : Causes with nil entry in respect of all years have been omitted.

Source : Directorate of Public Health, Gujarat

TABLE 16A—Deaths from special causes in towns with population 30,000 and over in Saurashtra and Kutch Region during 1959 and 1960

	Town	Cause of death								
		Enteric fever	Measles	Cerebro-spinal fever	Malaria	Influenza	Other fevers	Dysentery	Diarrhoea	Pneumonia
	1	2	3	4	5	6	7	8	9	10
1	Jamnagar	33	21	5	14	..	444	9	146	43
2	Rajkot	45	180	9	15	2	1,261	8	388	43
3	Morvi	5	5	..	..	..	146	2	39	6
4	Dhoraji	10	..	..	2	2	361	4	61	..
5	Gondal	24	19	..	15	..	208	2	64	1
6	Jetpur	4	18	..	1	4	164	1	25	1
7	Surendranagar	7	3	1	2	..	132	8	19	8
8	Dhrangadhra	2	22	..	..	..	121	4	33	7
9	Bhavnagar	40	255	10	3	..	913	34	317	63
10	Mahuva	4	6	1	..	..	80	6	9	6
11	Savarkundla	7	2	..	1	..	66	4	11	..
12	Porbandar	18	49	..	..	..	653	6	104	3
13	Junagadh	11	43	..	3	..	612	12	95	9
14	Veraval	2	16	..	..	..	185	7	2	3
15	Bhuj	10	8	..	8	..	85	10	55	65

	Town	Phthisis	Whooping cough	Other respiratory diseases	Diphtheria	Chicken-pox	Poliomyelitis	Leprosy	Cancer	Deaths from child birth
	1	11	12	13	14	15	16	17	18	19
1	Jamnagar	85	14	142	16	2	1	..	77	25
2	Rajkot	211	46	315	26	2	1	..	104	33
3	Morvi	32	1	29	..	..	..	..	5	5
4	Dhoraji	55	4	47	..	..	..	..	2	11
5	Gondal	48	3	78	6	..	..	3	19	3
6	Jetpur	9	3	49	1	..	..	..	17	2
7	Surendranagar	28	5	45	4	..	1	..	4	15
8	Dhrangadhra	23	..	12	..	..	..	..	4	2
9	Bhavnagar	277	87	434	12	2	..	..	99	36
10	Mahuva	12	5	32	3	..	..	..	14	..
11	Savarkundla	10	3	23	..	..	..	1	1	..
12	Porbandar	99	18	177	..	3	2	..	39	17
13	Junagadh	80	8	192	..	..	..	1	27	28
14	Veraval	31	4	78	..	..	..	..	12	8
15	Bhuj	86	5	41	2	..	..	..	22	2

NOTE : Causes with nil entry in respect of all the have been omitted.

Sourc : Directorate of Public Health, Gujarat

TABLE 17—Annual deaths by religion with rates in Gujarat State excluding Saurashtra and Kutch Region during 1951-60

Year	Religion						Rates					
	Hindu	Muslim	Jain	Christian	Others	Total	Hindu	Muslim	Jain	Christian	Others	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
1951	153,140	11,438	1,424	738	210	166,950	14.39	12.24	7.33	9.67	7.50	14.06
1952	192,149	13,797	1,455	956	220	208,577	17.59	14.43	7.39	12.35	7.84	17.12
1953	167,525	12,414	1,451	838	194	182,422	14.95	12.69	7.28	10.69	6 90	14.60
1954	155,619	11,449	1,307	752	198	169,325	13.54	11.44	6.47	9.46	7.03	13.22
1955	159,958	12,235	1,245	947	213	174,598	13.58	11.96	6.09	11.75	7.54	13.31
1956	164,334	12,543	1,336	819	221	179,253	13.62	12.01	6.46	10.05	7.81	13.35
1957	178,914	12,799	1,260	759	170	193,902	14.49	12.00	6.02	9.19	5.99	14.12
1958	203,948	15,282	1,222	1,107	212	221,771	16.15	14.03	5.77	13.24	7.46	15.79
1959	175,085	12,074	1,080	834	274	189,347	13.56	10.87	5.04	9.86	9.62	13.19
1960	166,533	11,526	1,080	689	216	180,044	12.62	10.17	4.98	8.04	7.56	12.28

Source : Directorate of Public Health, Gujarat

TABLE 17A—Annual deaths by religion with rates in Saurashtra and Kutch Region during 1958–60

Year	Religion						Rates					
	Hindu	Muslim	Jain	Christian	Others	Total	Hindu	Muslim	Jain	Christian	Others	Total
1	2	3	4	5	6	7	8	9	10	11	12	13
1958	39,732	2,360	215	8	4	42,319	8.54	4.08	1.14	2.01	1.01	7.80
1959	46,205	3,568	358	5	9	50,145	9.69	6.10	1.89	1.18	3.35	9.03
1960	43,947	2,722	224	6	12	46,911	8.99	4.60	1.18	1.33	4.36	8.26

Source :

Directorate of Public Health, Gujarat

TABLE 18—Infant deaths by age and sex in districts and their urban areas in Gujarat State excluding Saurashtra and Kutch Region during the decennium 1951–60

	District	Area	Within the 1st week after birth		From the beginning of the 2nd week to the end of the 1st month		Total (under one month)	
			Total	Males	Total	Males	Total	Males
	1	2	3	4	5	6	7	8
1	Amreli	T	1,374	753	1,763	1,021	3,137	1,774
		U	401	232	379	220	780	452
2	Banaskantha	T	3,992	2,192	3,639	2,040	7,631	4,232
		U	230	142	170	98	400	240
3	Sabarkantha	T	2,817	1,631	3,052	1,736	5,869	3,367
		U	223	136	180	105	403	241
4	Mehsana	T	3,414	1,893	5,035	2,785	8,449	4,678
		U	1,789	1,002	1,725	935	3,514	1,937
5	Ahmedabad	T	17,275	9,686	11,300	6,110	28,575	15,796
		U	14,295	8,064	7,895	4,187	22,190	12,251
6	Kaira	T	9,150	4,893	10,734	5,642	19,884	10,535
		U	2,983	1,676	2,792	1,492	5,775	3,168
7	Panchmahals	T	4,810	2,645	5,859	3,334	10,669	5,979
		U	596	344	510	298	1,106	642
8	Baroda	T	4,796	2,660	5,288	2,849	10,084	5,509
		U	2,560	1,440	1,851	1,002	4,411	2,442
9	Broach	T	6,528	3,695	6,711	3,692	13,239	7,387
		U	852	482	921	487	1,773	969
10	Surat	T	14,311	8,110	8,816	4,717	23,127	12,827
		U	6,949	3,980	2,430	1,277	9,379	5,257
11	Dangs*	T	517	288	599	339	1,116	627

	District	Area	During the 2nd to 6th month		During the 7th to 12th month		Total (from 2nd to 12th month)		Grand total (under one year)	
			Total	Males	Total	Males	Total	Males	Total	Males
	1	2	9	10	11	12	13	14	15	16
1	Amreli	T	5,376	2,905	5,713	2,855	11,089	5,760	14,226	7,534
		U	909	460	1,135	561	2,044	1,021	2,824	1,473
2	Banaskantha	T	9,462	5,029	7,370	3,741	16,832	8,770	24,463	13,002
		U	517	270	625	296	1,142	566	1,542	806
3	Sabarkantha	T	5,267	2,668	5,459	2,737	10,726	5,405	16,595	8,772
		U	342	160	481	230	823	390	1,226	631
4	Mehsana	T	14,265	7,439	15,334	7,387	29,599	14,826	38,048	19,504
		U	3,413	1,691	4,205	1,957	7,618	3,648	11,132	5,585
5	Ahmedabad	T	25,060	12,623	31,948	14,430	57,008	27,053	85,583	42,849
		U	17,155	8,550	21,354	9,424	38,509	17,974	60,699	30,225
6	Kaira	T	22,271	11,158	24,081	11,147	46,352	22,305	66,236	32,840
		U	6,076	2,965	7,415	3,378	13,491	6,343	19,266	9,511
7	Panchmahals	T	11,162	5,963	8,946	4,602	20,108	10,565	30,777	16,544
		U	890	472	953	461	1,843	933	2,949	1,575
8	Baroda	T	12,363	6,342	13,582	6,298	25,945	12,640	36,029	18,149
		U	3,761	1,860	4,426	1,996	8,187	3,856	12,598	6,298
9	Broach	T	11,259	5,812	9,158	4,496	20,417	10,308	33,656	17,695
		U	1,441	735	1,384	658	2,825	1,393	4,598	2,362
10	Surat	T	18,605	9,688	13,295	6,780	31,900	16,468	55,027	29,295
		U	5,042	2,572	4,844	2,341	9,886	4,913	19,265	10,170
11	Dangs*	T	794	399	650	323	1,444	722	2,560	1,349

Source :

Directorate of Public Health, Gujarat

*Entirely rural

TABLE 18A—Infant deaths by age and sex in districts and their urban areas in Saurashtra and Kutch Region during 1958–60

	District	Area	Within the 1st week after birth		From the beginning of the 2nd week to the end of the 1st month		Total (under one month)	
			Total	Males	Total	Males	Total	Males
	1	2	3	4	5	6	7	8
1	Jamnagar	T	535	304	529	293	1,064	597
		U	131	71	119	66	250	137
2	Rajkot	T	1,297	713	1,239	695	2,536	1,408
		U	652	375	433	232	1,085	607
3	Surendranagar	T	520	261	546	318	1,066	579
		U	169	83	141	87	310	170
4	Bhavnagar	T	848	470	810	470	1,658	940
		U	409	224	311	180	720	404
5	Junagadh	T	999	550	983	527	1,982	1,077
		U	359	179	303	144	662	323
6	Kutch	T	151	78	154	87	305	165
		U	58	32	20	7	78	39

	Distrct	Area	During the 2nd to 6th month		During the 7th to 12th month		Total (from 2nd to 12th month		Grand total (under one year)	
			Total	Males	Total	Males	Total	Males	Total	Males
	1	2	9	10	11	12	13	14	15	16
1	Jamnagar	T	1,382	701	1,463	703	2,845	1,404	3,909	2,001
		U	304	151	377	169	681	320	931	457
2	Rajkot	T	2,969	1,530	2,803	1,340	5,772	2,870	8,308	4,278
		U	1,105	554	1,119	544	2,224	1,098	3,309	1,705
3	Surendranagar	T	1,027	546	1,258	608	2,285	1,154	3,351	1,733
		U	240	122	350	146	590	268	900	438
4	Bhavnagar	T	1,987	979	2,342	1,072	4,329	2,051	5,987	2,991
		U	576	259	726	314	1,302	573	2,022	977
5	Junagadh	T	2,680	1,394	3,274	1,573	5,954	2,967	7,936	4,044
		U	678	329	689	334	1,367	663	2,029	986
6	Kutch	T	532	293	570	287	1,102	580	1,407	745
		U	116	62	153	74	269	136	347	175

NOTE :

Figures relate to years 1958 to 1960 as those for 1951 to 1957 are not available

Source :

Directorate of Public Health, Gujarat

TABLE 19—Infant deaths by age and sex in towns with population 30,000 and over in Gujarat State excluding Saurashtra and Kutch Region during the decennium 1951–60

	Town	Within 1st 24 hours after birth		After 24 hours to the end of the 1st week		From the beginning of the 2nd week to the end of the first month		Total infant deaths (under 1 month)		During the 2nd and 3rd month	
		Total	Males	Total	Males	Total	Males	Total	Males	Total	Males
	1	2	3	4	5	6	7	8	9	10	11
1	Amreli	35	15	103	64	143	84	281	163	151	73
2	Patan	64	36	349	174	318	153	731	363	335	171
3	Sidhpur	13	18	166	82	171	94	350	194	150	80
4	Mehsana	5	3	72	45	91	57	168	105	90	46
5	Kalol	23	12	162	101	155	90	340	203	143	63
6	Ahmedabad	4,344	2,548	8,801	4,859	6,946	3,666	20,091	11,073	7,071	3,394
7	Viramgam	100	51	257	140	298	152	655	343	281	152
8	Nadiad	115	72	502	290	455	254	1,072	616	536	276
9	Cambay	59	27	211	125	283	157	553	309	289	155
10	Anand	67	35	198	104	93	51	358	190	154	76
11	Petlad	38	23	238	129	252	137	528	289	260	145
12	Godhra*	49	26	153	76	183	98	385	200	133	73
13	Dohad	62	37	131	75	94	61	287	173	96	51
14	Baroda	601	363	1,382	772	1,302	699	3,285	1,834	1,319	672
15	Dabhoi	26	13	173	95	183	99	382	207	156	82
16	Broach	66	35	302	167	449	247	817	449	352	175
17	Surat	2,285	1,375	3,325	1,847	1,804	953	7,414	4,175	2,041	1,048
18	Navsari	129	79	415	238	154	84	698	401	162	92
19	Bulsar	7	4	103	56	87	45	197	105	70	36

	Town	During the 4th to 6th month		During the 7th to 12th month		Total infant deaths (from second month to twelth month)		Total infant deaths (under one year)	
		Total	Males	Total	Males	Total	Males	Total	Males
	1	12	13	14	15	16	17	18	19
1	Amreli	179	86	441	209	771	368	1,052	531
2	Patan	303	132	765	338	1,403	641	2,134	1,004
3	Sidhpur	153	67	442	206	745	353	1,095	547
4	Mehsana	130	52	276	131	496	229	664	334
5	Kalol	178	81	450	194	771	338	1,111	541
6	Ahmedabad	7,865	3,839	18,828	8,397	33,764	15,830	53,855	26,903
7	Viramgam	287	145	724	313	1,292	610	1,947	953
8	Nadiad	567	233	1,421	610	2,524	1,119	3,596	1,735
9	Cambay	283	136	570	274	1,142	565	1,695	874
10	Anand	204	105	488	232	846	413	1,204	603
11	Petlad	222	106	596	292	1,078	543	1,606	832
12	Godhra*	162	79	302	139	597	291	982	491
13	Dohad	96	56	222	109	414	216	701	389
14	Baroda	1,441	689	3,229	1,486	5,989	2,847	9,274	4,681
15	Dabhoi	121	58	375	172	652	312	1,034	519
16	Broach	334	176	629	316	1,315	667	2,132	1,116
17	Surat	1,773	892	3,761	1,813	7,575	3,753	14,989	7,928
18	Navsari	164	81	313	163	639	336	1,337	737
19	Bulsar	68	30	159	75	297	141	494	246

*The data for 1959 are not covered, as these figures are not available.

Source :

Directorate of Public Health, Gujarat

TABLE 19A—Infant deaths by age and sex in towns with population 30,000 and over in Saurashtra and Kutch Region during 1959-60

	Town	Within 1st 24 hours after birth		After 24 hours to the end of the 1st week		From the beginning of the 2nd week to the end of the first month		Total infant deaths (under 1 month)		During the 2nd and 3rd months	
		Total	Males	Total	Males	Total	Males	Total	Males	Total	Males
	1	2	3	4	5	6	7	8	9	10	11
1	Jamnagar	3	1	23	12	16	9	42	22	40	21
2	Rajkot	85	54	241	29	129	95	491	278	230	125
3	Morvi	1	..	33	22	15	11	49	33	10	6
4	Dhoraji	2	1	23	18	35	16	60	35	37	16
5	Gondal	5	2	22	15	21	14	48	31	33	23
6	Jetpur	..	..	6	4	7	3	13	7	13	10
7	Surendranagar	1	1	6	2	6	2	13	5	10	4
8	Dhrangadhra	9	5	9	6	9	4	27	15	14	8
9	Bhavnagar	27	11	120	67	150	84	297	162	112	55
10	Mahuva	11	6	17	10	12	6	40	22	1	..
11	Kundla	..	..	..	..	3	3	3	3	3	2
12	Porbandar	13	7	45	23	58	26	116	56	55	29
13	Junagadh	19	7	67	39	101	43	187	89	82	36
14	Veraval	11	2	24	7	27	15	62	24	7	4
15	Bhuj	5	2	16	8	10	3	31	13	25	15

	Town	During the 4th to 6th month		During the 7th to 12th month		Total infant deaths (from second month to twelfth month)		Total infant deaths (under one year)	
		Total	Males	Total	Males	Total	Males	Total	Males
	1	12	13	14	15	16	17	18	19
1	Jamnagar	32	15	93	41	165	77	207	99
2	Rajkot	218	97	434	200	882	422	1,373	700
3	Morvi	13	6	36	14	59	26	108	59
4	Dhoraji	41	22	57	34	135	72	195	107
5	Gondal	26	15	60	34	119	72	167	103
6	Jetpur	13	7	35	19	61	36	74	43
7	Surendranagar	20	12	39	16	69	32	82	37
8	Dhrangadhra	10	7	27	9	51	24	78	39
9	Bhavnagar	136	51	340	137	588	243	885	405
10	Mahuva	6	2	8	7	15	9	55	31
11	Kundla	4	2	7	4	14	8	17	11
12	Porbandar	66	28	105	44	226	101	342	157
13	Junagadh	80	40	137	61	299	137	486	226
14	Veraval	11	6	11	11	29	21	91	45
15	Bhuj	26	17	63	32	114	64	145	77

Source :

Directorate of Public Health, Gujarat

TABLE 20—Live births by birth order in cities with population one lakh and over during 1956-60

Cities	Population 1961 Census	Total births	Order of births											
			1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Over 10th	Twins
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
Ahmedabad	1,149,918	191,380	28,666	31,334	33,262	30,933	23,450	16,264	11,124	7,151	4,172	2,879	2,145	..
Baroda . .	295,144	54,612	9,331	8,718	8,365	7,704	6,249	4,908	3,471	2,384	1,509	958	846	169
Surat . .	288,026	51,567	9,567	8,819	8,376	7,058	5,178	3,809	2,783	2,199	1,646	950	1,182	..
Rajkot . .	193,498	25,737	5,697	4,254	3,804	3,366	2,677	1,899	1,436	945	674	475	510	..

NOTE :
The data for two cities, namely, Bhavnagar and Jamnagar, are not available.

Source :
Statements received from the office of the Registrar General, India

TABLE 21—Live births by age of mother in cities with population one lakh and over during 1956-60

Cities	Population 1961 Census	Total births	Age of mother								
			Under 15	15-19	20-24	25-29	30-34	35-39	40-44	45+	Twins
1	2	3	4	5	6	7	8	9	10	11	12
Ahmedabad	1,149,918	191,380	3	12,694	54,621	57,943	39,822	20,072	5,720	505	..
Baroda . .	295,144	54,612	71	3,875	19,606	15,960	11,205	5,241	1,345	140	169
Surat . .	288,026	51,567	1	4,235	17,204	13,421	10,246	4,981	1,271	208	..
Rajkot . .	193,498	25,737	40	1,830	9,595	6,583	4,254	2,467	838	130	..

NOTE :
The data for two cities, namely, Bhavnagar and Jamnagar, are not available.

Source :
Statements received from the office of the Registrar General, India

TABLE 22—Live births by age of mother and birth order in cities with population one lakh and over during 1956–60

Ahmedabad City

Birth order

Age of mother	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Over 10	Total births
1	2	3	4	5	6	7	8	9	10	11	12	13
Under 15	3	..	..	..	..	..	..	..	..	..	..	3
15–19	9,882	2,163	530	89	20	10	..	..	..	..	..	12,694
20–24	15,159	18,769	12,564	5,670	1,685	571	134	50	16	3	..	54,621
25–29	2,726	7,918	14,315	15,636	9,743	4,567	2,041	645	267	58	27	57,943
30–34	633	1,831	4,510	6,904	8,479	7,257	5,024	2,972	1,328	627	257	39,822
35–39	224	534	1,129	2,176	2,973	3,243	3,135	2,590	1,810	1,356	902	20,072
40–44	38	111	190	432	498	553	730	842	690	784	852	5,720
45+	1	8	24	26	52	63	60	52	61	51	107	505
Total	**28,666**	**31,334**	**33,262**	**30,933**	**23,450**	**16,264**	**11,124**	**7,151**	**4,172**	**5,879**	**2,145**	**91,380**

Baroda City

Birth order

Age of mother	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Over 10	Total births
Under 15	65	6	..	..	..	..	..	..	..	..	..	71
15–19	3,005	667	161	32	6	3	1	..	..	..	..	3,875
20 24	5,032	5,356	3,507	1,779	599	204	86	27	15	1	..	16,606
25–29	992	2,099	3,439	3,764	2,807	1,657	724	299	120	39	20	15,960
30–34	198	495	1,011	1,715	2,133	2,100	1,637	951	544	258	163	11,205
35–39	33	82	213	349	609	803	855	875	622	438	362	5,241
40–44	5	10	29	58	85	133	153	216	189	200	267	1,345
45+	1	3	5	7	10	8	15	16	19	22	34	140
Total	**9,331**	**8,718**	**8,365**	**7,704**	**6,249**	**4,908**	**3,471**	**2,384**	**1,509**	**958**	**846**	**54,443**
											Twins	169
												54,612

Surat City

Birth order

Age of mother	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Over 10	Total births
Under 15	1	..	..	..	..	..	..	..	..	..	..	1
15–19	3,258	843	92	42	..	..	..	..	..	..	..	4,235
20–24	5,038	5,387	4,027	2,032	505	143	30	35	5	2	..	17,204
25–29	896	1,828	3,030	3,021	2,373	1,218	556	357	88	32	22	13,421
30–34	275	640	1,017	1,540	1,730	1,652	1,295	941	669	283	204	10,246
35–39	86	113	198	366	513	670	743	699	690	431	472	4,981
40–44	13	6	12	55	54	121	156	150	171	156	377	1,271
45+	..	2	..	2	3	5	3	17	23	46	107	208
Total	**9,567**	**8,819**	**8,376**	**7,058**	**5,178**	**3,809**	**2,783**	**2,199**	**1,646**	**950**	**1,182**	**51,567**

Rajkot City

Birth order

Age of mother	1st	2nd	3rd	4th	5th	6th	7th	8th	9th	10th	Over 10	Total births
Under 15	33	6	1	..	..	..	..	..	..	..	..	40
15–19	1,481	278	54	15	1	..	..	1	..	..	..	1,830
20–24	3,477	2,853	1,724	1,028	356	103	41	9	2	2	..	9,595
25–29	538	789	1,477	1,509	1,173	664	293	83	34	14	9	6,583
30–34	107	234	382	574	812	694	632	389	233	113	84	4,254
35–39	31	53	131	188	262	361	370	350	299	188	234	2,467
40–44	28	38	32	48	64	69	85	99	90	140	145	838
45+	2	3	3	4	9	8	15	14	16	18	38	130
Total	**5,697**	**4,254**	**3,804**	**3,366**	**2,677**	**1,899**	**1,436**	**945**	**674**	**475**	**510**	**25,737**

NOTE : The data for two cities, namely, Bhavnagar and Jamnagar, are not available.

Source :

Statements received from the office of the Registrar General, India

PART B

FERTILITY SURVEY

CHAPTER I

INTRODUCTION

1. Components of Population Growth

1.1 Population as a factor of development is of crucial importance in a modern State which aspires to raise the levels of living of its people through planned development of its resources. Population conditions do not remain stationary and the future so far as population growth is concerned is not just a projection of the past. It is not enough to know the overall growth rate as that does not give any definite idea about changes in the age-sex composition of the population which is one of the important determinants. Study about the various components of population growth and their trends provides useful indices about the probable future course and possibilities of population growth. Adequate knowledge about the components and determinants of population growth is also of fundamental importance as a basis for policy making, planning of action programme and evaluation of economic and social development.

1.2 Population growth for the country as a whole is due almost entirely to the balance of births and deaths, since migration, the third component of population growth generally has only a minor effect upon population trends. The overall net migration from India during the past half century has not been more than .05 per cent of the population and there is no scope for any marked increase in this rate under the present circumstances of the State and country. Of the remaining two components of natural increase, namely, fertility and mortality, the only conceivable policy in regard to mortality is of scaling it down. But the factors which control and influence components of fertility, and the nature and magnitude of their effects are not constant as they may change with time and changing circumstances. In any policy to be adopted regarding population, the fertility component is thus the most important single element of population dynamics in the modern world. Registration of vital events provides a useful source for the two components of fertility and mortality but "for about 70 per cent of the world's inhabitants, statistics of birth and death registration either do not exist or are of doubtful quality".[1] Hence a study of fertility differentials is imperative as the findings arrived at through such studies provide a useful means of planning and policy making.

2. Genesis

2.1 The records of the decennial censuses from 1872 onwards contain a wealth of qualitative and quantitative demographic data. Isolated efforts were made in the past censuses to collect information about fertility. It was only forty years after the first Census (1911) that data regarding fertility were collected. Fertility enquiries were conducted thereafter by the Census of India in 1921, 1931, 1941, 1951 and 1961. Of these enquiries, the one conducted in 1921 was limited both in range as well as in scope, as it was confined only to a few aspects of the questions within municipal towns. In 1931 it was carried out on a more elaborate scale, a special schedule was designed for this purpose and the coverage was extended over rural areas also and data regarding a number of items like children born and surviving, age of mother, age and occupation of father, duration of married life, sex and age of children were added within the purview of the enquiry. The selection of families was, however, left to the discretion of the enumerators resulting ultimately in certain biased estimates. In 1941, information about the total children born was included in the general census questionnaire but the data were not tabulated. A question on number of children born was included as an optional item in the individual slip in the 1951 Census of Travancore Cochin, M.P. and West Bengal. As a sequel to the deliberations at the first conference of the Superintendents of Census Operations in

1 *Population and Vital Statistics Report*, United Nations, Series A, Vol. X, No. 2, April 1958

1959 the idea of conducting a Sample Survey on Fertility was mooted. The 1961 Census provides a bench-mark in this field in the census annals as the scope and coverage of this subject were much widened. The salient results of this survey are detailed in the various sections that follow.

3. PRELIMINARIES

3.1 All the Deputy Superintendents of Census Operations in charge of this work were instructed to give thorough training to the field staff and sorters entrusted with this work. During the training period, statistical checks and coding, etc., were explained by the Research Officer with practical illustrations to the staff engaged in this work. A pre-test was carried out in 16 Blocks and the data obtained during the pre-test were analysed as per instructions issued by the Registrar General before finalising the schedules and instructions. In order to watch the progress of the survey from time to time, the field staff were also instructed to send commencement, completion and weekly progress reports to the office of the Superintendent of Census Operations at Ahmedabad about their field work.

3.2 During the field work, the concerned Collectors were requested to instruct their taluka and block staff to render all help in this work. A circular letter to all Mamlatdars and Block Development Officers was also issued requesting them to extend all facilities and cooperation to the enumerators and enlist the assistance of Statistical Assistants, Social Education Organisers, especially the lady organisers.

4. OBJECTIVE

4.1 The object of the present survey was mainly to collect information on the fertility pattern of women and incidentally to obtain through a series of probing questions some information on working population. The data on the working population were not, however, tabulated. In a similar sample survey conducted by the State Bureau, only still married women were taken into account and the study of fertility differentials was confined only to the wife of the head of the household. But the present survey besides covering all ever-married women, also aims at studying the fertility differentials by various characteristics. The data thus collected will be a useful source of material for population projections at National as well as State level.

5. COVERAGE

5.1 Out of a total of 432 blocks selected, 249 were from rural areas and 183 from urban areas. This survey could not be conducted in one of the urban blocks of Kandla where it was found that the entire population of the block had migrated to some other place. The survey was limited to persons actually found in the household at the time of the survey, obviating the difficulty about the *de jure* population.

5.2 The statement given below shows the details of the number of households and population covered by the survey.

STATEMENT I.1

Households and Population Covered Under Fertility Survey

Households/ population covered	Total	Rural	Urban
1	2	3	4
No. of households	44,400	26,246	18,154
Population	234,511	141,488	93,023

The above statement reveals that out of a total of 44,400 households that were surveyed, 26,246 or 59.11 per cent were from rural areas and 18,154 or 40.89 per cent were from urban areas. As regards population, the total population covered was 234,511 of which 141,488 lived in villages and 93,023 in towns, thus covering 1.14 per cent of the total population of the State distributed into 0.92 per cent for the rural and 1.75 per cent for urban.

5.3 The fieldwork in connection with Fertility Survey was started in the first week of February 1962 and completed in April 1962. The enumeration was done by the sorters and compilers attached to the Census Tabulation Offices of the State. For this purpose the rural and urban blocks were distributed among the four Tabulation Offices as under.

STATEMENT I.2

Distribution of Blocks

Name of tabulation office	Number of blocks allotted		
	Rural	Urban	Total
1	2	3	4
Total	**249**	**184**	**433**
1 Ahmedabad	52	62	114
2 Surat	81	42	123
3 Bhavnagar	59	46	105
4 Rajkot	57	34	91

6. PROCESSING, SORTING AND TABULATION

6.1 It was decided to process the fertility data of the entire State centrally at the Rajkot Tabulation Office. For this purpose, all the Deputy Superintendents of Census Operations in charge of other Tabulation Offices were instructed to examine the accuracy of work and carry out coding of the Schedules and Slips, internal checks, etc., before sending the records to Rajkot. In order to get a complete idea about the processing and checking of Household Schedules and of sorting and tabulation of slips, pilot sorting was undertaken in one urban block of Gondal town.

6.2 Fertility data were analysed for the State as a whole and the rural and urban slips were sorted separately as distinct units. As some confusion prevailed at the sorting stage due to identical codes being given with Roman numbers to three different characteristics, separate alphabetical codes in consultation with and approval of the Registrar General were given for "marriage duration group" and "age at marriage".

6.3 Fertility slips were divided into four groups A, B, C, D with regard to the marital status of women, namely—

A—Women married only once and still in married state.

B—Women married only once but now widowed or divorced.

C—Women married more than once but in married state now.

D—Women married more than once but now widowed or divorced.

Details regarding processing, sorting and standard tabulation plan are given in Appendix III. The total number of tables prepared for the four groups and by various characteristics came to 649 for each of the rural and urban areas. A set of certain selected tables likely to prove useful for further reading on the subject is given separately at the end of the Report. Detailed tabulation for analysis of various fertility differentials was undertaken in respect of women returned under Group A. The desirability of doing so for groups of women under B, C and D was restricted by the difficulty of drawing valid inferences owing to the smallness of data about individual characteristics.

CHAPTER II

SCHEDULES, CONCEPTS AND DEFINITIONS

1. TYPE OF SCHEDULES

1.1 The two schedules prescribed for Fertility Survey were (A) Household Schedule and (B) Fertility Slip.

(A) *Household Schedule*

1.2 The Household Schedule contained three sections. The first section of this Schedule was primarily meant for listing of persons in the household with other demographic data regarding sex, relationship to head, age, marital status, etc., so as to serve primarily as a clue to a possible omission in the list of inmates. Section two was inserted to elicit information about the re-married, widowed or divorced women in the households, if any. The third section was designed to find out the number of persons working as defined in the 1961 Census and threw light on the significance of occupational pattern based on 15 days' reference period and position regarding seasonal workers. It was to be filled only in respect of persons aged over 10 years to find out the number of working persons in the household.

(B) *Fertility Slip*

1.3 The Fertility Slip was to be filled up for every ever-married woman in the Sample Households. This slip with geometrical designs is suitable for hand-sorting and is designed with a view to get information on the total number of children born to a woman cross-tabulated with reference to her age at marriage, duration of married life, religion, education and her husband's industrial, occupational and economic status. Total Fertility Slips filled up were 57,985, of which 35,308 were from rural areas and 22,677 were from urban areas. The facsimile of Fertility Slip is given at Appendix V.

1.4 A stream-lined set of instructions in regional language along with scrutiny points and check slips were issued to the field staff engaged in this survey, to enable them to understand the various concepts clearly and fill up the Schedule and Slip with correct nuances. A set of instructions on special points to be borne in mind by the investigator while filling the Household Schedule and Fertility Slip used at the time of the survey is given at Appendix VI.

2. CONCEPTS AND DEFINITIONS

2.1 *Ever-married women*—The term "ever-married women" covers all women, who had married any time during their lives, i.e., women who are still in a married state and women divorced or separated or widowed at the time of the investigator's visit.

2.2 *Current and life-time Fertility*—Current fertility may be studied with reference to births during the last twelve months, while life-time fertility is obtained by considering all the children born to a woman of completed fertility or of specified duration of married life.

2.3 *Live birth*—Live birth is the complete expulsion or extraction from its mother of a product of conception, irrespective of the duration of pregnancy, which, after such separation, breathes or shows any other evidence of life, such as beating of the heart, pulsation of the umbilical cord or definite movement of voluntary muscles, whether or not the umbilical cord has been cut or the placenta is attached; each product of such a birth is considered live born. Still birth is a birth prior to the complete expulsion or extraction from its mother of a product of conception which has attained at least 28 weeks of gestation and not showing any other evidence of life.

2.4 *Parity progression ratio*—Partity progression ratio for the $n+1$th parity is the proportion of women, who got the $n+1$th child, having borne n children.

2.5 *Sterility ratio*—Sterility ratio, i.e., proportion of women who cease reproduction after getting the nth child.

2.6 *Marital age specific fertility rate*—Number of live births to 1,000 married women in the specified age group in a year.

2.7 *Completed and incomplete fertility*—The

following types of women have been taken to constitute the group 'completed fertility'.

Age at marriage	*Duration of married life*
—18	30+
18—22	30+
23+	15+

Women aged 43 years and over have all been taken as having completed their fertility periods. Women under incomplete fertility include mothers in the age group 13–42.

2.8 *Expectation of fertile life*—It gives, on an average, the number of years for which a woman having attained some specified age, would remain fertile thereafter.

3. SAMPLE DESIGN

3.1 *Frame*—For census purposes, the entire State was divided into Census divisions more or less corresponding to the administrative divisions from district downwards, namely, district, taluka, town, village, ward, etc. The district was divided into a number of charges to be further subdivided into circles and blocks. An enumerator's block in rural areas consisted of 150 Census houses or approximately 750 persons and 120 Census houses or 600 persons in urban areas.

CHAPTER III

RESULTS OF THE SURVEY

1.1 In a survey of this type, correct reporting of age is one of the important determining factors and the quality of data is likely to be seriously affected due to the prevalence of complete ignorance of age on the part of the respondents. Further, this type of enquiry especially in rural and backward areas is not accepted in its true spirit with the result that the replies received are not correct in all the cases. Moreover, due to the smallness of the sample size so far as it concerns the various socio-economic characteristics, the resultant fertility differential would not come out properly. In view of these handicaps, it was felt after the compilation of the main tables, 1,298 in number, that the quantitative presentation of figures given in a large number of them would not serve any useful purpose. An abridged set of thirty eight summary tables has, therefore, been compiled from the main tables to bring out the salient features of the data. These are presented at the end of the Report.

2 MARITAL STATUS AND AGE AT MARRIAGE

(a) *Distribution of Women by Marital Status*

2.1 Attained age and duration of married life are two important factors which control a woman's reproductive behaviour. In order to obviate the difficulty arising in interpreting the results based on average number of children born to women married more than once with clear intervals between successive marriages and to women married but now widowed or divorced even though married only once, marital status with fourfold classification into groups of women, namely, A, B, C and D[1] has been adopted as referred to earlier. As this classification is very important for analytical reading given in the pages that follow, it is essential that the number of women returned under each of these four groups be first examined. The marital status under these four groups returned from rural and urban areas is, therefore, given in the statement below.

STATEMENT III.1

Distribution of Marital Status of all Women by Rural and Urban Classified by Groups

Groups	No. of women		Per cent	
	Rural	Urban	Rural	Urban
1	2	3	4	5
Total	**35,308**	**22,677**	**100.0**	**100.0**
A .	29,167	18,178	82.6	80.2
B .	5,194	4,153	14.7	18.3
C .	860	321	2.4	1.4
D .	87	25	0.3	0.1

2.2 It can be seen from the above statement that women under Group A are substantially large, more than 80 per cent in the case of both rural and urban areas. The detailed tabulation in respect of women under this group will be helpful in studying the fertility pattern of women married only once and still in married state. Women under the first two Groups A and B which relate to women married only once constitute 97.3 and 98.5 per cent of total number of women in rural and urban areas respectively under all the four groups combined. These figures are illustrative of the prevalent social order wherein remarriages in case of women are generally tabooed and constitute a very insignificant proportion of marital status.

2.3 The Mysore population study undertaken jointly by the United Nations and the Government of India has also adopted the distribution of ever-married women among four marital status

1 A=Women married only once and still in married state
B=Women married only once but now widowed or divorced
C=Women married more than once but in married state now
D=Women married more than once but now widowed or divorced

categories[1], as the number of children reported by women who had ever been married depends partly upon the incidence of widowhood, separation and remarriage. The four marital Groups I to IV more or less conform to the pattern of Groups A, B, C and D aforementioned. Comparable figures showing the percentage distribution of women and the average number of children born per woman under each marital status group are given in the statement below.

STATEMENT III.2

Percentage Distribution by Marital Status and Average Number of Children Born—Mysore Population Study and Fertility Survey

Marital status group		Percentage to total				Average No. of children born per woman			
		Mysore population study		Fertility Survey		Mysore population study		Fertility Survey	
Mysore population study	Fertility Survey	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	2	3	4	5	6	7	8	9	10
I	A	75.6	77.9	82.6	80.2	3.6	4.0	3.4	3.4
II	C	21.6	20.7	2.4	1.4	3.2	3.0	3.5	3.3
III	B	2.3	1.1	14.7	18.3	3.2	3.7	3.1	3.3
IV	D	0.5	0.3	0.3	0.1	3.8	*	3.5	2.8

*Average not shown because of the small number of cases in the sample

Source :
The Mysore Population Study U. N. p. 115, Table 10.4

2.4 The average number of children born per woman under Group A and I in rural areas is 3.4 according to Fertility Survey against the corresponding figure of 3.6 under the Mysore Population Study. In urban areas, the corresponding average is slightly higher under Mysore Study (4.0) as compared to Fertility Survey (3.4). The average number of children born per woman under the rest of the three groups are fairly comparable both for rural and urban areas. It may, however, be stated that the data relating to Groups B and D are based on small number of observations.

(b) *Attained Age*

2.5 A consolidated statement giving distribution of number of women under all the four groups by attained ages is detailed below.

STATEMENT III.3

Distribution of Women Under All Groups by Attained Age

Attained age	Total No. of women		Percentage distribution	
	Rural	Urban	Rural	Urban
1	2	3	4	5
12 and below	86	6	0.2	0.0
13–17 . .	987	315	2.8	1.4
18–22 . .	5,420	3,147	15.4	13.9
23–27 . .	5,167	3,572	14.6	15.7
28–32 . .	5,808	3,886	16.5	17.1
33–37 . .	3,365	2,462	9.5	10.9
38–42 . .	4,273	2,605	12.1	11.5
43–47 . .	2,643	1,679	7.5	7.4
48+ . .	7,559	5,005	21.4	22.1
Total	**35,308**	**22,677**	**100.00**	**100.00**

1 I—Currently married *plus* widowed or separated after reaching the age of 45 (once married only)
II—Currently married but married more than once
III—Widowed or separated (once married only) before reaching the age of 45
IV—Widowed or separated, married more than once

2.6 The distribution pattern of women in rural and urban areas show greater concentration between ages 18–32 (46 per cent) and after 48 a little more than 1/5th of the total.

(c) *Frequency of Marriage*

2.7 The insignificant proportion of remarriages and general problem of enforced widowhood in case of women is clearly brought out by examining the frequency of marriages. Percentage distribution of women by number of times married is given in Table 3.

2.8 The overwhelmingly large proportion of women married only once brings out the sanctity of and attitude towards marriage. Remarriages in the existing state of society are rare and confined to a few castes and communities among whom also its practice is not universal but very much restricted. Higher percentage of women married twice in rural areas as compared to urban is accounted for by social customs permitting remarriage of widows among certain lower castes and tribes living in the villages of the State.

2.9 Frequency of marriages by attained age given in the table referred to above reveals that the number of women married twice in rural areas is higher in the attained age groups 33–37 and 38–42, while in the urban areas the corresponding age groups are 33–37 and 43–47. These figures further disclose that marriages contracted thrice or four times are very insignificant. In rural areas the number of women married twice by attained ages goes on increasing from 2.1 per cent in age group 23–27 to 4.2 in 38–42 and thereafter it declines. As against the highest figure of 4.2 per cent of women married twice in the attained age 38–42 in rural areas, the corresponding maximum in urban areas is 2.1 per cent each under the attained age groups 33–37 and 43–47.

2.10 The statement given below shows the percentage distribution of women by age at marriage in rural and urban areas of Gujarat and adjoining States.

STATEMENT III.4

Percentage Distribution of Women by Age at Marriage

Marriage duration (in years)	Rural			Urban		
	Age at marriage			Age at marriage		
	-18	18–22	23+	-18	18–22	23+
1	2	3	4	5	6	7
GUJARAT						
All divisions combined . .	**58.1**	**39.9**	**2.0**	**61.9**	**36.2**	**1.9**
0–4	50.5	47.7	1.8	40.7	54.8	4.5
5–9	56.8	41.5	1.7	56.0	41.6	2.4
10+	60.7	37.2	2.1	68.7	30.1	1.2
Rajasthan*	82	16	1	80	19	1
Maharashtra*	79	19	2	82	16	2
Madhya Pradesh* . . .	84	14	2	86	10	4

**Vital Statistics of India*, 1960, p. XXIII, Table 13

2.11 This statement reveals the insignificant percentage of marriages after the age of 22 years both in the rural and urban areas. When all marriage durations are taken together the distribution of women by age at marriage in the rural areas is not materially different from that in the urban areas. But certain rural-urban differentials are observable when the distribution is studied in relation to duration of marriage also (note Statements III.4 and III.5). The urban distribution of women for marriage duration 10 years and over is weighted more in favour of marriage in the younger ages (-18 years) compared to the rural areas. This implies a smaller average age at marriage in the urban areas for the marriage-duration charts 10+ than in the rural areas. However, considering that the age data particularly in rural areas are difficult to obtain correctly and that the sample consists of a large number of women of marriage duration

10+. Some of this differential may perhaps be accounted for by the error in age data besides sampling fluctuation. Though the distributions for both rural and urban areas show a trend towards increasing age at marriage the urban areas have shown a faster rate of increase so that the rural-urban differential is levelled off in the marriage duration group 5–9. This tempo has been maintained in the recent marriages cohort of 0–4 years duration in which the marriages above age 18 are more numerous in the urban areas than in the rural areas. Marriages above the age of 23 are insignificant alike in Gujarat and the neighbouring States of Maharashtra, Rajasthan and Madhya Pradesh, but the percentage distribution of women marrying before the age of 18 is comparatively higher in case of all the three neighbouring States than that returned in Gujarat, where marriages in younger ages are comparatively less.

(d) *Age at Marriage by Marriage Duration*

2.12 The two-way analysis showing percentage distribution of women under Group A by age at marriage and different marriage duration groups reveals the shifts in marriages and changes over time resulting in elimination of child marriages and postponement of age at marriage.

STATEMENT III.5

Percentage Distribution of Women Married only Once and Still in Married State by Age at Marriage Cross-classified by Marriage Duration Groups

Rural					Urban			
Age at marriage				Marriage duration groups (in years)	Age at marriage			
23+	18–22	–18	Total		–18	18–22	23+	Total
1	2	3	4	5	6	7	8	9
2.0	**39.9**	**58.1**	**100.00**	**All Durations**	**61.8**	**36.2**	**2.0**	**100.00**
1.5	35.9	62.6	100.00	0	44.6	52.3	3.1	100.00
1.9	50.0	48.1	100.00	1–4	40.2	55.1	4.7	100.00
1.7	41.5	56.8	100.00	5–9	56.0	41.6	2.4	100.00
1.4	38.3	60.3	100.00	10–14	64.9	33.9	1.2	100.00
2.2	36.7	61.1	100.00	15–29	68.9	29.8	1.3	100.00
2.8	36.9	60.3	100.00	30+	72.7	26.1	1.2	100.00

2.13 Of all the marriage duration groups, in both rural and urban areas about 98 per cent of married women are aged less than 23 years when their marriages are contracted. Those that marry at a later age account for less than 2 per cent.

In case of marriages celebrated before attaining 18 years the percentage of married women goes on increasing with every advance in marriage duration, the reverse trend being generally noticeable in the case of subsequent age groups. This relationship brings out on the one hand the existence of early marriages before the last 30 years and over and on the other side the current trend of advancement in the age at marriage, totally eliminating infant marriages and reducing early marriages. As against 60.3 per cent and 72.7 per cent of total married women in rural and urban areas respectively against the marriage duration group of 30 years and over for women married at ages below 18, the corresponding percentages under the duration group 1–4 are 48.1 and 40.2. As already indicated in the earlier paragraph these figures show that in urban areas advancement in the age at marriage is more pronounced than in rural areas. This is supported by the fact that in the marriage duration group 0–4 years, 5.0 per cent have been returned as marrying at age 12 and below in rural areas as against 2.3 per cent in urban areas. As can be evidenced from Table 5. The extent of marriages in early ages is thus seen to be greater in villages than in towns.

3. AGE AT MARRIAGE

3.1 Marriage customs are crucial determinants of fertility. Age at marriage and duration of marriage are important variables in the computation of fertility rates. The ages at which men and women marry, the forms which the marital unions take, and the customs regarding

remarriages of widows and widowers, all have a close bearing upon the number of total children born. Marriage being a universal institution in the State and country, the age at marriage assumes a special significance in the study of fertility. After the passing of the Sarda Act in British India in 1930, revision of Hindu Marriage Law in 1955 establishing the minimum age of marriage at 15 for girls and 18 for boys, and as a result of social reform voluntarily adopted by certain castes and communities, the proportion of marriages contracted at very tender ages has substantially declined.

3.2 The Age of Consent Committee calculated that about 50 per cent of the girls get married before they complete their 15th year.[1] This position is changing today due to postponement of marriages in early ages, spread of literacy and operation of socio-cultural economic forces at work. The 1961 Census figures have disclosed that of the total women aged 14 years, only 2 per cent are returned as married. Majority of the married women (36.80 per cent) are returned under the two age groups, 20–24 and 25–29. Most of the women in India bear most of their children before they are around 34 years or so after which there is evidence of sharp decline in fertility. The average child-bearing period is about 32 years, and the average duration of effective fertile union comes to about 17 years taking the average age at marriage as 17 years. This means that on an average females in India remain in an effective marital union between the age of 17 and 34 and of this period, the first half between the ages 17 and 27 is more fertile from the point of view of reproduction. This is also corroborated by the expectation of fertile life at various ages given in Table 18. Expectation of fertile life has been worked out by making use of sterility ratio in the same manner as expectation of life is worked out from mortality rates. Expectation of fertile life actually gives, on an average, the number of years for which a woman having attained some specified age would remain fertile. The average span of fertile union according to this table is about 19 years. The expectancy of fertile life in rural as well as urban areas is the highest at ages 15–19 and goes on progressively declining in the subsequent age groups.

3.3 The standard of age reporting in our country has the usual biases, heaping and misstatements. Age reporting with particular reference to age at marriage also suffers from the same limitations of under and overstatement. In order to collect the data correctly and tactfully without causing any annoyance to the respondent, such questions as age at marriage, interval between wedding, the time she came to live with her husband and the duration of total married life were included in the Fertility Slip. The age when the husband and wife start living together referred to hereafter as "effective marriage age" has been classified into five major categories, namely, below 12 years, 13–17 years, 18–22 years, 23–27 years and 28 and above. The marriage duration has also been tabulated for 0 period, 1–4 years, 5–9 years, 10–14 years, 15–29 years and 30 and above. The data thus collected through this survey will help trace the shifts in marriages of last five years and compare them with those that occurred 10–15 years ago. For operational convenience, this kind of tabulation has been confined to Group A—still married women only, as similar study for other Groups B, C and D will entail heavier work without any material improvement in the findings. With the help of question 8(b) *vide* Appendix IV, the relative significance of the factor of interval between wedding and the time wife comes to live with her husband can be brought out and spacing examined.

3.4 The average age at marriage as revealed by the Fertility Survey for two marriage duration groups is given in Table 5.

3.5 The above figures relating to two marriage duration groups reveal advance in age at marriage which is higher in case of urban women as compared to those noticed in rural areas.

Median Age at Marriage

3.6 The median age at marriage for women under the marriage duration group 0–4 as revealed by Fertility Survey comes to 18.0 and 18.4 for rural and urban areas respectively (Table 5)

1. AGRAWAL, S. N., *Mean Duration of Fertile Union in India from Census Data, Report of the Sixth International Conference, Planned Parenthood*, p. 90, 1960.

The median ages at marriage in selected countries is given below.

STATEMENT III.6

Median Age of Bride at Marriage in Selected Countries

Country		Median age of bride at marriage (in years)
1		2
1 Switzerland		25.5
2 Sweden		24.8
3 England and Wales		24.0
4 Italy		23.2
5 France		23.0
6 Australia		23.0
7 Canada		23.0
8 New Zealand		22.8
9 Japan		22.2
10 Egypt		21.5
11 All-India[2]	**R**	**16.1**
	U	**17.1**
Gujarat	*R*	*18.0*
	U	*18.4*
Maharashtra	R	15.5
	U	17.6
Rajasthan	R	15.7
	U	16.0

2. Vital Statistics, 1961, Table 25 (A) p. XLV

1. Figures regarding median age at marriage for first ten selected countries are taken from *World population and Production Trends and Outlook* by W.S. WOYTINSKY and E. S. WOYTINSKY, Table 101, p. 194

3.7 The rural and urban median age at marriage of bride as revealed by the survey is higher in Gujarat as compared to that in the adjoining States of Maharashtra and Rajasthan. It also exceeds the all-India figure which is the lowest among the selected countries of the world.

4. CURRENT LEVEL OF BIRTHS

4.1 During the course of the survey, the data regarding type of birth during the last twelve months were collected to ascertain the current level of births. The types of birth were classified into live births, still births and multiple births. If a child is born alive, it is a live birth, even though it may die soon after. If the child is born dead and does not show any sign of life after death, it is considered as a still birth. In case of still birth, it was again to be ascertained whether the still birth occurred before or after six months of pregnancy.

(a) *Live and Still Births*

4.2 The findings of the survey tabulated in the following statement reveal that during the period of last 12 months, 4,570 live births were recorded in the sample in rural areas and 3,190 in urban areas.

STATEMENT III.7

Type of Births during Last 12 Months

Type of births	Number of births	
	Rural	Urban
1	2	3
A—Total live births [(i)+(ii)]	4,570	3,190
(i) Single birth	4,542	3,164
(ii) Multiple birth (Twins)	28	26
B—Total still births [(a)+(b)]	93	94
(a) Still births after six months of pregnancy	54	57
(b) Still births before six months of pregnancy	39	37
Total Births (A+B)	**4,663**	**3,284**

Of the total live births, 4,542 were single and 14 were twins in rural areas. The corresponding figures for urban areas were 3,164 and 13. Live and still births by attained ages with percentage distribution are analysed in the table given below.

STATEMENT III.8

Live and Still Births by Attained Ages

Attained age	Rural				Urban			
	Live births	Percentage to total live births	Still births	Percentage to total still births	Live births	Percentage to total live births	Still births	Percentage to total still births
1	2	3	4	5	6	7	8	9
All ages	**4,570**	**100.00**	**93**	**100.00**	**3,190**	**100.00**	**94**	**100.00**
13–17	42	0.92	1	1.08	24	0.75	1	1.06
18–22	1,100	24.07	19	20.43	771	24.17	19	20.21
23–27	1,211	26.50	33	35.48	953	29.87	20	21.28
28–32	1,185	25.93	18	19.35	843	26.43	27	28.72
33–37	514	11.25	7	7.53	348	10.91	12	12.77
38–42	396	8.66	11	11.83	200	6.27	12	12.77
43–47	83	1.82	1	1.08	40	1.25	1	1.06
48+	39	0.85	3	3.22	11	0.35	2	2.13

4.3 It can be noticed from the above figures that the number of live and still births is heavily heaped round three attained ages 18–22, 23–27 and 28–32 which have 76.50 and 80.47 per cent of total live births reported in rural and urban areas. In case of still births also the corresponding percentages are centred in these three groups, 75.26 in villages and 70.21 in towns. The population control methods and family limitation measures to be effective should, therefore, be concentrated and intensified among the females in the age group 18–32 which covers three-fourth of the total live births.

(b) *Multiple Births*

4.4 There were no multiple births other than twin births. The twin births when examined with reference to the attained age reveal that these births are returned upto the attained ages 33–37 and only two births are recorded under the attained age 48 and over in rural areas The attained age group 28–32 is having 12 out of 26 such births in urban areas whereas it is the next attained age group 33–37 which is having 12 births out of 28 such births in rural areas as shown by the following statement. However, the above results are to be used with caution on account of smallness of data.

STATEMENT III.9

Percentage of Multiple Births to Total Live Births by Attained Age

Attained age	Rural		Urban	
	No. of multiple (twin) births	Percentage of multiple births to total live births	No. of multiple (twin) births	Percentage of multiple births to total live births
1	2	3	4	5
All ages	**28**	**0.61**	**26**	**0.82**
13–17	..	..	..	..
18–22	2	0.18	2	0.26
23–27	4	0.33	6	0.63
28–32	8	0.68	12	1.42
33–37	12	2.33	6	1.72
38–42	..	..	..	..
43–47	..	..	..	..
48+	2	5.13	..	..

4.5 The contribution of multiple births to total births for all ages in rural areas is 0.61 per cent as compared to 0.82 in urban. These percentages though insignificant and based on small number of observation show an increasing trend which is correlated to the rise in attained age both in rural as well as urban areas. High percentage (5.13) of multiple births to total live births in the attained age 48+ in rural areas is due to the lesser number of live births and incorrect reporting of multiple births in this age group.

4.6 In the case of still births recorded after six months of pregnancy, 54 were recorded in rural and 57 in urban areas, as against 39 and 37 respectively before six months of pregnancy. That is, still births after six months of pregnancy constitute 58.06 per cent and 60.64 per cent of total still births in rural and urban areas, the corresponding percentages being 41.94 and 39.36 in case of still births before six months of pregnancy. Of the two categories of still births, those after six months of pregnancy are thus greater in both the areas as compared to still births before six months of pregnancy. Of the total live and still births in rural areas 4,570 or 98.01 per cent were live and 93 or 1.99 per cent were still. Similarly in case of urban areas, the distribution of live and still births was in the ratio of 97.14 and 2.96 respectively. Still births after six months of gestation per 100 total births (live and still) for all attained ages were

1.2 and 1.7 in rural and urban areas respectively; whereas the corresponding rates in case of still births within six months of gestation were 0.8 and 1.1.

STATEMENT III.10

Still Birth Rate per 100 Total Births (Live and Still)

Attained age	Still birth per 100 total births (live and still)			
	After six months of gestation (SA)		Within six months of gestation (SB)	
	Rural	Urban	Rural	Urban
1	2	3	4	5
All ages	**1.2**	**1.7**	**0.8**	**1.1**
13–17	..	..	2.3	4.0
18–22	1.1	1.8	0.6	0.6
23–27	1.4	1.1	1.3	0.9
28–32	0.9	1.7	0.6	1.4
33–37	0.8	2.8	0.6	0.6
38–42	1.7	2.8	1.0	2.8
43–47	1.2	..	..	2.4
48+	4.8	7.7	2.4	7.7

4.7 The above statement shows that both in the rural and urban areas the rate of still births after six months of pregnancy is higher than that within six months of pregnancy. However, under-reporting or unreporting of still births in rural and urban areas should also be borne in mind before validating this conclusion. Examining the still birth rate by various attained ages it is noticed that of all such ages it reaches a minimum in the ages 28–37 and the peak for both the categories in the attained age group 48 and over. In both the groups the still birth rate in the urban areas is mostly higher than in the rural areas.

5 FERTILITY PERFORMANCE

(a) *Fertility Rates*

5.1 Human fertility is influenced by a large number of factors, entangled with one another and interacting in complex ways, so that it becomes difficult to identify those which have a primary influence on fertility rates. The problem is further complicated by the fact that fertility is suseptible to human control, both by deliberate action and by the effects of behaviour which is not consciously directed to this purpose. Further, the factors which influence fertility and the nature and magnitude of their effects are not constant. All these factors make it difficult to predict the future trend of fertility, even if much were known of the factors influencing it a present and in the past.

5.2 The word fertility in demography is used in relation to actual occurrence of births, especially live births. The marital age specific fertility rate gives the annual number of live births to 1,000 married women in the specified age groups. For example, a marital fertility rate of 278 for ages 18–22 means that 278 births occurred to 1,000 married women in the age group 18–22 in the year under reference. Fertility can be distinguished in two different ways, namely, current fertility and life-time fertility. Current fertility may be measured by the crude bith rate or age specific fertility rate, whereas life-time fertility may be shown by the average number of live born children per woman. Current fertility is studied with reference to births during last 12 months, while life-time fertility is obtained by considering the number of children born alive to women of completed fertility of specified duration of married life. Age specific fertility rates would provide some overall indicators with regard to current level of fertility. Children born are recorded in two sections, those born after Divali of 1960 and before Divali of 1961. Questions have been so designed as to find out if there was any birth during a period of 12 months. But as most persons find it difficult to fix a span of 12 months, further enquiries were made about all births that took place preceding Divali

in 1960 as well as those that occurred before or after 1961 Divali and thus locate births during the span of one year, between the two Divalis of 1960 and 1961.

5.3 The entire population of married women is subdivided into two parts, namely, women with completed fertility and women with incomplete fertility. Number of children born alive to women who have passed through the entire length of their married life and are now past menopause and aged 43 and above are considered under completed fertility.

5.4 Average number of such women is also important as a large average family for women of completed fertility could only be the result of preponderance of women married at earlier ages having higher live birth orders and small percentage of childless women in that group. Generally speaking, the average number of children increases with the increase in the duration of married life and decreases with the rise in age at marriage. Women under incomplete fertility include mothers in the age group 13-42. Fertility differentials are examined with reference to women classified with regard to completed and incomplete fertility.

(b) *Age Specific Fertility Rate*

5.5 In Table 17, the age specific fertility rates per 1,000 married women are tabulated for rural and urban areas. "All ages" gives an overall measure, called the general fertility rate, of fertility per 1,000 married women to be 160 for the State as a whole, against 152 and 173 for rural and urban areas respectively.

5.6 The variation in age specific fertility rates shows how fertility of women varies with age. The fertility rate per 1,000 married women goes on increasing at every successive age groups from 13-17 reaching its maximum limit of 252 in the age group 23–27 after which a declining trend under each subsequent quinquennial age group is noticed. This feature is noticed to be the same in both rural and urban areas also.

5.7 Kuczynski arrived at similar findings while discussing the incidence of fertility at different age groups of mothers, and concluded that "for those in the age group below 20, the chance of a married woman having a child within a year is shown to be nearly one-half, between ages 25–29 the chances have diminished by 50 per cent to approximately one-fourth, for one between 30–39 it is less than eighth, while in the oldest age group 40–45, it is but 3 per cent or about one-fourteenth of that shown for the youngest age group1."[1]

5.8 According to the fourteenth round of National Sample Survey undertaken during July 1958–June 1959 in rural areas, the birth rate in rural Gujarat was 40.4 per 1,000 population and the 1961 Census Actuary estimated the birth rate for the decade 1951–61 to be 45.7. Assuming that the birth rate in 1961 is also likely to be of the order of 45.7 per 1,000 population the extent of under-enumeration in birth, in the Fertility Survey would be of the order of 27.6 per cent. Compared to these a birth rate of 32.3 as disclosed by the Fertility Survey seems to be an underestimate.

5.9 The age specific fertility rates in selected countries with the nearest possible comparable age groups adopted in Fertility Survey are compared in Statement III.11 on the next page.

5.10 It can be seen from that statement that the age groups giving fertility rates for selected countries are not the same as those adopted by the Fertility Survey. To facilitate comparative study, comparable age groups under both the sets are bracketted. Another limitation is the difference in the reference period. For, while the data of selected countries relate to years 1936–49, those for Fertility Survey pertain to 1962 February–April.

5.11 In the United States, fertility is the highest among women aged 20–24 years, declines slightly at ages 25–29 and drops abruptly after age 30. In England and Wales, Canada, France, Italy and Australia, the period of high fertility is confined to ages 20–34 years, with the peak in the middle at 25–29. In Netherlands, Sweden and Norway, high fertility begins and ends somewhat later, extending from 25 years through 39 years with the peak at ages 25–34. The pattern as emerging from the Fertility Survey in Gujarat also reveals similar trends so far as the high fertility ages are concerned. The period of high fertility which is 18–32 is comparable with the age group of 20–24

1. KUCZYNSKI, R., *The Measurement of Population Growth*, p. 147, 1930

STATEMENT III.11

Fertility Rate By Age Groups in Selected Countries

Fertility rate per 1,000 married women (Births per 1,000 women)

Age group (a)	Age group (b)	*Married once and still in married state (R+U combined)	United States	England and Wales	Canada	France	Italy	Australia	Netherlands	Sweden	Norway	Japan
1		2	3	4	5	6	7	8	9	10	11	12
13–17	15–19	51	80	17	43	23	17	32	13	35	16	17
18–22	20–24	222	193	126	179	161	107	166	97	129	100	180
23–27	25–29	252	161	157	197	184	159	186	188	141	143	256
28–32	30–34	218	101	119	140	126	139	131	172	106	127	211
33–37	35–39	160	53	66	90	75	102	74	120	65	87	148
38–42	40–44	99	15	19	32	26	46	23	50	23	37	58
43+	45+	42	1	1	3	2	5	2	4	2	4	5

*As per Fertility Survey 1961,

NOTE :

1. Age groups in col. 1(a) are those adopted by Fertility Survey and those in 1(b) are the age groups given in the source indicated below.
2. Year of reference for selected countries is indicated below each Col. heading

Source :

World population and Production Trends and Outlook by W. S. WOYTINSKY and E. S. WOYTINSKY, Table 71, p. 150

and the peak level 23–27 with the age group 25–29 in selected countries. However, beyond age 32 the levelling is rather slow compared to the other countries. Whereas in the age 43+ the number of births is 42 per 1,000 women, in the other countries listed the maximum is only 5. This illustrates influence of higher order births in inflating the fertility of Gujarat compared to other advanced countries.

(c) *Age Specific Marital Fertility Rates*

5.12 The general fertility rates in the case of women in the age group 13–47 married only once and still in the married state and women married more than once but in married state at the time of enquiry in rural areas came to 152.2 and 152.3 respectively and conjointly for the State to 152.2. The corresponding figures for urban areas are 173.0, 146.4 and 172.3 respectively. The marital fertility rate in urban areas is thus found to be higher than that in rural areas in case of women married only once and still in a married state.

STATEMENT III.12

Age Specific Marital Fertility Rates

Age group	Rural			Urban		
	Women married only once still in married state	Women married more than once but in married state	Combined	Women married only once still in married state	Women married more than once but in married state	Combined
1	2	3	4	5	6	7
All ages	**152.2**	**152.3**	**152.2**	**173**	**146.4**	**172.3**
13–17	42.9	..	42.9	76.9	..	76.9
18–22	205.3	145.8	204.8	249.8	45.5	248.3
23–27	237.0	314.8	238.7	272.8	209.5	272.1
28–32	212.2	167.7	211.0	225.9	289.5	227.2
33–37	163.1	201.5	164.7	154.6	137.3	154.3
38–42	105.1	133.3	106.4	90.2	90.9	90.2
43–47	37.0	80.5	38.8	29.0	125.0	31.4
48+	8.8	40.5	10.0	5.3	...	5.3

5.13 The marital fertility rate in case of women married only once and still in a married state is above 200 both in rural and urban areas for ages 18–32 which is the peak reproductive period in the entire span of effective married life. The combined marital fertility rates in case of women married only once and still in married state and married more than once but in married state now are also above 200 for these ages. The age group 23–27 claim the highest age specific marital fertility rate of 238.7 and 272.1 both in rural and urban areas respectively. The marital fertility rate is asserted to be higher in urban than in rural. How much of this difference is real is difficult to ascertain.

(d) *Sterility Rate per 1,000 Women in Quinquennial Age Groups*

5.14 Results about the rate of sterility per 1,000 women according to quinquennial age groups relate to women (a) married only once but still in a married state (b) with present ages 38–47 and (c) having at least one child. The rates were worked out from the frequency distribution of women by age of the youngest child for two age-cohorts of mothers, viz., 38–42 and 43–47. The calculations were made on the assumptions that (i) the average ages of the mothers in the two cohorts 38–42 and 43–47 were 40 and 45 respectively and (ii) the women in the two cohorts may be regarded as sterile, if the respective ages of the youngest child were 5 and 3. The difference of the age of the mother and that of the youngest child would provide a frequency distribution of women becoming sterile by ages. The cumulative total was taken as the magnitude of the cohort. The rest of the calculation followed on the same line as in the construction of an abridged life-table. The rate of sterility is similar in conception to central death rate $n\,^{m}x$ of life-table.

STATEMENT III.13

Rate of Sterility per 1,000 Women by Age Groups

Age group	Sterility rate per 1,000 women	
	Rural	Urban
1	2	3
Below 20	3	3
20–24	12	13
25–29	26	35
30–34	95	99
35–39	222	228
40–42	354	375

5.15 The rate of sterility runs close in rural and urban areas in the earlier ages less than 25 years. The sterility rate increased from one age period to another and reaches maximum (Rural 354 and Urban 375) in the age group 40–42. As is natural the chances of fertility gets weaker and weaker as the years advance.

(e) *Child-Woman Ratio*

5.16 Census data provide a balance-sheet of the distribution of population by numerous attributes like age, sex, marital status, literacy, occupation, etc. Census statistics, while admirably suited to the measurement of population increases and decreases, also provide information on factors affecting fertility and have the advantage of universal coverage which permits generalisations of wider reliability than can be drawn from a sample survey. "A common feature of fertility, especially where vital statistics and other types of direct information are lacking is the ratio of children under five years of age to all women in the child-bearing ages as computed from the census data on the total population".[1] The ratio of children to women of reproductive ages enumerated in the census has been widely used for the study of fertility. This ratio is derived from the census tabulation of population by sex and age groups. The child-woman ratio is commonly defined as the number of children under 5 years per 1,000 women of child-bearing ages (15–44 years). The numerator being number of children born under 5 years of age, the measure refers to fertility during a five-year period prior to Census taking. While using this ratio, its limitations and biases should also be kept in view. It may be biased by under-enumeration of children or misreporting of children's ages. Another factor which may affect child-woman ratio is the difference in marital status distribution of women in different population groups. In order to diminish the effect of this factor, the United Nations has given first priority to the tabulation of the number of ever married women (married, widowed, divorced or separated) instead of all women of reproductive age as the denominator, provided the census tabulation of women by age and marital status is available. As the data on the above lines are available from the 1961 Census the child-woman ratio derived from these

1. *Demographic Year Book*, 1949–50, United Nations Organisation

statistics is compared with ratios of some selected countries is given below.

STATEMENT III.14

Number of Children under 5 Years per 1,000 Women of Child-Bearing Age (15–44) and per 1,000 Ever Married Women (15–44)

Country	Year	No. of children under 5 years per 1,000 women of child-bearing age (15–44)	No. of children under 5–9 years per 1,000 women of child-bearing age (15–44)
1	2	3	4
England and Wales	1950	390	..
U.S.A.	1950	415	..
France	1949	470	..
Denmark	1950	487	..
U.S.A.	1950	517	..
Canada	1950	577	..
Japan	1951	647	..
Travancore-Cochin	1952	626	..
Banglore City:			
Zone I(R)	1952	721	
Zone II(R)	1952	706	..
Zone III(R)	1952	731	..
Gujarat:			
Total	**1961**	**1,036**	**815**
Rural		**1,055**	**821**
Urban		**980**	**798**

1. *United Nations Principles and Recommendations for National Population Censuses*, Statistical papers, Series M.No. 27, 1958.

5.17 The ratio given above relate to different reference periods between 1949 and 1952, but in case of Gujarat it is the figures of the latest Census of 1961 which are taken into account. The ratio for Gujarat is comparatively much higher than that for other countries included in the table. If it is calculated on the basis of children in the age group 5–9, the margin of error is smaller than that in the youngest age group 0–4. Even then the child-woman ratio (col. 4) is much higher than that of other countries. In either case the ratios in col. 3 and col. 4 are indicative of a higher birth rate in urban areas as compared to rural and in the State than in other countries examined.

6 Average Number of Children Born Per Currently Married Women

6.1 Average number of children born by attained ages and the fourfold grouping of marital status for rural and urban areas is given in Table 4.

6.2 The average number of children born to the four different groups of married women of all ages over 12 years is 3.4 both for rural and urban areas. The average number of children born under A and C groups of women in rural areas comes to 3.4 and 3.1, but 3.5 in case of B and D groups. In urban areas, the average is identical (3.3) for B and C groups of women, but it is 3.4 and 2.8 respectively for women under groups A and C. The difference shown is slight. Further analysis by attained age groups brings out direct relationship between the attained age and the number of children born. In all the four groups of married women, the average number of children born is generally found to rise with increase in the attained age groups. The averages under defferent groups of married women bring out the effects of widowhood *versus* remarriage in contrast with continuing marriage under which the average number of children born is higher under all the attained age groups. The effect of permanent termination of married state

by compulsory widowhood as compared to remarriage is also visible through these averages which are lower in case of the former than those returned under the latter.

6.3 The completed family size for the State is 5.1 children compared to the 1961 Census Actuary's estimate of 6.2 children based on the quasi-stable population theory, the result of the Fertility Survey gives an idea of the extent of under-enumeration in it. Even so, since the Fertility Survey has been conducted with uniform care and attention all over the State, it may be considered to bring out the comparative picture though not the absolute overall levels.

6.4 Information regarding Indian fertility is largely derived from data collected through various rounds of the National Sample Survey, the Sample Surveys conducted from time to time by the office of the Registrar General and a large number of localised demographic studies conducted over the last 15 years by organisations like the Gokhale Institute of Politics and Economics, U.N. in collaboration with the Government of India and a few individual scholars. Statement given below shows the average number of children born alive to women of unbroken marriages during reproductive ages drawn from a number of such studies, which also indicate that the rural-urban differentials in fertility are not very significant.

6.5 The average number of children born to a woman in her reproductive age period who has had a birth registered in the specified year for selected countries are given in the following statement separately for countries of low and high fertility. Since the age group pattern followed in the Fertility Survey is not identical, the figures tabulated by the survey for the nearest comparable age groups are shown separately for Gujarat at the end of the table.

The countries listed in the above table are subdivided into two parts, namely, countries having low fertility and countries having high fertility. All those countries where the crude birth rate is greater than 30 are grouped as countries having high fertility, while those with the crude birth rate below 30 are classed as countries having low fertility. In countries of low fertility at serial numbers 1 to 5, the average number of children born at ages below 20 is 1.2 or 1.3 and is generally higher than 1.3 in the countries of high

STATEMENT III.15

Average Number of Children Born Alive per Woman of Unbroken Marriage during Reproductive Age Period

Survey	Average number of children born alive	
	Rural	Urban
1	2	3
Bengal Survey (1946–47)		
Ballygunj–Upper middle class	..	5.7
Beniatola–Lower middle class	..	6.2
Singur	7.3	..
Gokhale Institute of Politics and Economics—Surveys		
Poona (1951–52)	6.4	6.4
Poona (1956)	..	5.9
Nasik (1952–54)	6.2	6,6
Kolaba (1953–54)	6.1	5.8
Satara North (1952–54)	6.3	6.1
U. N. and Government of India, "Mysore Survey"		
Bangalore City (1952)	..	6.2
Rural Areas (1952)	6.0	..
Office of the Registrar General—Surveys		
Maternity data of 1951 Census:		
Travancore-Cochin	6.6	6.4
East Madhya Pradesh	6.1	6.3
West Bengal	6.0	..
Sample Census of births and deaths in seven districts of U. P. (1952–53)	6.2	..
Registration data (1961)	..	6.6
Fertility Survey (1961–62) Gujarat	**5.1**	**5.1**
National Sample Survey		
2nd and 4th Rounds (Couple Fertility) (1951–52)	5.86	5.92
16th Round (Family Planning Schedule) (1960–61)	..	6.5
Kanpur and Lucknow Survey (1951)	..	7.8
Patna Survey (1956)	..	5.6

fertility at serial numbers 6 to 10. The small lead taken by the high fertility areas in ages below 20 is further accelerated in the subsequent quinquennial age groups. The average for ages 20–24 for low fertility areas varies from 1.5 to 2.1 as against 2.0 to 2.5 in the high fertility countries. In the higher age groups, the divergence between the averages of the low and high fertility areas goes on increasing. Statement III.16 distinctly shows that differences in both the areas become more pronounced after 30 years. In the last two

STATEMENT III.16

Average Number of Children Born per Mother in Various Countries Having Low and High Fertility

Sl. No.	Country	Year	Average number of children born by age groups							
			-20	20-24	25-29	30-34	35-39	40-44	45+	All ages
1	2	3	4	5	6	7	8	9	10	11
A—Countries of low fertility										
1	U. S. A.	1957	1.3	2.1	2.9	3.8	4.5	5.4	6.8	2.8
2	U. K.	1957	1.2	1.5	2.1	2.7	3.5	4.4	4.9	2.3
3	France	1958	1.2	1.7	2.3	3.5	4.3	5.5	6.1	2.7
4	Italy	1957	1.2	1.5	2.1	3.0	4.1	5.7	7.0	2.5
5	Austria	1958	1.2	1.6	2.2	2.9	3.6	4.7	5.4	2.4
B—Countries of high fertility										
6	Thailand	1953	1.2	2.0	3.1	4.3	5.3	6.2	6.4	3.0
7	Chile	1956	1.5	2.3	3.4	4.8	6.1	7.3	7.4	3.7
8	Paraguay	1957	1.3	2.1	3.4	4.9	6.5	7.4	7.1	3.6
9	Ecuador	1957	1.4	2.5	4.0	5.3	6.5	7.2	7.2	3.8
10	India	1960	1.5	2.4	3.9	5.4	6.9	8.3	8.9	3.9
11	**Gujarat**	*1961-62*		*18-22*	*23-27*	*28-32*	*33-37*	*38-42*	*43+*	
	(As per Fertility Survey)			**2.3**	**3.5**	**4.4**	**4.8**	**4.8**	**4.5**	**3.4**

Source : Vital Statistics for 1960, issued by the Registrar General, India, p. LXIII, Table 5

age groups in countries with low fertility the average number of children born varies from 4.4 under the age group 40–44 in U.K. to 7.0 in Italy under the age group 45 and above. The corresponding averages in countries with high fertility in these two age groups are 6.2 in Thailand and 8.9 in India. The Indian pattern of increase in the average number of children born conforms to that shown by countries of high fertility. It may be noted that the age groups for different countries and those adopted in Fertility Survey are not exactly comparable but the data are presented by comparable age groups as far as possible. The overall average for all ages as well as for different age groups in case of Gujarat is fairly comparable with the Indian pattern in the age groups 20–24, 25–29 and 30–34, whereafter the comparison ceases. The smaller figures for ages beyond 30 years points to the underestimation of children of older age cohorts due to recall lapse.

6.6 Duration of married life is one of the important determining factors affecting the level of fertility. As the age at marriage advances, the span of married life decreases and the number of children born is also correspondingly reduced. The earlier phase of the reproductive period of woman is comparatively more fertile and the latter less fertile. The summary Table 7 tests the validity of the above generalisation and quantifies the relationship between duration of married life and the average number of children born.

6.7 As is to be expected a positive correlation between the duration of married life and the number of children born is clearly established. The average number of children born in rural and urban areas increases from 0.54 and 0.62 in case of marriage cohort[1] group 1–4 years to 5.05 and 5.22 respectively for the cohort 30 years and above. The urban averages are less than those of the rural in all the groups except duration 1–4 years and 30+ years. The differential in the group 30+ can be explained as being due to the errors of recall in the older cohorts. No such simple explanation is possible with regard to the marriage duration 1–4 years. However, the difference may not be appreciable enough to indicate higher urban fertility in the case of the recent marriage cohorts.

6.8 Distribution of married women over different duration groups in rural and urban

1 Groups of women married in a given set of years, Royal Commission on Population, Vol. I

areas shows progressive increase from the lower to the higher till the duration increases to 15–29 years which claims more than one-third of the women under survey. It is again in this duration group that the maximum of 47.97 and 48.44 per cent of the total children born in rural and urban areas are noticed.

6.9 Average number of children born by age at marriage and marriage duration groups are given in summary Table 8.

6.10 The figures given therein reveal that the average number of children born is dependent upon duration of marriage correlated to the age when marriage is contracted. Proliferation is found to be closely related to the period available for procreation. When the marriage is celebrated at an advanced age, the effective period which naturally governs the average number of children born is *pro rata* reduced. This average would naturally show a rising trend with the gradual increase in marriage duration. The highest average number of children born reaches 5.1 and 5.4 in rural and urban areas when the marriage duration is 30 years and over and the age at marriage below 18.

7 Composition of Family Sizes for Completed Fertility Women

7.1 Childlessness is a phenomenon associated with age at marriage. The percentage of childless women among completed fertility women comes to 4.2 in rural areas as compared to 5.1 in urban. Table 16 gives the percentage of childless women of completed fertility with referenee to age at marriage for rural and urban areas.

7.2 The figures in that table show a rising trend of childlessness with every increase in age at marriage which in rural areas rises from 3.8 per cent for women married before they are aged 18 years to 5.0 for the age at marriage 23 and over. The corresponding percentage goes up from 3.2 to 11.8 in urban areas. Thus the postponement of age at marriage tends to reduce fecundity and increase chances of sterility in marriage.

7.3 Percentage distribution of families of different sizes for mothers of completed fertility by effective age at marriage is given in summary Table 11.

7.4 The percentage of childless women of completed fertility in case of rural women increases from 3.8 for those whose age at marriage is below 18 to 5.5 for women in the effective age group 18–22 and slightly declines in the last group of 23 and above. The corresponding sterility ratio in case of urban areas is 3.2, 6.6 and 11.8.

8 Number of Children Born Alive by Order of Birth and their Contribution to the Average Size of a Household

8.1 Average number of children born to women married once only and now in a married state and aged 43 and above comes to 5.07 for rural and 5.09 for urban areas. The percentage distribution of households of different sizes for mothers of completed fertility (aged 43 and above) and number of children born is given in Table 12.

8.2 In rural areas 4.8 per cent of mothers of completed fertility have one child, 6.7 per cent have two children and 9.5 per cent have three; the respective percentages in case of urban areas are 5.5, 7.0 and 9.3. In rural and urban areas the percentage progressively increases in case of such mothers to whom four, five and six children are born and declines thereafter. Mothers with completed fertility (age 43+) having 3 children and less account for 25.2 per cent; those with 4 to 7 children 58.5 per cent; and those with 8 children and more 16.3 per cent in rural areas with slight variation in towns where the percentage of mothers with 8 children and more rises a little to 19 per cent.

9 Parity Progression and Sterility Ratio

9.1 Parity progression ratio and sterility ratio in case of completed fertility women are given below.

STATEMENT III.17

Parity Progression and Sterility Ratio

	Parity Ratio		Sterility Ratio	
Children	Rural	Urban	Rural	Urban
1	2	3	4	5
0	95.8	94.9	4.2	5.1
1	94.9	94.2	5.1	5.8
2	92.6	92.2	7.4	7.8
3	88.8	88.7	11.2	11.3
4	81.7	81.5	18.3	18.5
5	72.6	76.2	27.4	23.8
6	65.8	68.3	34.2	31.7
7	55.8	61.2	44.2	38.8
8	47.7	53.1	52.3	46.9
9	40.9	49.2	59.1	50.8

9.2 Parity progression ratio of the *n*th birth order gives the proportion of women who, already having *n* children born alive give birth to the *n*+ 1th child during the year of observation. Sterility ratio of the *n*th birth order gives the proportion of women who have ceased reproduction after getting *n*th child (completed fertility). It can be deduced from the above statement that among women of completed fertility, 4.2 per cent are childless in rural areas as against 5.1 in urban areas.

9.3 The distribution of women by specific number of children born during the year of observation is also useful in computing the "parity progression ratio". By examining the parity progression ratio in relation to age, it is possible to study the progression of sterility with advancing age. It implies that out of 100 women having 5 children, 72.6 and 76.2 in rural and urban areas respectively go in for the 6th child, but 27.4 and 23.8 in rural and urban areas stop child-bearing thereafter. This ratio declines as the age at marriage and parity order increase. The decline from one parity to the next is gradual and not abrupt. Sterility ratio is the complement of parity progression ratio. Further, with the increase in the number of children born, the parity ratio shows a declining trend and the sterility ratio a corresponding increase.

10 Contribution by each Birth Order to the Average Size of a Household

10.1 Average number of children contributed by each birth order to the average size of a family of completed fertility for different ages at marriage is given in Table 13 bring out the substantial contribution in rural as well as urban areas by first three birth orders to the average size of a family under all the three ages at marriage.

10.2 Average number of children born to women of completed fertility and those married once only and in a married state at the time of survey by age at marriage below 18, 18–22 and 23 and above in rural areas is 5.13, 4.93 and 4.41 the respective averages for urban areas being 5.35, 4.89 and 3.77. Average size of a family is higher in case of marriages at ages below 18 as compared to other two higher age groups of effective marriage.

11 Effect of Age at Marriage on Family Size

11.1 The rate of family building as measured by the percentage ratio of the average number of children born per woman in a specified duration group to the average for the preceding duration group is given in summary Table 9.

11.2 The figures therein indicate that the rate of family building is at its peak in the marriage duration group 5–9 years for women of all age at marriage groups but as the duration of married life advances, the pace of reproduction slackens with the advancement in age at marriage and reduces the number of children born.

11.3 In order to gauge the effects of age at marriage on the growth of family size, that is average number of children born, performance of women married between the ages 18–22 has been taken as an index in the following statement.

STATEMENT III.18

Effects of Age at Marriage on Family Size

(Age at marriage 18-22=100)

Duration of marriage	Age at marriage: −18 Rural	−18 Urban	18–22 Rural	18–22 Urban	23+ Rural	23+ Urban
1	2	3	4	5	6	7
All durations	**113**	**134**	**100**	**100**	**100**	**69**
1–4	100	100	100	100	100	100
5–9	111	111	100	100	89	68
10–14	106	109	100	100	91	81*
15–29	100	111	100	100	88	82
30+	104	110	100	100	96	90*

*Based on less than 50 women.

11.4 The indices in the above statement disclose that age at marriage is inversely related to the size of family which means that lower the age at marriage higher the average number of children born and *vice versa*.

12 FERTILITY DIFFERENTIALS

12.1 Knowledge about the fertility performance among different groups of population by religion, education, occupation, income, etc., makes it possible to predict changes in the composition of the population. The study of fertility pattern by different characteristics also throws light on the conditions which influence fertility. There may be differential birth rates between different ethnic groups, between the rural and urban population, between illiterate and literate or highly educated, between professional and labouring classes. Assuming biological potentialities as being equal in different groups, impact of different socio-economic and cultural conditions and their influence on reproductive behaviour present interesting study. Much useful data are thus made available by reading through the differences in the reproductive performance of various elements of population which have been affected in different degrees by important forces of economic and social change that are at work in the country. The data thus obtained serve as a basis for anticipating the effect of increase in the birth rate among different sections of population. Each of the characteristics is again a complex of other factors which are inter-related and associated with a number of other socio-economic, environmental or regional variables.

12.2 The data regarding fertility differentials in the present survey are analysed with reference to religion, woman's education, husband's education, nature of work and industry. As special interest attaches to the fertility experience of tribal people, special instructions were given to record religion as well as tribe, in the sampled blocks where tribal people are known to be concentrated, so that the data for such tribes may be analysed separately.

12.3 The average number of children born to women of incomplete fertility aged 13–42 and completed fertility (43+) and the marital fertility rate based on births during the last twelve months for each of these characteristics for women between the ages 13 and 47 are also examined in this section. Wherever the number of women in the sample under each of these characteristics is small, the rates are not calculated as it will vitiate the findings arrived at. The age specific marital fertility rates for the various characteristics referred to above are given in Tables 34 to 38 and not reproduced in the text.

(a) *Religion and Tribe*

12.4 Religions have great demographic importance in so far as many cultural and social values vary widely and in turn affect their fertility pattern through variations in their precepts, injunctions and beliefs. The differentials by various religious denominations and tribes are given in Table 19.

12.5 The small number of women in the sample for the religious groups Jains, Christians, and other religions and for the individual tribes does not permit a critical comparison of their average figures individually. The only clear-cut differential as brought out by these statements is that between Muslims and Hindus. As is generally accepted the Muslims because of their marriage customs have higher fertility which is also shown by the data in the statements. However, the higher figure of 5.4 for the completed family size of urban Muslims as against that of the rural does not conform to the general pattern. The difference may probably be due to the smaller sample size in the rural areas—1,623 women against 2,313 in urban areas. Another feature that merits comment in Table 19 is the smaller average size of completed family in the case of the category "all tribes", as against either Hindus or Muslims which again goes contrary to the generally accepted fact that fertility varies inversely with the socio-economic status of the community. Whether this is due to acute mortality and other socio-economic conditions of the tribals or due to under-enumeration of births needs further study.

12.6 Age specific marital fertility rate is higher in the age span 18–32 among all religions and declines thereafter. (Table 34).

(b) *Women's and Husband's Education*

12.7 In order to study the relationship between levels of fertility and levels of education the following four broad educational attainments

of wife and husband are taken into account.

1 Formal schooling but high school or equivalent examination not passed

2 High school or equivalent examination

3 Graduated from college

4 Others comprising just literate and uneducated

12.8 Table gives the number of women and average unmber of children born by women's and husband's education. The size of the sample in the case of high school and college education particularly in the case of women being very small, the statements have failed to bring out any significant differentials with regard to completed family size. However, it is interesting to note that in the case of incomplete fertility with regard to women aged 13–42, the average number of children born steadily declines with increasing level of education of either husband or wife. Further the marital fertility rate for women between ages 13 and 47 based on births during last twelve months presented in Table 33 by women's and husband's education also points towards the decreasing trend in fertility with increasing level of education.

(c) *Nature of Work and Nature of Industry*

12.9 Differentials with regard to nature of work and industry were also studied. But the data did not bring out any significant differentials. The related tables are, however, given at the end of the report.

12.10 The salient results of the survey are presented in the foregoing paragraphs. In these results the somewhat higher level of urban fertility compared to the rural as shown by the various fertility rates merits attention. The relevant data are assembled together in Statement III.19 given below.

STATEMENT III.19

Some Results of the Gujarat Fertility Survey, 1961

	Rural	Urban
1 Marital fertility rate . .	152	173
2 Completed family size . .	5.1	5.1
3 Average number of children born to women of completed fertility with age at marriage		
(a) -18	5.1	5.4
(b) 18–22	4.9	4.9
(c) 23+	4.4	3.8
4 Percentage of families of sizes :		
(a) 4+	74.8	73.1
(b) 6+	44.4	45.4
(c) 8+	16.3	19.0
5 (a) Sterility ratio (childless) .	4.2	5.1
(b) Sterility rate at age 38–42 .	354	375
6 Total fertility rate :		
[(Sum of A. S. F. R's 13 to 48+) x5]	5.1	5.5

It may be seen that though the marital and other fertility rates given in the statement tilt the balance in favour of urban fertility, the sterility ratio and the percentage of families of size 4 children or more indicate a contrary picture. It is hard to conclude from these data whether there is really a departure from the generally accepted belief regarding inverse relationship between fertility and urbanisation. Apart from sampling fluctuations, a number of other non-sampling errors resulting in differential effects of recall lapse, underenumeration of infants, particularly those already dead, misstatement of age at marriage and of marriage duration, etc., might have played a predominant part in bringing about the rural-urban differential as observed. In the absence of any concrete evidence to distinguish the relative effects of these non-sampling errors, it may be safer to conclude that there may not as yet be any serious gap between rural and urban fertility either one way or the other.

CHAPTER IV

CONCLUSION

1 Economic planning calls for adequate knowledge about the components and determinants of population growth. Population growth like "a perverse Penelope" is not just undoing in the night what was woven in the day, but complicates the threads in every way. It is said that the reproductive power of human beings is so great that a single pair of it could have produced the present population of the world in 1800 years.[1] If the population spiral is, therefore, allowed to increase unchecked, economic growth and social change might well prove to be a "tantalising mirage" and the most well-laid out plans of economic growth will be jeopardised. In any policy to be adopted regarding population, the fertility component is, therefore, one of the most important elements of population dynamics. Human fertility is again such a complex variable and lends itself to such a flexible treatment that only after conducting a number of studies on the subject relevant factors affecting the fertility pattern can be pinpointed. The Fertility Survey conducted at the time of 1961 Census, though in unison with past Census tradition provides a wealth of data on the fertility pattern for all the States for the first time in Census history.

2 Such a survey is replete with a number of limitations in a country or region where complete ignorance about age prevails. As the data on age are of fundamental importance for the analysis of fertility performance such a study can be more meaningful only if the data are available for correct age groups. All such factors like misstatement of age, digit preference in quoting age and looseness of thinking with regard to time duration must be kept in view while going through the results of a fertility survey. There is some doubt and not without reason as to how far the age returns given by the persons questioned represent really accurate and correct statement of facts. Further in a country or region where the Vedic scriptures bless a married couple with a large family to perpetuate the lineage, such questions as number of children born alive or dead or the time when husband and wife started cohabitation are considered with a coy and bashful approach. Under the circumstances, a survey aiming at studying fertility pattern is not likely to get accurate replies.

3 The various *ad hoc* studies and enquiries conducted on the subject of fertility in this country as well as others have thrown out results which strengthen the view that a multiplicity of forces and factors are to be taken into account while studying fertility pattern of any region. Behind the causes of the varying differential fertility pattern in different regions or countries lie the interplay and under-currents of socio-cultural-economic forces. A clear-cut demarcating line classifying the countries into "high level of fertility" and "low level of fertility" can be drawn as noticed from the varying rates of fertility in Asian and European countries. The European nations also in the early stages of their industrialisation, went through just the same phase of accelerating population growth and a declining death rate as in India and other developing or underdeveloped regions of the world though the range of variation had not been as acute. It has been pointed out that regions now characterised by low birth rates formerly had much higher rates. The onset of decline in fertility rates, noticed in a few countries like France and the United States early in the nineteenth century, generally did not begin until the last quarter of the nineteenth century and in most countries of southern and eastern Europe not until even later. In most countries the fertility rate continued to decline until the 1930's and reached the lowest point during or immediately following the depression.

4 Although a probe into the causes of the decline of fertility rate is far from being fully understood, the evidential data available so far from various studies on the subject show that it

1. SWINBURNE, *Population and Social Problems*, p. 16

was mainly connected with the industrial economy, rising level of *per capita* income, desire to improve one's own social scale termed as "social capillarity" by Dumont,[1] increasing expenses of rearing children, emancipation of women, changes in the status and role of women in the society, and such related social changes as the extension and expansion of popular education and the adoption of the urban way of life.

5 The Fertility Survey has clearly disclosed that high general fertility rate of 160 per 1,000 married women and the estimated birth rate during 1951-61 of 45.7 for Gujarat can be considered as an important contributory factor for such a high increase of 2.7 per cent of population per annum in the State as against 2.1 for the country. The progression of age specific fertility rate with its peak level at 237 and 275 in the age span 23-27 in rural and urban areas respectively and a declining trend with increase in the age at marriage besides bringing out in bold relief how the incidence of fertility varies with age provide a useful clue to activate the family planning programme, so as to keep the number of births within bounds and not threaten the success of efforts to achieve a satisfactory standard of living.

6 Marital status more particularly the age at marriage and duration of married life are important variables in the computation of fertility rates. The median age at marriage for women under the marriage duration group 0-4 as disclosed by the survey is found to be 18.0 and 18.4 years for rural and urban areas respectively. Accompanied by factors such as universality of marriage and the ignorance about family limitation measures the median age accounts for the prevailing high rate of fertility. The Survey has further testified that higher the age at marriage lower the fertility rate as the span of fertility is shortened by the number of years by which the marriage age advances. Advancement of age at marriage for girls and the family limitation methods for women in ages 18-24, 18-32 the peak period of their reproductive career seem to be the two effective measures which can help in substantially scaling down the explosive rate of population growth.

7 Germane to the study of fertility pattern is the reproductive performance of various elements of the population which is affected by important forces of economic development and the concomitant social changes that are at work in the country. It may be added that the numbers examined in the fertility tables hardly admit of firm conclusions except on broader lines.

8 It appears from the Survey that fertility rate of mothers declines as we proceed along the scale of education. This pattern of variation in fertility clearly indicates that upto a certain level there is a positive association between fertility and educational status. This must have been due to factors associated with rise in levels of living and approach of prudential foresight towards life by the educated elite. The postponement of the age of marriage, extension of education among women, increase in employment opportunities for women and the popularising and intensifying the family planning programme among developing nations through "Planned Parenthood" will have a profound impact in moderating the fertility rate in the times to come. In most of the fertility enquiries conducted so far, the pattern of variation of fertility rates between various classes and by different characteristics have been examined with a view to establish the differentials which are not static but change according to time, conditions and practices prevalent in a particular region or country. The varying and divergent pattern of fertility performance noticeable from the findings of these enquiries can be ascribed to the complex and flexible nature of fertility and the operation of direct factors like the variation in the length of periods of exposure to the risk of pregnancy, marital habits, social taboos, customs and traditions breast feeding, practice of contraception or biological variation in the group fecundity itself.

9 In order to study spacing between births which is of great interest in fertility studies, it was decided that after the main tabulation was completed, a ten per cent sample of women from groups A and B, i.e., women who married only once should be drawn from the Fertility Slips for preparing spacing tables with the help of punched cards. Under group A 2,917 and 1,818 sample slips were drawn from rural and

1. *Determinants and Consequences of Population Trends*, United Nations Chapter V. *Economic and Social factors affecting Fertility*, p. 71

urban areas respectively; whereas in the case of B the number of sample slips were 520 and 415. These slips are currently under tabulation in the office of the Registrar General, India.

SUGGESTIONS

10 In the absence of any details about (a) attitude towards family size, (b) knowledge of contraceptives or (c) other factors affecting fertility, the differentials observed in fertility rates give only general indications of broad trends at work. Such details if collected along with the Fertility Survey would have provided useful information both for the purpose of prediction of future trends and also as a guide to action for the present for intensification of Family Planning programme among different segments of the population.

11 Looking to the expanding nature of industrial and occupational complex, the broad pattern of fertility differential emerging from Occupational and Industrial Divisions only, without details of major and minor groups leave a very wide gap for arriving at a clearer picture. Omission of data regarding income of family the correct figures of which it is difficult to obtain cuts off the reader from a comparative study with one of the most important fertility differentials.

12 It is important that fertility data are made available by well-defined geographical areas with common social and economic characteristics, so that the regional pattern of fertility can be studied and the pockets or areas of high and low fertility clearly distinguished for detailed studies and further investigation and research. As large sized cities have a completely different socio-economic framework as compared to urban areas in general collection of data for cities above one lakh of population separately would provide some interesting and illuminating results.

13 Many a time some useful and cognate data even though canvassed in the Schedule remain buried therein without being tabulated as in the case of Section 3 of the Household Schedule of the present survey. Collection of data regarding attitude and approach of the head of the household towards family size and family planning programme would have provided an interesting aspect of study of fertility.

14 It would have been useful to record the information about births by sex so as to ensure completeness of fertility data. This would have undoubtedly increased the tabulation load but would also have at the same time thrown light on the sex of the first born child and furnished some useful data about sex ratio and masculinity at births.

15 Study of fertility pattern is a long range study varying with the age pattern of a woman. Instead of Fertility Slip, a card with sufficient number of pages if maintained and the survey followed up at interval of some years for the same sampled women, a very useful record can be maintained about the fertility performance of mothers. If the data for such a survey are collected through a Lady Investigator or female Social Education Organiser working at the Block Level, some of the replies given by respondents can be filled up more accurately and correctly as the employment of women for such a type of survey has distinct advantages.

16 The fertility continuum runs from high to low in terms of economic, social and cultural progress. The differences in natality among communities and among economic, social and educational groups suggest that average birth and fertility rates decline with economic, educational and cultural advancement. The transition from unplanned to planned parenthood necessarily starts from a situation in which many families have more children than they would desire to have. The higher level of fertility is thus one of the important contributory factors for such a high rate of population growth in Gujarat as 2.7 per cent per annum. An accelerating birth rate coupled with a declining mortality in view of increasing hospitalisation and medical facilities sets at naught all our efforts to improve the standard of living through successive Five Year Plans. However, in perspective it can be said for Gujarat that with the acceptance of family planning programme and its implementation and intensification through the adoption of one of the effective family planning measures by coil method, the current birth rate is expected to be reduced by about 25 per cent. Further accompanied by such measures as spread of literacy, postponement of age at marriage, and operation of other forces social, economic and cultural, a significant change in the level of fertility may be anticipated.

ANNEXURE

Method of drawing the Sample of Blocks

For rural areas generally 1% of blocks i.e., 1 in 100 are to be selected with a random start. Suppose this random start is 77. The sample numbers are 77, 177, 277, 377 and so on.

For urban areas generally 2% of blocks, i.e., 1 in 50 are to be similarly selected. If the random start in their case be 6, the sample numbers are 6, 56, 116, 166 and so on. Our problem is to identify blocks corresponding to these sample numbers.

For conveying the procedure in concrete terms, the method is described with reference to the hypothetical example given below in which number of blocks in the five charge circles (C.C.) is as given in column numbered 4—Cols. 2 and 3 of the list are not reproduced.

Charge Code	Circular No.	No. of blocks	Cumulative total of Col. 4	Sample numbers falling in the charge	Serial No. of the selected block in the relevant charge circle	Random start for sampling houses in the selected blocks
1		4	5	6	7	8
1	-	124	124	77	77	2
2		156	280	177, 277	53, 153	7, 10
3		84	364	..	..	..
4		147	511	377, 477	13, 113	1, 7
5		158	669	577	66	10

THE METHOD

(i) Put down the continued total of Col. 4 incol. 5 headed 'Cumulative total of Col. 4.

[First entry 124 merely reproduces the first entry of Col. 4. Next 280 is the total of the first entry of Col. 5 and the 2nd entry of Col 4 and so on. Similarly, 364=84+280, 511=147+364, 669=158 +511. Thus, entry in Col. 5 is the total of corresponding entry in Col.4 and the preceding entry in Col.5.

(ii) Insert in Col. 6 headed 'Sample number falling in the charge', the sample numbers, which fall within the limit of the cumulative total figure given in Col. 5.

(First sample number 77 falls within the limit 124 of the lst C.C. Next two sample number 177, 277 fall within the limit 124–280 of the 2nd C.C. Next sample number 377 falls beyond the limit of the 3rd C.C. and hence no block is selected from this C.C. Sample numbers 377 and 477 fall within the limit 364–511 of the 4th C.C. 577 lies between 511 and 669.

It may be noted tha twhile no block is selected from C.C. 3 two are selected from C.C. 2 and 4 having 156 and 147 blocks and only one from C.C. 5 having 158 blocks.

(iii) 'Serial number of the selected block in the Charge Circle'—Col. 7 is obtained by subtracting from the figure(5)in Col. 6, the preceding figure in Col. 5.

[The first entry in Col. 7 is 77 all right. The next entry 53=177–124 and 153=277–124. Similarly 13=377–364; 113=477–364; 66=577–511.]

(iv) The selected blocks having code number in the relevant charge circle obtained in Col. 7 can be identified from the list of blocks prepared as prescribed.....

(v) For each selected block, a random start is also to be intimated for the purpose of drawing sample of houses of re-enumeration. This is given in Col. 8. It has to be drawn afresh for each block by referring to the enclosed *Random Numbers Sheet in the following manner.

Method of drawing Random start for each selected block.

(a) Take any column of the random number sheet. (Suppose Col. No. 6 is taken.)

(b) Selection of random start for the rural areas—

*Not reproduced

Here we have to select 1 house in 10.

Pick out the digit in the unit's place in each number as it occures in the column selected.

(Thus, from Col. 6 selected as above, the random starts for the successive blocks are 2,7,0*, 1,7,0*, 3, etc.) To be taken as 10, as explained in note 2 below.

(c) Selection of random start for urban areas—

Here we have to select 1 house in 20.

Divide each number in the selected column by 20 and the remainder gives the random start If the number in the column is less than 20, the figure itself gives the remainder, i.e., no division is necessary.

(Thus, the remainders after dividing the successive numbers in col. 8 (selected for the purpose) by 20, which give the random start for the successive blocks, are 19, 13, 12, 15, 17, 8, 14, 9, etc.)

Notes :

1 (i) If the numbers in the column are less than the number of random starts required, select another column of the Random Number Sheet as soon as the numbers in the initially selected column are exhausted.

(ii) In case all the columns of the Random Number Sheet have been so used and still more random starts are to be selected, use the columns again, as if they had not already been used.

(iii) The order in which columns are taken is immaterial.

2 If the random start figure comes out to be 0, it should be taken as 10 in case 1 in 10 is to be selected and as 20 in case 1 in 20 is to be selected.

3 It will be seen that the method of taking the unit's digit given in (b) above is equivalent to dividing the random number by 10 and taking the remainder as the random start.

APPENDIX I

Block Population Summary (Rural) *Consolidated*

(a) *Frequency Distribution of Households by Persons, Females, Persons aged above 10 and Never Married Females*

Number of members in the household	No. of households having the number of members in the relevant horizontal row of columns in terms of			
	Persons	Females	Persons above age 10	Never married females
1	2	3	4	5
0	..	1,153	4	9,108
1	1,537	5,973	1,843	7,518
2	2,225	6,839	7,877	5,465
3	2,873	5,730	5,497	2,710
4	3,785	3,548	4,693	1,033
5	4,056	1,747	2,795	287
6	3,862	748	1,765	88
7	2,903	280	933	30
8	2,004	113	435	3
9	1,218	63	222	3
10	678	27	84	..
Over 10	1,105	25	98	1
	26,246	26,246	26,246	26,246
Total number in all households of over 10 members each	14,195	297	1,209	12

(b) *Summary*

(i) Total persons....141,488
(ii) Total females....68,254
(iii) Total males.....73,234
(iv) Total persons above age 10 91,483
(v) Total never married females....32,946
(vi) Total ever married females.....35,308

Consolidated

Block Population Summary (Urban)

(a) *Frequency Distribution of Households by Persons, Females, Persons aged above 10 and Never Married Females*

Number of members in the household	No. of households having the number of members in the relevant horizontal row of columns in terms of			
	Persons	Females	Persons above age 10	Never married females
1	2	3	4	5
0	..	1,326	3	7,168
1	1,557	4,735	1,682	4,902
2	1,957	4,600	5,496	3,301
3	2,118	3,486	3,665	1,689
4	2,594	2,013	2,920	703
5	2,654	1,069	1,833	267
6	2,312	520	1,226	76
7	1,795	192	649	28
8	1,217	112	304	5
9	737	43	158	7
10	444	25	90	3
Over 10	769	33	128	5
	18,154	18,154	18,154	18,154
Total number in all households of over 10 members each	10,306	457	1,645	64

(b) *Summary*

(i) Total persons.....93,023
(ii) Total females.....44,244
(iii) Total males.....48,779
(iv) Total persons above age 10..62,812
(v) Total never married females..21,567
(vi) Total ever married females..22,677

APPENDIX II

Household Schedule (Rural) *Consolidated*

BLOCK SUMMARY OF SECTION 3

The following Block Summary is prepared directly from the tally sheet by assembling the figures in columns 6 and 7 against the rows indicated.

	Persons	Males	Females
Group—A			
(i) Number working (Row +2+4)	54,424	39,802	14,622
(ii) Number unemployed (Row 3)	324	197	127
(iii) Number not economically active (Row 5)	36,735	7,879	28,856
(iv) Number over age 10 (i+ii+iii)	91,483	47,878	43,605
Group—B			
(v) Number returned as 'working' straightaway (Row 1)	44,690	39,092	5,59
(vi) Additional Number returned as working on a pointed reference (Row 2)	9,591	615	8,976
(vii) Number having a job though not working within last 15 days (Row 4)	143	95	48
Group—C			
(viii) Number of casual workers (Row 6)	11,079	4,925	6,154
(ix) Number of workers other than casual who had work in the last 15 days different from their usual work. (Row 7)	484	388	96
(x) Of the workers in (viii) above, number which took to work other than the usual work, this being of seasonal nature (Row 8)	7,514	3,082	4,432
Group—D			
(xi) Number of non-casual workers who did not do any work during the last 15 days but had work of a nature different from their usual work. (Row 9)	1	1	..
(xii) Number of seasonal workers who changed to casual work but did not do any work during the last 15 days but had work of a nature different from their usual work, this being of a seasonal nature. (Row 10)	16	8	8
(xiii) Number of casual workers who had no work during the last 15 days and were looking for work (Row 11)	867	526	341

Items (x) and (xii) above are of peculiar interest as reflecting the position of seasonal workers.

APPENDIX II-*contd.*

Household Schedule (Urban) *Consolidated*

BLOCK SUMMARY OF SECTION 3

The following Block Summary is prepared directly from the tally sheet by assembling the figures in columns 6 and 7 against the rows indicated.

	Persons	Males	Females
Group—A			
(i) Number working (Row 1+2+4)	27,804	23,603	4,201
(ii) Number unemployed (Row 3)	580	382	198
(iii) Number not economically active (Row 5)	34,428	9,219	25,209
(iv) Number over age 10 (i+ii+iii)	62,812	33,204	29,608
Group—B			
(v) Number returned as 'working' straightaway (Row 1)	24,935	23,048	1,887
(vi) Additional Number returned as working on a pointed reference (Row 2)	2,753	479	2,274
(vii) Number having a job though not working within last 15 days (Row 4)	116	76	40
Group—C			
(viii) Number of casual workers (Row 6)	4,061	2,071	1,990
(ix) Number of workers other than casual who had work in the last 15 days differenent from their usual work (Row 7)	41	26	15
(x) Of the workers in (viii) above, number which took to work other than the usual work, this being of seasonal nature. (Row 8)	1,583	625	958
Group—D			
(xi) Number of non-casual workers who did not do any work during the last 15 days but had work of a nature different from their usual work (Row 9)	3	1	2
(xii) Number of seasonal workers who changed to casual work but did not do any work during the last 15 days but had work of a nature different from their usual work, this being of a seasonal nature. (Row 10)	3	1	2
(xiii) Number of casual workers who had no work during the last 15 days and were looking for work (Row 11)	150	67	83

Items (v) and (vii) above are of peculiar interest as reflecting the position of seasonal workers.

APPENDIX III

Processing, Sorting and Tabulation of Fertility Slip

PROCESSING

1 Check Religion and Education codes in Qs. 5 and 6 marking Scheduled Tribes 'T' and other religions 'O'. If there is any religion or tribe in the groups O or 'T' which is of special significance from the point of view of differential fertility and figures in sufficient numbers in the sample canvassed, it may be marked separately and treated as a distinct category in the subsequent treatment.

2 Codify present age in Q. 4 as follows.

12 and below	I
13–17	II
18–22	III
23–27	IV
28–32	V
33–37	VI
38–42	VII
43–47	VIII
48+	IX

3 Check 8(a) + 8(b)=8(c) allowing for adjustment for fractional years (See para (i) under Qs. 8–10 of "Instructions").

4 (a) For women married once, check Q. 10=(4)–(9)–8(c) allowing for adjustment for fractional years (See para (ii) under Qs. 8–10 of "Instructions").

For women married more than once, no such check is possible. It should, however, be checked that Q. 10 does not exceed (4)–(9)–8(c).

N.B.—In paras (i) and (ii) referred to in items 3 and 4 above, it is instructed that 'ages' and 'durations' are to be recorded in completed years but that in filling Q. 8(c) and Q. (10) adjustment should be made so as to get correct answers to Qs. 8(c) and Q. 10. It is this adjustment for fractional years that is referred to here.

(b)* Codify Q. 10 as follows :

Duration	0	I	(P)	Duration	10–14	IV (S)
,,	1–4	II	(Q)	,,	15–29	V (T)
,,	5–9	III	(R)	,,	30+	VI (U)

5* Codify 8(c) as follows :

12 and below	I	(A)
13–17	II	(B)
18–22	III	(C)
23–27	IV	(D)
28+	V	(E)

6 Codify Q. 11 as follows :

Nature of Work

1 Technical, professional and related workers	T
2 Administrative, executive and managerial workers	A
3 Clerical and related workers	C
4 Sales workers	S
5 (a) Farmers	FA
(b) Hunters, loggers and related workers	FH
6 Production process workers and craftsmen	P
7 Unskilled workers	W
8 The rest	O

Nature of Industry

1 (i) Agriculture, where occupation is farming	FA
(ii) Agriculture where occupation is other than farming	FO
2 Quarrying and Mining	Q
3 Manufacture	M
4 Building and Construction	B
5 Commerce	C
6 Transport, Storage and Communication	T
7 Services	S
8 Others	O

It is found that usually farming occupation and cultivation industry go together. Hence, the same code FA is provided in occupation and industry. This indentification makes separate sorting of such groups by occupation and industry unnecessary; only one sort will do.

Education

1 Formal schooling but high school or equivalent examined not passed	E
2 High school or equivalent examination	H
3 Graduated from college	G
4 Others comprising just literates and uneducated	O

7 In Q. 12, consider only such births as occurred after Divali 1960 but before Divali 1961. Such births will have 'Before' in Q. 12(ii). Those births, which have 'after' in Q. 12(ii) may be ignored for the purposes of the next step indicated here.

Put round item (ii)—

a ring— If there is a live birth



If there is still birth after 6 months of pregnancy (SA)

If there is still birth before 6 months of pregnancy (SB)

A double ring may be placed in the case of twin live births.

*4(b) and (5)—A slight departure in the code structure was followed while coding Qs. 8(i) and 10. The Roman numerals as directed to be adopted as code figures were replaced by alphabetical codes as it was feared that coders and sorters may confuse the codes if the same. Roman numeral codes are adopted against three entries in the fertility slip.

8 Check that total in the parallelogram Q. 14 is equal to the total number of children born to the woman as recorded in Qs. 12 and 13 leaving out still born.

9 Put a circle round the age of the youngest child as seen from Cols. 1 and 4 of Q. 13, treating dead children, as if they had not died and were now alive. It will be recalled that Col. 4 gives the present age of dead children, as if they had not died and were now alive.

Record this age of the youngest child just below Q. 14 on the left handside. For this purpose, any child shown to have been born in Q. 12 is to be ignored.

SORTING INSTRUCTIONS

Rural and urban data are to be tabulated separately. The slips may be sorted in Groups A, B, C and D as explained in para 4 of Section 2 'Premises of Tabulation Programme'.

I. GROUP A

1. *Table* A-I—The table shows the number of children born to women by attained age and is meant to give average number of children per woman.

Sorting Procedure

(i) Sort on Q. 4—age group code.

(ii) Sort each code on Q. 14—total number of children born, the figure in the /_____/ parallelogram.

(iii) Sort each pack of slips pertaining to a specified number of children born in a mother's age group according to the various characteristics of religion, woman's education, husband's nature of work, nature of industry and education by successively sorting on Qs. 5, 6, 11(a), 11(b) and 11(c). Each pack has further to be sorted in continuation for Table A-II as indicated below.

The count may be recorded in sorter's ticket as per performa attached using one ticket for each woman's age group. The figures can be assembled to produce separate tables as per scheme described under Table A-I in Section 3.

2. *Tables* A-II—The table shows the number of children born during the period of 12 months Divali 1960 to Divali 1961 by attained age of woman and is meant to give fertility rates by age.

Sorting Procedure

Take each pack of Table A-I slips in continuation of sorting stage (iii). Sort on Q. 12(ii) separating out those marked with ring, double ring, triangle and rectangle. See para 7 of Section 1—Processing. Record the counts in Cols. 16–19 of sorter's ticket. They give figures for Cols. 3–6 of Table A-II. Column 14 of sorter's ticket give the figures for Col. 2 of Table A-II.

3. *Table* A-III—This table is meant to show onset of sterility. Take women age group codes VII–IX, i.e., 38–42, 43–47, 48+.

Sorting Procedure

Sort each code by the age of the youngest child as recorded on the left hand side just below Q. 14. Record the count directly in the Table A-III.

4. *Table* A-IV—This table is meant for studying average number of children per woman, parity progression ratio, extent of infertility, effect of age at marriage and changes in them with duration of married life.

Sorting Procedure

(i) Sort on Q. 10, i.e., by marriage duration code.

(ii) Sort each code on Q. 8(c), i.e., by age at effective marriage code.

(iii) Sort each effective marriage age group code by number of total children born with reference to Q. 14.

(iv) Sort each pack of slips pertaining to a specified number of children born in a mother's effective marriage age group code according to the various characteristics of religion, woman's education, husband's nature of work, nature of industry and education by successively sorting on Qs. 5, 6, 11(a), 11(b) and 11(c).

The count may be recorded in Cols. 2–15 of Sorters Tickets, which is of the same form as for Table A-I only that Cols. 16–19 are excluded, as they are not relevant here. There is to be one ticket for each effective marriage age group within each marriage duration group. Thus the Sorter's Ticket should indicate the appropriate marriage duration/effective marriage age group to which it relates.

The figures can be assembled from the Sorter's Tickets to produce the separate Table A-IV as required.

5. *Table* A-V—The table is meant for studying average age at effective marriage. It is to be prepared separately for marriage durations 0, 1–4 and 10–14 to trace shifts.

The slips are in batches, which can be readily put in effective marriage age groups. Of these, the number of women in age groups 12 and below and 28+ required for Table A-V in respect of marriage durations 1–4 and 10–14 can directly be obtained from Table A–IV. Only age groups 13–17, 18–22, 23–27 need sorting by individual ages. Each individual age is to be sorted on Qs. 5 and 6 for the characteristics of religion and woman's education to get the figures for the separate tables.

II. GROUP B

The sorting procedure is already illustrated in the case of the corresponding tables in A group. However, the following point in regard to Table B–II may be noted. For this Table women aged 48 and over only are to be considered. They are already separated out in the compilation of Table B–I. On the slips of this group, record on the left side of Q. 9 the age when marriage broke up. This is obtained by subtracting the number of years when marriage was broken as given in Q. 9 from the present age given in Q. 4. Slips, having 45 or over as the age when marriage broke up, are to be taken for preparing Table B–II. These women represent the group, which had completed fertility and was in a married state throughout the reproductive period.

III. GROUP C

1. No further explanations are necessary for Table C–I.

2. Table C–II is meant to indicate the extent of remarriage and births during 12 months. As the practice of remarriage may vary with religions and tribes, separate tables are desired to be prepared.

Sorting Procedure

Initially, sort by religion and tribal group. Take each religion and tribal group separately.

(i) Sort on Q. 4, i.e., age group code.

(ii) Sort each age group code on Q. B under 'Remarriages' block according to number of times remarried. Record the count.

(iii) Sort each age group code on Q. 12(ii) according to single ring, double ring, triangle and rectangle. Record the count.

(iv) Sort each Q. 12(ii) pack of live birth single, live birth multiple, still birth SA and still birth SB on Q. 6 to get the number of those births which relate to graduate women. A similar sorting on Q. 6 of slips, which did not have a birth in the twelve months' period, will give the total number of graduate women by age who did not have a child during the 12 months' period.

The figure when added to the number of graduate women who had a birth in the 12 months' period gives the total number of graduate women by age group code required in column 6.

IV. GROUP D

No further explanations are necessary for these tables.

Sorter's Ticket (Table A I)

Woman's Age Group....

	Code	Number of women having children												Total children born to women having more than 10 children each	Live births single	Live births multiple	Still births SA	Still births SB
		0	1	2	3	4	5	6	7	8	9	10	Over 10	Total columns 2 to 13				
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
I	By Religion & Tribe	H																
		M																
		C																
		-																
		-																
		-																
		-																
		0																
		Total																
II	Woman's Education	E																
		H																
		G																
III	Nature of work	T																
		A																
		C																
		S																
		FA																
		FH																
		P																
		W																
IV	Nature of Industry	FO																
		Q																
		M																
		B																
		C																
		T																
		S																
V	Husband's Education	E																
		H																
		G																

STANDARD TABULATION PLAN

Premises of the Tabulation Scheme

1. Current Fertility may be studied with reference to births during last 12 months, while life-time fertility is obtained by considering the number of children born to woman of completed fertility or specified duration of married life. The latter does not reflect well recent changes in fertility and is determined mainly by past fertility. In a community where fertility has not changed much, life-time fertility is useful for studying differential pattern of the various groups.

Current fertility may be measured by crude birth rate or age specific fertility rates. Life-time fertility may be shown by average number of children per woman. The extent to which age at marriage, duration of married life and other socio-economic factors like religion, education, occupation and industry affect fertility are of interest. Fertility pattern is reflected by parity progression, ratio, spacing, onset of sterility and extent of childlessness. The tabulation scheme should aim at preparing tables useful for studying these aspects.

2 The two most important factors which control a woman's reproductive behaviour is attained age and duration of married life, and hence arises the difficulty in interpreting the results based on average number of children born to women married more than once with clear intervals between successive marriages and to widowed or divorced women even though married only once. It is, therefore, considered that fertility slips should be divided into four groups :

A—Women married only once and still in married state

B—Women married only once but now widowed or divorced

C—Women married more than once but in married state now

D—Women married more than once but now widowed or divorced

Detailed tabulations for analysis of the type discussed in para 1 may be made in respect of Group A. The desirability of doing so for Groups B, C and D is restricted by the difficulty of drawing valid inferences from the data and the need to consider each case in the light of its individual circumstances. Detailed tabulations do not appear to be worthwhile. The treatment of these groups may, therefore, be confined to a study of their relative magnitude and the average number of children born by attained age, since their average affects the overall average in the population. Data for homogenous groups is useful for studying the intrinsic level but an overall average also has a value, since it is this which is actually realised in practice. The fertility experience of the population is determined not only by the physiological level but also by such attendant circumstances as widowhood and re-marriages. However, if any of the groups B, C, D, happens to be small, it is not worthwhile going in for their tabulation at all.

Spacing is of great interest in fertility studies but it is difficult to prepare the relevant tables by handsorting. It requires tabulation of ages of women of different parity at each of the successive births. Then again if it is desired to study spacing by age at marriage and duration of married life and the various socio-economic characteristics, the problem becomes rather unmanageable. It is, therefore, suggested that after the main tabulations by the Superintendents of Census Operations are over, a 10% sample of group A may be taken on punched cards to study spacing.

Thus, the suggestion is that fertility slips may first be sorted into R and non-R slips by referring to entries in the remarriage block on the right hand side of the Fertility Slip. Each may then be sorted into married or widowed and divorced groups by referring to Q. 7. This will give four groups—A, B, C and D. Their tabulation according to the standard programme may be proceeded with. Simultaneously, the number of women in each group may be intimated to Registrar General's Office, so that if any further tabulation is deemed to be desirable, it may be suggested in time.

Most of the tables that are to be prepared give frequency distribution showing the number of women having specified number of children, the women being classified according to certain criterion, e.g., age at marriage, attained age, socio-economic characteristics such as education, religion, etc. The proforma of such tables is basically the

same as given in Annexure 1 of the instructions sent with circular of even number dated 15-12-1961[1]. A specimen of the Frequency Distribution (F.D.) Table is attached herewith. The headings of columns, which have to be inserted for each specific tabulation, are left blank. It is suggested that an adequate number of F.D. Table proforma may be got printed.

In this connection, particular attention may be invited to the explanations in paras 2 and 3 on page 4 of the instructions sent with circular of even number dated 15-12-1961[1]. The total number of children born to all women having 0, 1, 2, 3, ...10 and over 10 children can be obtained in a similar manner from the F.D. Table.

6. There is a considerable interest in knowing the average age at marriage in the different sections of population as also whether there is any shift in recent years. The data collected can be used to study these problems. For tracing shifts it should suffice if marriages of the last five years are studied with those that occurred in the period 10-15 years ago. For operational convenience, this kind of tabulation may be confined to Group A—still married women. Study of the other Groups B, C and D will entail heavier work without material improvement in the results. The exclusion of Groups B, C and D may give a feeling of bias, since only still married group is being studied but this does not seem to be relevant in so far as study of age at marriage is concerned. With the help of Q.8(b) it is also possible to bring out the relative significance of the factor of interval between wedding and the time the wife comes to live with her husband in studies on fertility but this may be left over to be covered in 10 % sample study.

To reduce tabulation load births have not been considered by sex in the tabulation scheme. It was useful to record this information for ensuring completeness of data. Similarly, duration in years of current marriage in case of remarried women is not being utilised in tabulation.

1. Not reproduced.

TABLES

NOTE : The following Tables have common proformas

(i) Tables A–I, B–I, C–I and D–I

(ii) Tables A–IV and B–II

TABLE A–I, B–I, C–I, D–I

Rural
Urban

Frequency Distribution Of Women By Age And The Number Of Children Born To Them

Total children born	No. of women									
	I (12 and below)	II (13–17)	III (18–22)	IV (23–27)	V (28–32)	VI (33–37)	VII (38–42)	VIII (43–47)	IX (48+)	Total
1	2	3	4	5	6	7	8	9	10	11
0										
1										
2										
3										
4										
5										
6										
7										
8										
9										
10										
Over 10										
Total										

Total children born to women having more than 10 children each

Total children born

TABLE A—II

Age group	No. of women	Twelve months			
		Live births		Still births SA	Still births SB
		Single	Multiple		
1	2	3	4	5	6
12 and below					
13–17					
18–22					
23–27					
28–32					
33–37					
38–42					
43–47					
48+					

TABLE A-III

Age of youngest child	Number of women having attained age		
	38–42	43–47	48+
1	2	3	4
2 and below			
3			
4			
5			
6			
7			
8			
9			
10			
11			
12			
13			
14			
15			
16			
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28+			

TABLE-A-IV, B-II

Frequency Distribution of Women by Marriage Duration Group/Effective Marriage Group/Characteristics and the Number of Children Born to Them

Total children born	No. of Women				
	AB 17 and below	C 18–22	D 23–27	E 28 Plus	Total
1	2	3	4	5	6
0					
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
Over 10					
Total					
Total children born to women having more than 10 children each					
Total children born					
Average No. of children born per woman					

TABLE A-V

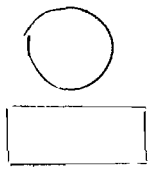
Age at effective marriage 1	No. of women 2
12 and below	
13	
14	
15	
16	
17	
18	
19	
20	
21	
22	
23	
24	
25	
26	
27	
28+	

TABLE C-II

	No. of women married					Twelve months			
Age group	Once	Twice	Thrice	Four times or more	Total	Live births single	Live births multiple	Still births S A	Still births S B
1	2	3	4	5	6	7	8	9	10
12 and below									
13–17									
18–22									
23–27									
28–32									
33–37									
38–42									
43–47									
48+									

TABLE D-II

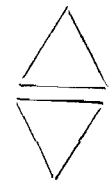
	No. of women married				
Age group	Once	Twice	Thrice	Four times or more	Total
1	2	3	4	5	6
12 and below					
13–17					
18–22					
23–27					
28–32					
33–37					
38–42					
43–47					
48+					



APPENDIX IV

POST CENSUS SURVEY

HOUSEHOLD SCHEDULE



Census Location Code _____ S. No. _____

SECTION 1.

1 (a) [*Persons (including visitors) in the household on the date of investigator's visit*]

Name	Rel. to Head	Sex	Age	M.S.	Name	Rel. to Head	Sex	Age	M.S.
1					7				
2					8				
3					9				
4					10				
5					11				
6					12				

SECTION 2.

(a) Is remarriage after widowhood or divorce permissible in your family ? (*Yes/No*) _____

(b) If 'Yes' is the answer, is there any woman in the family who has been married more than once, give reference to S. No. in Section 1 (a) _____

SECTION 3. Fill for all males and females above age 10 en merated in the household.

Activity during the last 15 days	S No in 1 (a)									
1 (a) What was the person doing most of last 15 days ? Wkg/H/O/UW,										
(b) If answer is H/O/UW, did the person do any work at all for pay or wages or in own business or profession or farm or as unpaid family worker on any day or days during the last 15 days ? (*Yes/No*)										
(c) If 'No' is the answer to (b), was the person looking for work (*Yes/No*)										
(d) If 'No' is the answer to (c), does the person have an occupation or business or profession, even though he or she did not work during last 15 days. (*Yes/No*)										
2 (a) Is the person a casual worker, that is, working whenever he or she gets some work ? (*Yes/No*)										
(b) If 'No' is the answer to 2 (a), whether his or her usual work is different from present work. (*Yes/No*)										
(c) If 'Yes' is the answer to 2 (a), whether his or her usual work is of seasonal nature. (*Yes/No*)										

APPENDIX V

POST CENSUS SURVEY

FERTILITY SLIP

(For ever married woman)

1. Sr. No. of the Household Schedule to which woman belongs .....

   Sr. No. in Sec. I(a) of Household Schedule .....

2. Location Code .....

3. Name .....

4. Present Age (Completed years) .....

5. Religion .....

6. Education .....

8. (a) Age at wedding (Age at first wedding, if remarried) .....

   (b) Interval between wedding and the time she came to live with her husband .....

   (c) Her age when she began to live with her hasband:[Total of (a) & (b)].

REMARRIAGES

A. If married after widowhood or divorce write R.

B. How many times remarried ?

C. Duration in years of current marriage

7. Marital Status ..... (M/W/S)

9. If W/S, number of years when marriage was broken by death or divorce.....

10. Duration of total married life : [(4)–(9)–8 (c)].

11. HUSBAND'S PARTICULARS :

	Code
(a) Nature of Work.....	.....
(b) Nature of Industry in which working.....	.....
(c) Education.....	.....

12. (i) Births after Divali 1960:

(a) Sex.....

(b) Type of birth.....
(L/SA/SB)

(ii) Did this birth occur *before* or *after* Divali 1961? *(Before/After)*.....

13. All children born alive to this woman *before* Divali 1960 :

	Present age of still alive (1)		Age at death of those now dead (2)		No. of years passed since death (3)	Total of Cols. (2) and (3) (4)
	M	F	M	F		
1st						
2nd						
3rd						
4th						
5th						
6th						
7th						
8th						
9th						
10th						
No. of entries					Total children	M F

14. Total No. of children born alive including that given in Q. 12 but excluding still births :

.....Male,.....Female. Total

APPENDIX VI

INSTRUCTIONS

Household Schedule and Fertility Slip

A—HOUSEHOLD SCHEDULE

1 (i) In Section 1 all persons of the household present in the village or town at the time of investigator's visit should be entered. The requirements are more or less the same as in filling Census individual slip.

(ii) It may be suggested to the respondent to give the name of residents in the sequence of their natural relationships, e.g., head, wife, sons, sons' wives and children, unmarried daughters and then any others. A wide variety of related and unrelated persons come under others', e.g., parents, married daughters and their husbands and children, nephews, nieces, grandsons, grand-daughters.

(iii) Consideration of the entries of relation to head, age and marital status will indicate whether any person has been missed in the list. This should be checked up in order to catch omissions of residents.

2 Section 2 aims at finding out if there is any woman who married more than once. A direct question on the point may be resented by many families and hence a general question (a) is asked. Only if the answer is in affirmative, should question (b) be asked, otherwise not. If there is any woman who married more than once, it is desirable to complete forthwith her particulars in respect of remarriages at the top right hand corner of this woman's fertility slip. This question of remarriages should not be broached lightly or more often than is necessary.

3 (i) Section 3 is to be filled only in respect of persons above age 10 to find out the number of working persons in the household. The following gives the definition of 'working' for the purpose of this survey:

> A person is 'working' if his activity brings him or to his family earnings in cash or kind. Such earnings should arise from repairs done or services rendered or sale of own or somebody else's produce including manufactured goods. The earnings arising from interest, dividend, pension, rent, royalty and begging are not relevant in this connection.

The object is to see how this definition works operationally. In 1961 Census, the concept of work was made clear through a number of illustrative examples. The two basic concepts in the definition adopted for this survey should be particularly explained to the field investigators. The first is that in return for the activity some earning in cash or *kind* should accrue to him or *to his family*. This does not involve any question of dependency. The other is that the earning should accrue from the type of economic activities specified in the definition. In the case of seasonal work like cultivation, livestock, dairying, household industry, etc., a person should have had some regular work of more than an hour a day throughout most of the reference period of 15 days to be considered as 'working'. This should be particulary borne in mind in the case of a family worker.

(ii) The answer to Q. 1(a) may be recorded as

Wkg—Working
H—Keeping house
O—Doing other work
UW—Unable to work

(iii) A person's usual work is what he considers it to be.

(iv) Seasonal work is one which can be carried on only during certain periods of seasons of the year and not throughout the year.

B—FERTILITY SLIP

It is to be filled for every woman, who was ever married.

Question 5—

For	Hindu	write H
	Muslim	write M
	Christian	write C
	Jain	write J
	Buddhist	write B
	Sikh	write S

For others write the answer actually returned.

Question 6—Education may be filled according to the highest standards reached as follows:

Formal schooling but high or equivalent examination not passed . .	E
Passed high school or equivalent examination . . .	H
Graduated from college . .	G
Others comprising just literate and uneducated . . .	C

Questions 8–10 are on marriage particulars, designed to elicit a woman's age, when she came to live with her husband and the duration of married life. Care should be taken to collect them correctly and tactfully without causing any annoyance to the informant. Collection of these particulars will present some difficulty in the case of women married more than once. Such women must have already been marked on the top right hand corner of the slip. In their case, special instruction given in (iii) below should be carefully followed.

(i) In some communities, there is a separate formal ceremony or occurrence such as *gauna*, *muklawa* or *dwiragaman*, which takes place quite some time after the wedding celebrations. This is a custom which continues from the time when girls used to be married before attainment of puberty but used to start married life with the husband some time after the attainment of puberty. This second ceremony, therefore, marks the time when the girl comes to live with her husband, and her age at this time is sought in Q. 8(c) through two subsidiary Qs. 8(a) and 8(b). Information on Q. 8(b) should be obtained tactfully in two stages; first by a preliminary sorting question as to whether she came to her husband's home to live with him immediately after her wedding. If answer is yes, 0 may be entered in 8(b) and age entered in 8(a) may be repeated in 8(c). If 'No' is the answer, the interval should be asked and entered in 8(b). Before entering the total of 8(a) and 8(b) in 8(c) it should be checked up with an apparently superfluous third question whether this total represents her age when she came to live with the husband.

(ii) The difference between the present age of a woman and her age in 8(c) gives the duration of total married life, only where the woman has been married once and still continues in the married state. However, even in this case the duration so obtained should be varified by a direct question on duration before recording in Q. 10. That is to say, if the informant gives the duration of married life to be the same as calculated above, the figure should be recorded in Q. 10. If it differs, her present age as recorded in Q. 4, her age when she began to live with her husband as recorded in Q. 8(c) and the duration as now returned in Q. 10 should be severally checked again with the informant in order to find out which one of these three items should be revised so that Q. 4 and Q. 10 can tally with each other. The necessary revisions in the recorded entries should be made.

(b) Where a woman was married only once and is now widowed, separated or divorced, the period that elapsed after she was widowed or divorced should be ascertained as required in Q. 9. Entry in Q. 10 then is given by subtracting the total of entries in Q. 9 and Q. 8(c) from that in Q. 4.

(iii) Where a woman has been married more than once, duration of total married life is the total of several periods lived in the married state during each marriage. This can be conveniently obtained by first enquiring about the period of break between the earlier marriage and the remarriage, and adding up the periods of breaks. This total of breaks in married life should be subtracted from the difference between the entries in Qs. 4 and 8(c) to get the duration of total married life. The intervals have to be ascertained tactfully and carefully.

Question 11—(i) In Q. 11(a) on nature of work the *kind of work* done by the person himself should be recorded. If the person is not working at all, 'not working' should be written.

(ii) In Q. 11(b) on nature of industry the activities of the employer or the establishment where the person works should be fully recorded. The activity may relate to a production industry, business, trade, profession or service. The description should give the chief articles or goods produced or repaired or services rendered by the employer or the establishment.

Question 12—If a child is born alive, it is a live birth, even though it may die soon after. However, if the child is born dead, i.e., it does not show any sign of life after birth, it is a still birth. In

such cases, it should be ascertained whether the still birth occurred before or after the completion of six months of pregnancy. Thereafter the type of birth in Q. 12(i)(b) should be entered according to the following Code :

Live birth . .	L
Still birth after six months of pregnancy . .	SA
Still birth before six months of pregnancy . .	SB

Question 12—Children born are to be recorded in two Sections. Those born after Divali of 1960 are to be entered in Qs. 12(i) and (ii). All children born before Divali of 1960 will be entered in Q. 13. In States, where Divali is not readily recalled any other important festivals, which occurred near about this time, may be taken. The object in Q. 12 is to find out if there was any birth during a period of 12 months but most persons find it difficult to fix a span of 12 months and hence are unable to give correct information. Keeping this in view Q. 12 has been divided into two parts. Part (i) enquires about all births that took place after the preceding Divali in 1960, which the informant can well fix in his mind. Part (ii) requires the informant to fix his attention to the Divali of 1961 (which will be just over) and say if the birth occurred before or after this date. By considering answers to parts (i) and (ii), it would be possible to locate births that occurred between the two Divalis of 1960 and 1961.

Question 13—In this question information is to be collected only about children born alive, leaving out still births. The informant has to closely recollect the past and needs assistance. He may first be asked to concentrate on those still alive. He can then easily fill in those who are no longer alive.

If no child is reported to have been born it should be asked specifically if there was none born, who may have died.

Col. 4 of Q. 13 really works out the present ages of dead children if they had not died and were now alive. A quick glance of the entries against Col. 1 and Col. 4 will show the internal consistency of the information. Births generally occur with a time gap of 2 to 3 years. Only in a few cases will the gap be shorter, in which case confirmation of the fact should be obtained. Where there is a wider gap, it should be made sure that there is no omission. It will be a good thing if the entries against Col. 1 and Col. 4 are reviewed with the help of the respondent asking for confirmation of the time interval between successive births, which, ordinarily, should be easy.

Total number of children recorded in Q. 13 have to be shown in the margin as provided there.

Question 14—In Q. 14 the number of all the children born *alive* including any shown in Q. 12 but *excluding* any still birth is to be recorded.

TABLES

TABLE 1—Percentage Distribution of Women by Marital Status and Attained Age

Attained age	All groups A, B, C, D				Group A: Women married only once and still in married state				Group B: Women married only once but now widowed or divorced			
	No. of women		Percentage to total		No. of women		Percentage to total		No. of women		Percentage to total	
	R	U	R	U	R	U	R	U	R	U	R	U
1	2	3	4	5	6	7	8	9	10	11	12	13
All ages	**35,308**	**22,677**	**100.00**	**100.00**	**29,167**	**18,178**	**100.00**	**100.00**	**5,194**	**4,153**	**100.00**	**100.00**
12 and below	86	6	0.24	0.02	86	6	0.29	0.03	..	..	..	..
13–17 . .	987	315	2.80	1.39	979	312	3.36	1.72	8	3	0.15	0.07
18–22 . .	5,420	3,147	15.35	13.88	5,323	3,083	18.25	16.96	48	42	0.93	1.01
23–27 . .	5,167	3,572	14.63	15.75	4,966	3,460	17.02	19.03	92	69	1.77	1.66
28–32 . .	5,808	3,886	16.45	17.14	5,462	3,635	18.73	20.00	188	173	3.62	4.17
33–37 . .	3,365	2,462	9.53	10.86	2,986	2,205	10.24	12.13	241	204	4.64	4.91
38–42 . .	4,273	2,605	12.10	11.49	3,541	2,173	12.14	11.95	544	386	10.47	9.30
43–47 . .	2,643	1,679	7.49	7.40	2,053	1,240	7.04	6.82	494	402	9.51	9.68
48+ . .	7,559	5,005	21.41	22.07	3,771	2,064	12.93	11.36	3,579	2,874	68.91	69.20

Attained age	Group C: Women married more than once but in married state now				Group D: Women married more than once but now widowed or divorced			
	No. of women		Percentage to total		No of women		Percentage to total	
	R	U	R	U	R	U	R	
1	14	15	16	17	18	19	20	21
All ages	**860**	**321**	**100.00**	**100.00**	**87**	**25**	**100.00**	**100.00**
12 and below	..	..	..	..	..	..	..	..
13–17 . .	..	..	..	..	..	..	..	..
18–22 . .	48	22	5.58	6.85	1	..	1.15	..
23–27 . .	108	43	12.56	13.39	1	..	1.15	..
28–32 . .	155	76	18.02	23.68	3	2	3.45	8.00
33–37 . .	134	51	15.58	15.89	4	2	4.60	8.00
38–42 . .	180	44	20.93	13.71	8	2	9.20	8.00
43–47 . .	87	32	10.12	9.97	9	5	10.34	20.00
48+ . .	148	53	17.21	16.51	61	14	70.11	56.00

TABLE 2—Child-Woman Ratio, 1961 Census

(Ever married women)

Total/ Rural/ Urban	No. of ever married women (15–44)	No. of children (age 0–4)	No. of children (age 0–5)	Child-woman ratio (age 0–4)	Child-woman ratio (age 0–5)	No. of ever married women (15–49)	No. of children (age 0–4)	No. of children (age 0–5)	Child-woman ratio (age 0–4)	Child-woman ratio (age 0–5)
1	2	3	4	5	6	7	8	9	10	11
Total	3,867,076	3,271,130	4,006,382	845.9	1,036.0	4,259,642	3,271,130	4,006,382	767.9	940.5
Rural	2,899,832	2,502,556	3,058,781	863.0	1,054.8	3,202,356	2,502,556	3,058,781	781.5	955.2
Urban	967,244	768,574	947,601	794.6	979.7	1,057,286	768,574	947,601	727.0	896.3

Source :

Census of India, 1961,Volume V, Gujarat, Part II–C, Tables C–II, C-III–A, B and C, C–IV

TABLE 3—Frequency of Marriage by Attained Age (All Women)

Attained age	Rural					Urban				
	Once	Twice	Thrice	4 times or more	Total	Once	Twice	Thrice	4 times or more	Total
1	2	3	4	5	6	7	8	9	10	11
All ages*	**34,275 (97.3)**	**911 (2.6)**	**29 (0.1)**	**7 (0.0)**	**35,222 (100.00)**	**22,325 (98.5)**	**327 (1.4)**	**16 (0.1)**	**3 (0.0)**	**22,671 (100.00)**
13–17	987 (100.00)	.. (..)	.. (..)	.. (..)	987 (100.00)	315 (100.00)	.. (..)	.. (..)	.. (..)	315 (100.00)
18–22	5,371 (99.1)	49 (0.9)	.. (..)	.. (..)	5,420 (100.00)	3,125 (99.3)	21 (0.7)	1 (0.0)	.. (..)	3,147 (100.00)
23–27	5,058 (97.9)	106 (2.1)	2 (0.0)	1 (0.0)	5,167 (100.00)	3,529 (98.8)	41 (1.2)	1 (0.0)	1 (0.0)	3,572 (100.00)
28–32	5,650 (97.3)	153 (2.6)	5 (0.1)	.. (..)	5,808 (100.00)	3,808 (98.0)	73 (1.9)	5 (0.1)	.. (..)	3,886 (100.00)
33–37	3,227 (95.9)	135 (4.0)	3 (0.1)	.. (..)	3,365 (100.00)	2,409 (97.8)	51 (2.1)	2 (0.1)	.. (..)	2,462 (100.00)
38–42	4,085 (95.6)	178 (4.2)	9 (0.2)	1 (0.0)	4,273 (100.00)	2,559 (98.3)	45 (1.7)	1 (0.0)	.. (..)	2,605 (100.00)
43–47	2,547 (96.4)	91 (3.4)	5 (0.2)	.. (..)	2,643 (100.00)	1,642 (97.8)	35 (2.1)	2 (0.1)	.. (..)	1,679 (100.00)
48+	7,350 (97.2)	199 (2.6)	5 (0.1)	5 (0.1)	7,559 (100.00)	4,938 (98.7)	61 (1.2)	4 (0.1)	2 (0.0)	5,005 (100.00)

* Excludes women aged 12 and below

NOTE :

Percentage of women by the number of times married are given in bracket below the actual numbers.

TABLE 4—Average Number of Children by Attained Age for Different Classes of Married Women

Attained age	All groups (A+B+C+D)				Group A			
	No. of women		Average No. of children born		No. of women		Average No. of children born	
	R	U	R	U	R	U	R	U
1	2	3	4	5	6	7	8	9
All ages	**35,222**	**22,671**	**3.4**	**3.4**	**29,081**	**18,172**	**3.4**	**3.4**
13–17	987	315	0.1	0.1	979	312	0.1	0.1
18–22	5,420	3,147	0.9	0.9	5,323	3,083	0.9	0.9
23–27	5,167	3,572	2.3	2.2	4,966	3,460	2.3	2.3
28–32	5,808	3,886	3.5	3.5	5,462	3,635	3.6	3.6
33–37	3,365	2,462	4.5	4.4	2,986	2,205	4.7	4.6
38–42	4,273	2,605	4.8	4.7	3,541	2,173	5.1	5.1
43–47	2,643	1,679	4.8	4.7	2,053	1,240	5.2	5.1
48+	7,559	5,005	4.4	4.2	3,771	2,064	5.0	5.1

Attained age	Group B				Group C				Group D			
	No. of women		Average No. of children born		No. of women		Average No. of children born		No. of women		Average No. of children born	
	R	U	R	U	R	U	R	U	R	U	R	U
1	10	11	12	13	14	15	16	17	18	19	20	21
All ages	**5,194**	**4,153**	**3.5**	**3.3**	**860**	**321**	**3.1**	**3.3**	**87**	**25**	**3.5**	**2.8**
13–17	8	3	..	..	..	..	..	..	..	..	..	..
18–22	48	42	0.5	0.4	48	22	0.9	0.6	1	..	..	..
23–27	92	69	1.3	1.1	108	43	1.7	1.7	1	..	..	..
28–32	188	173	2.0	1.7	155	76	2.5	3.1	3	2	3.7	..
33–37	241	204	2.5	2.7	134	51	3.5	3.8	4	2	4.3	2.5
38–42	544	386	3.0	2.8	180	44	3.6	4.2	8	2	2.6	1.5
43–47	494	402	3.4	3.4	87	32	3.8	5.1	9	5	1.9	1.2
48+	3,579	2,874	3.8	3.6	148	53	4.1	3.5	61	14	4.0	3.9

A=Women married only once and still in married state
B=Women married only once but now widowed or divorced
C=Women married more than once but in married state now
D=Women married more than once but now widowed or divorced

NOTE:

Under all the four groups, women under the attained age group 12 and below are excluded.

TABLE 5—Average Age at Marriage

		Rural	Urban
(a)	Marriage duration 0–4 years—current level		
	1 Percentage of women marrying at age 12 and below	5.0	2.3
	2 Median age at marriage	18.0	18.4
	3 Inter-quartile range	1.5	1.5
	4 Average age at marriage	17.8	18.5
(b)	Average age at marriage in marriage duration 10–14 years	17.3	17.1

TABLE 6—Percentage Distribution of Women by Marriage Duration for Each Age at Marriage

Duration of marriage (in years)	Number of women		Rural				Urban			
			Age at marriage				Age at marriage			
	Rural	Urban	Below 18	18–22	23+	All ages	Below 18	18–22	23+	All ages
1	2	3	4	5	6	7	8	9	10	11
All Durations	**29,167**	**18,178**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**
0 . .	859	321	3.2	2.7	2.2	3.0	1.3	2.6	2.8	1.8
1– 4 . .	4,532	2,670	12.9	19.5	14.7	15.5	9.5	22.4	34.8	14.7
5– 9 . .	5,146	3,155	17.2	18.3	15.4	17.6	15.7	19.9	21.2	17.4
10–14 . .	4,858	3,222	17.3	16.0	11.9	16.7	18.6	16.6	10.6	17.7
15–29 . .	9,569	6,295	34.5	30.2	35.8	32.8	38.6	28.5	22.0	34.6
30+ . .	4,203	2,515	14.9	13.3	20.0	14.4	16.3	10.0	8.6	13.8

TABLE 7—Average Number of Children Born by Marriage Duration Groups

Duration of marriage (in years)	Rural					Urban				
	No. of women	Percentage to total	Total children	Percentage to total	Average No. of children born	No. of women	Percentage to total	Total children	Percentage to total	Average No. of children born
1	2	3	4	5	6	7	8	9	10	11
All Durations*	**28,308**	**100.00**	**97,684**	**100.00**	**3.45**	**17,857**	**100.00**	**62,092**	**100.00**	3.48
1–4	4,532	16.01	2,470	2.53	0.54	2,670	14.95	1,655	2.56	0.62
5–9	5,146	18.18	10,508	10.76	2.04	3,155	17.67	6,390	10.29	2.03
10–14	4,858	17.16	16,605	17.00	3.41	3,222	18.04	10,833	17.45	3.36
15–29	9,569	33.80	46,862	47.97	4.89	6,295	35.25	30,077	48.44	4.78
30+	4,203	14.85	21,239	21.74	5.05	2,515	14.09	13,137	21.16	5.22

*Excludes women with duration of marriage '0' year

TABLE 8—Average Number of Children by Age at Marriage and Duration of Marriage

Duration of marriage (in years)	Age at marriage							
	Below 18		18—22		23+		All ages at marriage	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	2	3	4	5	6	7	8	9
All Durations* . .	**3.6**	**3.9**	**3.2**	**2.9**	**3.2**	**2.0**	**3.5**	**3.5**
1–4 . .	0.5	0.6	0.6	0.6	0.5	0.6	0.5	0.6
5–9 . .	2.1	2.1	1.9	1.9	1.7	1.3	2.0	2.0
10–14 . .	3.5	3.5	3.3	3.2	3.0	2.6†	3.4	3.4
15–29 . .	4.9	4.9	4.9	4.4	4.3	3.6	4.9	4.8
30+ . .	5.1	5.4	4.9	4.9	4.7	4.4†	5.1	5.2

*Excludes women with duration of marriage '0' year
†Based on less than 50 women

TABLE 9—Effect of Age at Marriage on the Growth of Family Size as shown by the Percentage Ratio of Average Children Born per Woman to the Average for the Preceding Duration Group

Duration of marriage (in years)	Age at marriage					
	Below 18		18—22		23+	
	Rural	Urban	Rural	Urban	Rural	Urban
1	2	3	4	5	6	7
5– 9 . .	420	350	380	317	340	217
10–14 . .	167	167	174	168	176	200*
15–29 . .	140	140	148	138	143	138
30+ . .	104	110	100	111	109	122*

*Based on less than 50 women

TABLE 10—Live and Multiple Births by Attained Ages Current Level

Attained age	Live births				Multiple births (twins)			
	Rural	Percentage to total	Urban	Percentage to total	Rural	Percentage to total	Urban	Percentage to total
1	2	3	4	5	6	7	8	9
All ages (above 12)	**4,570**	**100.00**	**3,190**	**100.00**	**28**	**100.00**	**26**	**100.00**
13–17 . .	42	0.92	24	0.75	..	..	..	..
18–22 . .	1,100	24.07	771	24.17	2	7.14	2	7.69
23–27 . .	1,211	26.50	953	29.87	4	14.29	6	23.08
28–32 . .	1,185	25.93	843	26.43	8	28.57	12	46.15
33–37 . .	514	11.25	348	10.91	12	42.86	6	23.08
38–42 . .	396	8.66	200	6.27	..	..	..	..
43–47 . .	83	1.82	40	1.25	..	..	..	..
48+ . .	39	0.85	11	0.35	2	7.14	..	..

TABLE 11—Percentage of Families of Different Sizes for Mothers of Completed Fertility

Age at marriage	Rural/ Urban	Percentage of families having number of children											Total
		0	1	2	3	4	5	6	7	8	9	10 & over	
1	2	3	4	5	6	7	8	9	10	11	12	13	14
Below 18	Rural	3.8	4.6	6.6	9.2	14.2	17.1	15.3	12.5	8.3	4.6	3.8	100.00
	Urban	3.2	5.3	7.2	9.0	13.5	13.3	14.3	13.1	9.0	5.8	6.3	100.00
18–22	Rural	5.5	6.1	6.0	10.1	12.3	17.3	14.6	13.2	8.4	3.9	2.6	100.00
	Urban	6.6	6.1	4.9	9.7	14.8	16.8	12.8	11.7	9.6	4.0	3.0	100.00
23+	Rural	5.0	6.8	8.4	13.9	16.4	18.9	13.3	9.3	4.3	1.5	2.2	100.00
	Urban	11.8	8.2	11.8	16.4	16.4	11.8	11.8	5.5	0.9	1.8	3.6	100.00

TABLE 12—Children Born by Birth Order to Women of Completed Fertility (Ages 43+)

Birth order	Rural				Urban			
	No. of women	Percentage to total	No. of children born	Percentage to total	No. of women	Percentage to total	No. of children born	Percentage to total
1	2	3	4	5	6	7	8	9
Total	**5,186**	**100.00**	**26,545**	**100.00**	**3,304**	**100.00**	**16,914**	**100.00**
0	216	4.2	..	..	169	5.11	..	..
1	241	4.8	241	0.91	182	5.50	182	1.08
2	345	6.7	690	2.60	230	7.0	460	2.72
3	485	9.5	1,455	5.48	307	9.3	921	5.45
4	706	13.7	2,824	10.64	448	13.5	1,792	10.59
5	871	16.7	4,355	16.41	469	14.2	2,345	13.86
6	788	15.2	4,728	17.82	475	14.4	2,850	16.85
7	678	12.9	4,746	17.86	397	12.0	2,779	16.43
8	452	8.5	3,616	13.62	294	8.9	2,352	13.91
9	239	4.6	2,151	8.11	169	5.1	1,521	8.99
10+	165	3.2	1,739	6.55	164	5.0	1,712	10.12

TABLE 13—Average Number of Children Contributed by Each Birth Order to the Average Size of a Family of Completed Fertility

Age at marriage	Rural/ Urban	Order of birth 1	2	3	4	5	6	7	8	9	10 & over	Average family size
1	2	3	4	5	6	7	8	9	10	11	12	13
Below 18	Rural	.96	.92	.85	.76	.62	.44	.29	.17	.08	.04	5.13
	Urban	.97	.92	.85	.76	.62	.49	.34	.21	.12	.07	5.35
18–22	Rural	.95	.88	.82	.72	.60	.43	.28	.15	.07	.03	4.93
	Urban	.93	.87	.82	.73	.58	.41	.28	.17	.07	.03	4.89
23+	Rural	.95	.88	.80	.66	.50	.31	.17	.08	.04	.02	4.41
	Urban	.88	.80	.68	.52	.36	.24	.12	.07	.06	.04	3.77

TABLE 14-A—Birth Order by Attained Age Groups (Rural)

Attained age	Total women No.	Percentage to total	No. of children born by birth order 0 No.	Percentage to total	1 No.	Percentage to total	2 No.	Percentage to total	3 No.	Percentage to total	4 No.	Percentage to total
1	2	3	4	5	6	7	8	9	10	11	12	13
Total	**26,029**	**100.00**	**4,161**	**100.00**	**3,206**	**100.00**	**3,311**	**100.00**	**3,451**	**100.00**	**3,388**	**100.00**
12 and below	82	0.32	82	1.97	..	..	..	..	..	..	..	..
13–17	904	3.47	824	19.80	70	2.18	10	0.30	..	..	..	..
18–22	4,821	18.52	2,087	50.16	1,583	49.38	841	25.40	253	7.33	53	1.56
23–27	4,422	16.99	475	11.42	791	24.67	1,162	35.09	1,129	32.72	612	18.06
28–32	4,827	18.54	256	6.15	311	9.70	575	17.37	970	28.11	1,194	35.24
33–37	2,657	10.21	114	2.74	91	2.84	183	5.53	299	8.66	422	12.46
38–42	3,130	12.03	107	2.57	119	3.71	195	5.89	315	9.13	401	11.84
43–47	1,809	6.95	66	1.59	71	2.22	126	3.81	157	4.55	244	7.20
48+	3,377	12.97	150	3.60	170	5.30	219	6.61	328	9.50	462	13.64

Attained age	No. of children born by birth order 5 No.	Percentage to total	6 No.	Percentage to total	7 No.	Percentage to total	8 No.	Percentage to total	9 No.	Percentage to total	10 No.	Percentage to total	10+ No.	Percentage to total
1	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Total	**3,032**	**100.00**	**2,313**	**100.00**	**1,602**	**100.00**	**888**	**100.00**	**426**	**100.00**	**177**	**100.00**	**74**	**100.00**
12 and below	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13–17	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18–22	4	0.13	..	..	..	..	..	..	..	..	..	..	..	..
23–27	212	6.99	35	1.51	5	0.31	1	0.11	..	..	..	..	..	..
28–32	858	28.30	467	20.19	147	9.18	43	4.84	5	1.17	1	0.57	..	..
33–37	562	18.54	464	20.06	323	20.16	143	16.11	43	10.09	6	3.39	7	9.46
38–42	525	17.32	559	24.17	449	28.03	249	28.04	139	32.63	55	31.07	17	22.97
43–47	289	9.53	274	11.85	236	14.73	181	20.38	103	24.18	45	25.42	17	22.97
48+	582	19.19	514	22.22	442	27.59	271	30.52	136	31.93	70	39.55	33	44.60

TABLE 14-B—Birth Order by Attained Age Groups (Urban)

Attained age	Total women		No. of children born by birth order									
			0		1		2		3		4	
	No.	Percentage to total	No.	Percentage to total	No.	Percentage to total	No.	Percentage to total	No.	Percentage to total	No.	Percentage to total
1	2	3	4	5	6	7	8	9	10	11	12	13
Total	**18,178**	**100.00**	**2,646**	**100.00**	**2,308**	**100.00**	**2,456**	**100.00**	**2,491**	**100.00**	**2,375**	**100.00**
12 and below	6	0.03	6	0.23	..	..	..	..	..	..	..	..
13–17	312	1.72	273	10.32	35	1.52	4	0.16	..	..	..	..
18–22	3,083	16.96	1,287	48.64	1,008	43.68	546	22.23	188	7.55	40	1.68
23–27	3,460	19.03	455	17.20	608	26.34	885	36.03	816	32.76	473	19.92
28–32	3,635	20.00	229	8.65	253	10.96	486	19.79	710	28.50	780	32.84
33–37	2,205	12.13	106	4.01	120	5.20	170	6.92	247	9.92	366	15.41
38–42	2,173	11.95	121	4.57	102	4.42	135	5.50	223	8.95	268	11.29
43–47	1,240	6.82	71	2.68	61	2.64	93	3.79	104	4.17	167	7.03
48+	2,064	11.36	98	3.70	121	5.24	137	5.58	203	8.15	281	11.83

Attained age	No. of children born by birth order													
	5		6		7		8		9		10		10+	
	No.	Percentage to total	No.	Percentage to total	No.	Percentage to total	No.	Percentage to total	No.	Percentage to total	No.	Percentage to total	No.	Percentage to total
1	14	15	16	17	18	19	20	21	22	23	24	25	26	27
Total	**2,041**	**100.00**	**1,542**	**100.00**	**1,087**	**100.00**	**641**	**100.00**	**322**	**100.00**	**188**	**100.00**	**81**	**100.00**
12 and below	..	..	..	..	..	..	..	..	..	..	..	..	..	..
13–17	..	..	..	..	..	..	..	..	..	..	..	..	..	..
18–22	14	0.69	..	..	..	..	..	..	..	..	..	..	..	..
23–27	172	8.43	45	2.92	6	0.55	..	..	..	..	..	..	..	..
28–32	652	31.94	336	21.79	137	12.60	43	6.71	5	1.55	3	1.60	1	1.23
33–37	415	20.33	341	22.12	248	22.82	125	19.50	47	14.59	10	5.32	10	12.35
38–42	319	15.63	345	22.37	299	27.51	179	27.93	101	31.37	59	31.38	22	27.16
43–47	161	7.89	209	13.55	145	13.34	104	16.22	67	20.81	44	23.40	14	17.28
48+	308	15.09	266	17.25	252	23.18	190	29.64	102	31.68	72	38.30	34	41.98

TABLE 15—Birth Distribution by Birth Order in Selected Countries Around 1945 and 1949

(Per cent)

Country	Year	Birth order					
		1st	2nd	3rd	4th to 6th	7th and over	Unknown
1	2	3	4	5	6	7	8
United States	(1948)	35.6	27.6	14.3	13.4	4.6	4.6
Canada	(1948)	31.3	25.5	15.5	18.7	9.0	0.0
Mexico	(1945)	21.2	18.0	14.9	32.2	12.4	1.3
Chile	(1946)	29.0	19·1	14.1	33.9	3.9	
England and Wales	(1945)	39.8	29.5	14.3	12.5	3.2	0.5
France	(1947)	42.9	24.2	13.9	13.9	4.9	0.3
Belgium	(1949)	41.5	25.3	13.7	14.9	4.6	0.0
Netherlands	(1949)	28.9	24.3	16.0	22.2	8.5	0.0
Norway	(1948)	37.5	28.6	16.9	14.1	2.6	0.3
Finland	(1948)	34.8	27.3	15.3	16.8	5.7	0.0
West Germany	(1948)	45.2	27.9	13.2	10.8	2.6	0.3
Switzerland	(1946)	36.0	27.7	16.8	15.7	3.9	0.0
Hungary	(1946)	37.6	25.5	13.8	16.2	6.8	0.1
Italy	(1948)	36.1	22.5	14.0	19.1	7.9	0.5
Australia	(1948)	36.6	30.1	16.4	14.0	2.9	0.0
New Zealand	(1948)	36.1	28.9	16.5	15.8	2.7	0.0

Source :

World Population and Production on Trends and Outlook
By W. S. Woytinsky and E. S. Woytinsky, Table 81, p. 160

TABLE 16—Parity Progression and Sterility Ratio by Age at Marriage

Age at marriage		Number of children																			
		0		1		2		3		4		5		6		7		8		9	
		P.R.	S.R.	P.R.	S.R.	P.R.	S.R.	P.R.	S.R.	P.R.	S.R.	P.R.	S.R.	P.R.	S.R.	P.R.	S.R.	P.R.	S.R.	P.R.	S.R.
1		2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21
Below 18	R	96.2	3.8	95.2	4.8	92.8	7.2	89.2	10.8	81.3	18.7	72.2	27.8	65.6	34.4	57.1	42.9	50.0	50.0	45.0	55.0
	U	96.8	3.2	94.5	5.5	92.2	7.8	89.3	10.7	82.1	17.9	78.4	21.6	70.5	29.5	61.8	38.2	57.3	42.7	52.0	48.0
18-22	R	94.5	5.5	93.5	6.5	93.2	6.8	87.8	12.2	83.0	17.0	71.1	28.9	65.9	34.1	53.1	46.9	43.5	56.5	39.6	60.4
	U	93.4	6.6	93.5	6.5	94.4	5.6	88.2	11.8	79.7	20.3	71.1	28.9	68.9	31.1	58.6	41.4	42.2	57.8	43.5	56.5
23+	R	95.0	5.0	92.8	7.2	90.5	9.5	82.6	17.4	75.1	24.9	61.9	38.1	56.6	43.4	46.4	53.6	46.2	53.8	58.3	41.7
	U	88.2	11.8	90.7	9.3	85.2	14.8	76.0	24.0	68.4	31.6	66.7	33.3	50.0	50.0	53.8	46.2	85.7	14.3	66.7	33.3

NOTE :

P.R.=Parity progression ratio, i.e., proportion of women who got n + 1th child, n children having been born

S.R.=Sterility ratio, i.e., proportion of women who ceased reproduction after getting nth child

TABLE 17—Fertility Rate per 1,000 Married Women by Attained Age

Attained age	Fertility rate per 1,000 married women *		
	Total	Rural	Urban
1	2	3	4
All ages (above 12) . .	**160**	**152**	**173**
13-17	51	43	77
18-22	222	205	250
23-27	252	237	273
28-32	218	212	226
33-37	160	163	155
38-42	99	105	90
43-47	34	37	29
48+	8	9	5

*Based on number of births during last twelve months

TABLE 18—Expectation of Fertile Life at Various Ages (in Years)

Ages	Rural	Urban
1	2	3
15-19	19.41	18.93
20-24	14.66	14.18
25-29	10.41	9.96
30-34	6.52	5.10
35-39	4.02	3.95

TABLE 19—Number of Women and Average Number of Children born per Woman of Incomplete and Completed Fertility by various Characteristics

INCOMPLETE AND COMPLETED FERTILITY

Characteristics	Incomplete fertility (Age 13-42)				Completed fertility (Age 43 and over)			
	Rural		Urban		Rural		Urban	
	No. of women	Average No. of children born	No. of women	Average No. of children born	No. of women	Average No. of children born	No. of women	Average No. of children born
1	2	3	4	5	6	7	8	9
All Religions and Tribes	**23,257**	**2.9**	**14,868**	**3.0**	**5,824**	**5.1**	**3,304**	**5.1**
All Religions	*20,761*	*2.9*	*14,520*	*3.0*	*5,186*	*5.1*	*3,220*	*5.1*
I—A. *Religions*								
1 Hindu	19,466	2.9	12,043	3.0	4,784	5.1	2,567	5.1
2 Muslim	1,175	3.1	1,747	3.1	312	5.2	427	5.4
3 Jain	90	3.6	588	3.1	41	4.9	171	5.4
4 Christian	13	3.7	112	3.5	6	N	23	N
5 Other religions	17	2.4	30	2.6	43	3.7	32	3.2
B. *Tribes*	*2,496*	*2.8*	*348*	*3.0*	*638*	*4.9*	*84*	*4.5*
1 Bhil, Vasava, Tadvi and Dungri Garasia	1,067	2.7	74	2.5	266	4.6	16	N
2 Dhodia	253	3.0	122	2.8	68	4.4	36	3.8
3 Other tribes	1,176	2.9	152	3.4	304	5.2	32	4.9
II—*Woman's education*								
1 Formal schooling but high school or equivalent examination not passed	2,657	2.5	5,948	2.9	268	4.9	911	5.1
2 High school or equivalent examination	23	2.7	305	1.7	3	N	27	3.4
3 Graduated from college	7	1.4	53	1.2	4	N	1	N
4 Others comprising just literates and uneducated	20,570	3.0	8,562	3.0	5,549	5.1	2,365	5.1
III—*Husband's education*								
1 Formal schooling but high school or equivalent examination not passed	7,606	2.9	8,655	3.1	1,428	5.2	1,889	5.3
2 High school or equivalent examination	330	2.3	1,558	2.5	36	5.1	243	4.9
3 Graduated from college	57	2.2	593	2.4	17	N	121	4.9
4 Others comprising just literates and uneducated	15,264	3.0	4,062	3.1	4,343	5.1	1,051	4.9
IV—*Nature of work*								
1 Technical, professional and related workers	418	2.5	746	2.7	100	4.6	181	5.2
2 Administrative, executive and managerial workers	132	2.8	466	3.2	15	N	116	5.1
3 Clerical and related workers	133	2.4	1,406	2.7	23	N	257	4.9
4 Sales workers	765	3.3	3,064	3.2	173	5.1	750	5.4
5 Farmers	17,683	3.0	1,348	3.1	4,434	5.1	379	5.2
6 Hunters, loggers and related workers	416	2.7	165	3.1	78	5.4	54	5.6
7 Production process workers and craftsmen	1,439	2.9	4,063	3.1	297	5.4	618	5.3
8 Unskilled workers	1,591	2.9	1,930	3.1	332	5.1	329	5.2
V—*Nature of industry*								
1 (i) Agriculture, where occupation is farming	17,683	3.0	1,348	3.1	4,434	5.1	379	5.2
(ii) Agriculture, where occupation is other than farming	405	2.7	162	2.9	76	5.4	52	5.4
2 Quarrying and mining	12	2.0	26	3.9	4	N	5	N
3 Manufacture	1,478	2.9	4,530	3.1	284	5.4	687	5.3
4 Building and construction	199	2.8	387	3.0	35	4.9	78	4.7
5 Commerce	799	3.2	3,363	3.1	189	4.9	820	5.3
6 Transport, storage and communication	196	2.3	967	2.9	31	5.9	127	4.9
7 Service	2,237	2.9	3,659	2.9	465	5.0	711	5.1

N=Not calculated since the number of women in the sample is below 25

TABLE 20—Number of Women and Average Number of Children born per Woman in Different Durations of Married Life by Characteristics

(INCOMPLETE FERTILITY—AGES 13-42)

Characteristics : Religion and tribe

Duration of married life (in years)	Hindu				Muslim				Jain				Christian			
	No. of women		Average No of children born		No. of women		Average No. of children born		No. of women		Average No. of children born		No. of women		Average No. of children born	
	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
All Durations*	**23,521**	**14,345**	**3.5**	**3.5**	**1,469**	**2,138**	**3.6**	**3.6**	**129**	**749**	**4.0**	**3.6**	**19**	**134**	**4.1**	**4.0**
1- 4	3,790	2,173	0.5	0.6	212	330	0.7	0.6	N	93	N	0.7	N	N	N	N
5- 9	4,299	2,557	2.0	2.0	280	376	2.2	2.1	N	132	N	1.9	N	N	N	N
10-14	4,027	2,604	3.4	3.4	258	375	3.4	3.4	N	134	N	3.2	N	N	N	N
15-29	7,926	5,047	5.0	4.8	494	752	5.0	5.0	N	253	N	4.8	N	N	N	N
30+	3,479	1,964	5.1	5.2	225	305	5.2	5.5	N	137	N	5.7	N	N	N	N

Duration of married life (in years)	Other Religions				Bhil, Vasava, Tadvi and Dungri Garasia				Dhodia				Other tribes			
	No. of women		Average No. of children born		No. of women		Average No. of children born		No. of women		Average No. of children born		No. of women		Average No. of children born	
	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
1	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
All Durations*	**60**	**62**	**3.4**	**2.9**	**1,321**	**89**	**3.1**	**3.1**	**320**	**158**	**3.3**	**3.0**	**1,469**	**182**	**3.4**	**3.7**
1- 4 . .	N	N	N	N	236	N	0.6	N	39	N	0.6	N	240	N	0.6	N
5- 9 . .	N	N	N	N	242	N	1.9	N	53	N	1.9	N	247	N	2.1	N
10-14 . .	N	N	N	N	218	N	3.2	N	52	N	3.2	N	281	N	3.5	N
15-29 . .	N	N	N	N	431	N	4.2	N	130	N	4.4	N	501	N	4.7	N
30+ . .	N	N	N	N	194	N	4.8	N	46	N	4.3	N	200	N	5.2	N

N=Not calculated due to small number of women in the sample

* Excludes women with duration of marrried life '0' year

TABLE 21—Number of Women and Average Number of Children born per Woman in Different Durations of Married Life by Characteristics

(INCOMPLETE FERTILITY—AGES 13-42)

Characteristic : Woman's education

Duration of married life (in years)	Others comprising just literates and uneducated				Formal schooling but high school or equivalent examination not passed				High school or equivalent examination				Graduated from college			
	No. of women		Average No. of children born		No. of women		Average No. of children born		No. of women		Average No. of children born		No of women		Average No. of children born	
	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
All Durations*	**25,481**	**10,771**	**3.5**	**3.7**	**2,790**	**6,714**	**2.8**	**3.2**	**26**	**319**	**3.0**	**1.9**	**N**	**N**	**N**	**N**
1- 4	3,819	1,361	0.6	0.6	705	1,170	0.5	0.6	N	116	N	0.6	N	N	N	N
5- 9	4,512	1,776	2.1	2.1	629	1,287	1 9	2.0	N	77	N	1.7	N	N	N	N
10-14	4,329	1,925	3.4	3.4	523	1,231	3.4	3.4	N	58	N	2.8	N	N	N	N
15-29	8,803	3,886	4.9	4.9	750	2,350	4 9	4.6	N	52	N	3.8	N	N	N	N
30+	4,018	1,823	5.1	5.2	183	676	4.8	5.3	N	16	N	3 3	N	N	N	N

N=Not calculated due to small number of women in the sample

* Excludes women with duration of married life '0' year

TABLE 22—Number of Women and Average Number of Children born per Woman in Different Durations of Married Life by Characteristics

(INCOMPLETE FERTILITY—AGES 13–42)

Characteristic : Husband's education

Duration of married life (in years)	Others comprising just literates and uneducated				Formal schooling but high school or equivalent examination not passed				High school or equivalent examination				Graduated from college			
	No. of women		Average No. of children born		No. of women		Average No. of children born		No of women		Average No. of children born		No. of women		Average No. of children born	
	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
All Durations*	**19,102**	**5,013**	**3.5**	**3.6**	**8,782**	**10,394**	**3.3**	**3.6**	**350**	**1,747**	**2.7**	**3.0**	**74**	**703**	**2 9**	**2.8**
1- 4	2,824	674	0.6	0.7	1,593	1,466	0.5	0.6	97	393	0.5	0 6	N	137	N	0.6
5- 9	3,381	840	2.1	2.1	1,650	1,813	2.0	2.0	97	354	2.0	2.0	N	148	N	1.8
10–14	3,196	899	3.4	3.3	1,607	1,896	3.4	3.4	44	308	2.9	3.3	N	119	N	2.9
15-29	6,577	1,801	4.9	4.8	2,882	3,751	5.0	4.9	90	533	5.2	4.5	N	210	N	3.9
30+	3,124	799	5.0	5.1	1,050	1,468	5.2	5.3	22	159	5.3	5.2	N	89	N	5.2

N=Not calculated due to small number of women in the sample

* Excludes women with duration of married life '0' year

TABLE 23—Number of Women and Average Number of Children born per Woman in Different Durations of Married Life by Characteristics

(INCOMPLETE FERTILITY—AGES 13–42)

Characteristic : Nature of work

Duration of married life (in years)	Technical, professional and related workers				Administrative, executive and managerial workers				Clerical and related workers				Sales workers			
	No. of women		Average No. of children born		No. of women		Average No. of children born		No. of women		Average No. of children born		No. of women		Average No. of children born	
	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
All Durations*	**505**	**919**	**3.0**	**3.2**	**143**	**576**	**3.1**	**3.9**	**154**	**1,633**	**2.6**	**3.1**	**917**	**3,750**	**3.7**	**3.7**
1- 4	93	160	0.5	0.5	N	77	N	0.6	N	285	N	0.6	131	533	0.6	0.6
5- 9	105	174	1.8	2.0	N	93	N	2.2	N	293	N	1.9	150	632	2.2	2.1
10–14	88	140	3.3	3.2	N	99	N	3.3	N	312	N	3.3	165	671	3.5	3.4
15-29	152	309	4.6	4.5	N	222	N	4.9	N	566	N	4.3	343	1,336	5.1	4.9
30+	67	136	4.6	5.3	N	85	N	5.2	N	177	N	5.0	128	578	5.0	5.5

Duration of married life (in years)	Farmers				Hunters, loggers and related workers				Production process workers and craftsmen				Unskilled workers			
	No. of women		Average No. of children born		No. of women		Average No of children born		No. of women		Average No. of children born		No. of women		Average No. of children born	
	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
1	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
All Durations*	**21,556**	**1,683**	**3.5**	**3.7**	**474**	**214**	**3.2**	**3.8**	**1,702**	**4,625**	**3.4**	**3.5**	**1,887**	**2,223**	**3.4**	**3.5**
1- 4	3,386	217	0.6	0.6	92	N	0.4	N	285	686	0.6	0.7	309	345	0.6	0.6
5- 9	3,871	288	2.0	2.1	117	N	2.1	N	357	863	2.0	1.7	359	426	2.0	1.9
10–14	3,717	259	3.4	3.3	63	N	3.2	N	317	930	3.5	3.4	337	430	3.4	3.4
15-29	7,391	636	4.9	4.9	153	N	5.0	N	541	1,694	5.1	4.9	643	781	4.6	5.0
30+	3,191	283	5.1	5.2	49	N	5.7	N	202	452	5.3	5.4	229	241	5.2	5.4

N=Not calculated due to small number of women in the sample

* Excludes women with duration of married life '0' year

TABLE 24—Number of Women and Average Number of Children born per Woman in Different Durations of Married Life by Characteristics

(INCOMPLETE FERTILITY—AGES 13–42)

Characteristic : Nature of industry

Duration of married life (in years)	Agriculture, where occupation is farming				Agriculture, where occupation is other than farming				Quarrying and mining				Manufacture			
	No. of women		Average No. of children born		No. of women		Average No. of children born		No. of women		Average No. of children born		No. of women		Average No. of children born	
	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
All Durations*	**21,556**	**1,683**	**3.5**	**3.7**	**463**	**209**	**3.2**	**3.6**	N	N	N	N	**1,730**	**5,154**	**3.4**	**3.5**
1- 4	3,386	217	0.6	0.6	91	N	0.4	N	N	N	N	N	300	761	0.5	0.7
5- 9	3,871	288	2.0	2.1	115	N	2.1	N	N	N	N	N	353	950	2.0	2.0
10–14	3,717	259	3.4	3.3	61	N	3.2	N	N	N	N	N	314	1,039	3.5	3.4
15–29	7,391	636	4.9	4.9	148	N	5.1	N	N	N	N	N	574	1,904	5.1	4.8
30+	3,191	283	5.1	5.2	48	N	5.6	N	N	N	N	N	189	500	5.3	5.5

Duration of married life (in years)	Building and construction				Commerce				Transport, storage and communication				Services			
	No. of women		Average No. of children born		No. of women		Average No. of children born		No. of women		Average No. of children born		No. of women		Average No. of children born	
	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
1	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
All Durations*	**229**	**462**	**3.1**	**3.3**	**966**	**4,110**	**3.6**	**3.6**	**222**	**1,074**	**2.8**	**3.2**	**2,634**	**4,308**	**3.3**	**3.4**
1- 4	N	72	N	0.6	145	601	0.6	0.6	N	189	N	0.7	437	686	0.6	0.6
5- 9	N	84	N	2.0	154	672	2.2	2.1	N	242	N	2.1	509	814	2.0	2.0
10–14	N	85	N	3.0	173	629	3.5	3.4	N	216	N	3.4	489	793	3.3	3.3
15–29	N	162	N	4.8	362	1,480	5.0	4.8	N	336	N	4.6	877	1,494	4.9	4.7
30+	N	59	N	4.9	132	628	4.8	5.4	N	91	N	5.4	322	521	5.0	5.2

N=Not calculated due to small number of women in the sample

* Excludes women with duration of married life '0' year

TABLE 25—Average Number of Children born per Woman by Age at Marriage in Different Characteristics

(All durations)

Characteristics	Average number of children					
	Rural Age at marriage			Urban Age at marriage		
	Below 18	18–22	23+	Below 18	18–22	23+
1	2	3	4	5	6	7
Religion						
Hindu	3.6	3.2	3.2	3.8	2.8	2.0
Muslim	3.9	3.2	3.9	4.0	3.2	1.8
Jain	4.2	3.9	N	4.3	2.8	N
Tribes						
Bhil, Vasava, Tadvi and Dungri Garasia	3.3	2.9	2.4†	3.4†	2.9†	N
Dhodia	3.6	2.8	N	3.2	2.9	N
Other tribes	3.5	3.4	3.3†	3.8	3.2†	N
Woman's education						
Others comprising just literates and uneducated	3.7	3.3	3.3	4.0	3.2	2.4
Formal schooling but high school or equivalent examination not passed	3.0	2.5	2.9	3.7	2.6	1.8
High school or equivalent examination	N	N	N	2.5	1.8	1.5†
Husband's education						
Others comprising just literates and uneducated	3.7	3.3	3.3	3.8	3.2	2.6
Formal schooling but high school or equivalent examination not passed	3.5	2.9	3.0	4.0	2.9	1.9
High school or equivalent examination	3.1	2.1	N	3.5	2.4	1.3
Graduated from college	3.4†	2.2†	N	3.6	2.2	1.7†
Nature of work						
Technical, professional and related workers	3.3	2.5	3.5†	3.8	2.6	2.2†
Administrative, executive and managerial workers	3.7	2.2†	N	4.1	3.1	N
Clerical and related workers	2.8	2.1	N	3.7	2.5	1.4†
Sales workers	4.0	3.3	N	4.2	3.0	2.1
Farmers	3.6	3.2	3.2	3.9	3.4	N
Hunters, loggers and related workers	3.5	2.8	N	4.0	3.5	N
Production process workers and craftsmen	3.6	3.1	N	3.8	2.8	2.0
Unskilled workers	3.7	3.1	3.2†	3.7	3.0	N
*Nature of industry**						
Agriculture, where occupation is farming	3.6	3.2	3.2	3.9	3.4	N
Agriculture, where occupation is other than farming	3.5	2.8	N	3.7	3.3	N
Manufacture	3.6	3.1	N	3.8	2.8	2.0
Building and construction	3.4	2.6	N	3.7	2.0	N
Commerce	3.9	3.2	N	4.1	3.0	2.1
Transport, storage and communication	3.1	2.4	N	3.6	2.6	N
Services	3.5	3.1	3.3	3.8	2.8	1.9

N=Not calcuated since the number of women in the sample was below 25

* Differential groups not considered due to small number of women in group "Quarrying and mining"

† Average is based on number of women between 25 and 49

TABLE 26—Average Number of Children born per Woman by Age at Marriage in Different Durations of Married Life by Characteristics

Characteristics : Religion and tribe

Duration of married life (in years)	Hindu						Muslim						Jain**					
	Rural			Urban			Rural			Urban			Rural			Urban		
	Age at marriage			Age at marriage			Age at marriage			Age at marriage			Age at marriage			Age at marriage		
	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+†	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
All Durations*	3.6	3.2	3.2	3.8	2.8	2.0	3.9	3.2	3.9	4.0	3.2	1.8	4.2	3.9	N	4.3	2.8	N
1–4	0.5	0.5	0.5	0.6	0.6	0.6	0.8	0.7	N	0.7	0.6	N	N	N	N	N	0.6	N
5–9	2.1	1.9	1.6	2.1	1.9	1.4	2.3	2.0	N	2.2	1.9	N	N	N	N	2.2	1.7	N
10–14	3.5	3.3	3.1‡	3.5	3.2	N	3.5	3.2	N	3.6	3.3	N	N	N	N	3.2	3.1	N
15–29	5.0	4.9	4.4	4.9	4.4	3.8‡	5.0	4.9	N	5.2	4.8	N	N	N	N	4.9	4.5	N
30+	5.1	5.0	4.5	5.3	4.9	N	5.4	4.7	N	5.7	5.1	N	N	N	N	5.8	N	N

Duration of married life (in years)	Bhil, Vasava, Tadvi and Dungri Garasia						Dhodia						Other tribes					
	Rural			Urban			Rural			Urban			Rural			Urban		
	Age at marriage			Age at marriage			Age at marriage			Age at marriage			Age at marriage			Age at marriage		
	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+
1	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
All Durations*	3.3	2.9	2.4‡	3.4‡	2.9‡	N	3.6	2.8	N	3.2	2.9	N	3.5	3.4	3.3‡	3.8	3.2‡	N
1–4	0.5	0.6	N	N	N	N	N	0.5‡	N	N	N	N	0.6	0.6	N	N	N	N
5–9	2.1	1.6	N	N	N	N	N	1.7‡	N	N	N	N	2.2	2.0	N	N	N	N
10–14	3.4	3.1	N	N	N	N	3.2‡	N	N	N	N	N	3.5	3.4	N	N	N	N
15–29	4.1	4.3	N	N	N	N	4.4	4.4‡	N	N	N	N	4.4	5.0	N	4.4	N	N
30+	4.9	4.5	N	N	N	N	4.4‡	N	N	N	N	N	5.3	5.3	N	5.0‡	N	N

N=Not calculated since the number of women in the sample was below 25

* Excludes women with duration of married life '0' year

** Differential groups not considered due to small number of women in case of women in the groups 1 Christian 2 Other religions

† Data appear to be defective

‡ Average is based on number of women between 25 and 49

TABLE 27—Average Number of Children born per Woman by Age at Marriage in Different Durations of Married Life by Characteristics

Characteristic : Woman's education

Duration of married life (in years)	Others comprising just literates and uneducated						Formal schooling but high school or equivalent examination not passed						High school or equivalent examination**					
	Rural			Urban			Rural			Urban			Rural			Urban		
	Age at marriage			Age at marriage			Age at marriage			Age at marriage			Age at marriage			Age at marriage		
	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+†	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
All Durations*	**3.7**	**3.3**	**3.3**	**4.0**	**3.2**	**2.4**	**3.0**	**2.5**	**2.9**	**3.7**	**2.6**	**1.8**	N	N	N	**2.5**	**1.8**	**1.5‡**
1– 4	0.4	0.6	0.5	0.6	0.6	0.5‡	0.4	0.5	N	0.6	0.6	0.6	N	N	N	N	0.5	N
5– 9	2.2	1.9	1.8	2.2	1.9	N	2.0	1.9	N	2.0	1.3	1.9	N	N	N	N	1.8	N
10–14	3.5	3.3	3.0	3.5	3.3	N	3.4	3.4	N	3.5	3.2	N	N	N	N	N	2.8‡	N
15–29	4.9	4.9	4.3	5.1	4.5	3.7‡	4.9	5.0	N	4.7	4.4	3.5	N	N	N	N	3.5‡	N
30+	5.1	5.0	4.8	5.3	4.5	N	5.1	4.6	N	5.4	4.9	N	N	N	N	N	N	N

N=Not calculated since the number of women in the sample was below 25
* Excludes women with duration of married life '0' year
** Differential groups not considered due to small number of women in group "Graduated from college"
† Data appear to be defective
‡ Average is based on number of women between 25 and 49

TABLE 28—Average Number of Children born per Woman by Age at Marriage in Different Durations of Married Life by Characteristics

Characteristic : Husband's education

Duration of married life (in years)	Others comprising just literates and uneducated						Formal schooling but high school or equivalent examination not passed					
	Rural			Urban			Rural			Urban		
	Age at marriage			Age at marriage			Age at marriage			Age at marriage		
	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+
1	2	3	4	5	6	7	8	9	10	11	12	13
All Durations*	3.7	3.3	3.3	3.8	3.2	2.6	3.5	2.9	3.0	4.0	2.9	1.9
1– 4	0.6	0.5	0.5	0.7	0.6	N	0.5	0.6	N	0.6	0.6	0.6
5– 9	2.2	1.9	1.8	2.2	2.0	N	2.0	1.9	N	2.1	1.9	1.3†
10–14	3.5	3.3	3.0	3.4	3.2	N	3.4	3.2	N	3.5	3.3	N
15–29	4.9	4.8	4.4	5.0	4.5	3.8†	5.0	4.9	3.9†	5.0	4.6	3.5†
30+	5.1	4.9	4.8	5.2	4.7	N	5.3	5.1	N	5.4	5.1	N

Duration of married life (in years)	High school or equivalent examination						Graduated from college					
	Rural			Urban			Rural			Urban		
	Age at marriage			Age at marriage			Age at marriage			Age at marriage		
	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+
1	14	15	16	17	18	19	20	21	22	23	24	25
All Durations*	3.1	2.1	N	3.5	2.4	1.3	3.4†	2.2†	N	3.6	2.2	1.7†
1– 4	0.4†	0.5†	N	0.4	0.6	0.6†	N	N	N	N	0.6	N
5– 9	2.1	1.8†	N	2.1	2.0	N	N	N	N	1.9†	1.8	N
10–14	2.8†	N	N	3.3	3.2	N	N	N	N	2.9	2.9	N
15–29	5.3†	N	N	4.7	4.1	N	N	N	N	4.0	3.8	N
30+	N	N	N	5.4	4.9†	N	N	N	N	5.4	N	N

N=Not calculated since the number of women in the sample was below 25
* Excludes women with duration of married life '0' year
† Average is based on number of women between 25 and 49

TABLE 29—Average Number of Children born per Woman by Age at Marriage in Different Durations of Married Life by Characteristics

Characteristic : Nature of work

Duration of married life (in years)	Technical, professional and related workers						Administrative, executive and managerial workers						Clerical and related workers					
	Rural			Urban			Rural			Urban			Rural			Urban		
	Age at marriage			Age at marriage			Age at marriage			Age at marriage			Age at marriage			Age at marriage		
	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
All Durations*	3.3	2.5	3.5†	3.8	2.6	2.2†	3.7	2.2†	N	4.1	3.1	N	2.8	2.1	N	3.7	2.5	1.4†
1– 4	0.5†	0.5	N	0.5	0.5	N	N	N	N	N	0.6	N	N	N	N	0.6	0.6	N
5– 9	1.8	1.8†	N	2.2	1.9	N	N	N	N	2.5†	1.9†	N	N	N	N	1.9	1.9	N
10–14	3.3	3.2†	N	3.3	2.9†	N	N	N	N	3.5	3.0†	N	N	N	N	3.5	3.1	N
15–29	4.9	4.1	N	4.8	4.1	N	N	N	N	5.1	4.6	N	N	N	N	4.5	4.0	N
30+	5.1†	N	N	5.6	4.6†	N	N	N	N	5.0	N	N	N	N	N	5.1	4.8	N

Duration of married life (in years)	Sales workers						Farmers						Hunters, loggers and related workers					
	Rural			Urban			Rural			Urban			Rural			Urban		
	Age at marriage			Age at marriage			Age at marriage			Age at marriage			Age at marriage			Age at marriage		
	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+
1	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
All Durations*	4.0	3.3	N	4.2	3.0	2.1	3.6	3.2	3.2	3.9	3.4	N	3.5	2.8	N	4.0	3.5	N
1– 4	0.7	0.6	N	0.6	0.7	0.5†	0.5	0.6	0.5	0.6	0.6	N	0.5†	0.4	N	N	N	N
5– 9	2.4	2.0	N	2.3	2.0	N	2.1	1.9	1.7	2.1	2.0	N	2.3	1.9†	N	2.1†	N	N
10 14	3.7	3.4	N	3.5	3.3	N	3.5	3.4	3.1	3.5	3.1	N	3.4†	3.0†	N	N	N	N
15–29	5.3	4.8	N	5.1	4.5	N	4.9	4.9	4.3	4.9	4.9	N	5.1	4.8	N	5.3†	N	N
30+	5.2	4.7	N	5.7	4.9	N	5.1	5.0	4.7	5.2	5.4	N	N	5.3†	N	5.9†	N	N

Duration of married life (in years)	Production process workers and craftsmen						Unskilled workers					
	Rural			Urban			Rural			Urban		
	Age at marriage			Age at marriage			Age at marriage			Age at marriage		
	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+
1	38	39	40	41	42	43	44	45	46	47	48	49
All Durations*	3.6	3.1	N	3.8	2.8	2.0	3.7	3.1	3.2†	3.7	3.0	N
1– 4	0.6	0.6	N	0.7	0.7	0.8†	0.6	0.5	N	0.7	0.6	N
5– 9	2.1	1.8	N	2.1	2.0	N	2.2	1.8	N	2.1	1.8	N
10–14	3.6	3.3	N	3.4	3.4	N	3.6	3.1	N	3.4	3.2	N
15–29	5.2	4.9	N	5.0	4.6	N	5.0	4.8	N	5.2	4.6	N
30+	5.2	5.4	N	5.5	5.2	N	5.2	5.1	N	5.6	4.7	N

N=Not calculated since the number of women in the sample was below 25

† Average is based on number of women between 25 and 49

* Excludes women with duration of married life '0' year

TABLE 30—Average Number of Children born per Woman by Age at Marriage in Different Durations of Married Life by Characteristics

Characteristic : Nature of industry

Duration of married life (in years)	Agriculture, where occupation is farming						Agriculture, where occupation is other than farming †						Manufacture					
	Rural			Urban			Rural			Urban			Rural			Urban		
	Age at marriage			Age at marriage			Age at marriage			Age at marriage			Age at marriage			Age at marriage		
	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
All Durations*	**3.6**	**3.2**	**3.2**	**3.9**	**3.4**	N	**3.5**	**2.8**	N	**3.7**	**3.3**	N	**3.6**	**3.1**	N	**3.8**	**2.8**	**2.0**
1– 4	0.5	0.6	0.5	0.6	0.6	N	0.5‡	0.4	N	N	N	N	0.6	0.5	N	0.7	0.7	0.6‡
5– 9	2.1	1.9	1.7	2.1	2.0	N	2.3	1.8‡	N	N	N	N	2.1	1.8	N	2.0	1.9	N
10–14	3.5	3.4	3.1	3.5	3.1	N	3.5‡	3.0‡	N	N	N	N	3.6	3.3	N	3.5	3.2	N
15–29	4.9	4.9	4.3	4.9	4.9	N	5.1	4.8	N	N	N	N	5.2	5.0	N	5.0	4.4	N
30+	5.1	5.0	4.7	5.2	5.4	N	N	N	N	N	N	N	5.3	5.4	N	5.6	5.1	N

Duration of married life (in years)	Building and construction						Commerce						Transport, storage and communication					
	Rural			Urban			Rural			Urban			Rural			Urban		
	Age at marriage			Age at marriage			Age at marriage			Age at marriage			Age at marriage			Age at marriage		
	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+	Below 18	18–22	23+
1	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37
All Durations*	**3.4**	**2.6**	N	**3.7**	**2.0**	N	**3.9**	**3.2**	N	**4.1**	**3.0**	**2.1**	**3.1**	**2.4**	N	**3.6**	**2.6**	N
1– 4	N	N	N	0.6‡	0.5‡	N	0.7	0.5	N	0.6	0.6	0.5‡	N	N	N	0.7	0.6	N
5– 9	N	N	N	2.1	2.1‡	N	2.4	1.9	N	2.3	2.0	N	N	N	N	2.1	2.0	N
10–14	N	N	N	3.3	2.6‡	N	3.7	3.3	N	3.5	3.3	N	N	N	N	3.5	3.4	N
15–29	N	N	N	5.1	4.2‡	N	5.2	4.8	N	5.0	4.5	N	N	N	N	4.8	4.0	N
30+	N	N	N	4.8	N	N	4.9	4.7	N	5.6	4.9	N	N	N	N	5.5	5.3‡	N

Duration of married life (in years)	Services					
	Rural			Urban		
	Age at marriage			Age at marrige		
	Below 18	18–22	23+	Below 18	18–22	23+
1	38	39	40	41	42	43
All Durations*	**3.5**	**3.1**	**3.3**	**3.8**	**2.8**	**1.9**
1– 4	0.6	0.6	N	0.6	0.6	0.7‡
5– 9	2.0	1.9	N	2.2	1.8	N
10–14	3.4	3.2	N	3.4	3.2	N
15–29	5.0	4.8	3.8	4.9	4.4	N
30+	5.1	4 8	N	5.4	4.9	N

N=Not calculated since the number of women in the sample was below 25

* Excludes women with duration of married life '0' year

† Differential groups not considered due to small number of women in group "Quarrying and mining"

‡ Average is based on number of women between 25 and 49

TABLE 31—Number of Women and Average Number of Children born per Woman of Completed Fertility by Different Characteristics

(Women aged 43 years and above)

Characteristics	Rural		Urban	
	No. of women	Average No. of children born	No. of women	Average No. of children born
1	2	3	4	5
I—*Religion/Tribe*				
Religion				
1 Hindu	4,784	5.1	2,567	5.1
2 Muslim	312	5.2	427	5.4
3 Jain	41	4.9	171	5.4
4 Christian	6	N	23	N
5 Other religions	43	3.7	32	3.2
Tribe				
1 Bhil, Vasava, Tadvi and Dungri Garasia	266	4.6	16	N
2 Dhodia	68	4.4	36	3.8
3 Other tribes	304	5.2	32	4.9
II—*Woman's education*				
1 Formal schooling but high school or equivalent examination not passed	268	4.9	911	5.1
2 High school or equivalent examination	3	N	27	3.4
3 Graduated from college	4	N	1	N
4 Others comprising just literates and uneducated	5,549	5.1	2,365	5.1
III—*Husband's education*				
1 Formal schooling but high school or equivalent examination not passed	1,428	5.2	1,889	5.3
2 High school or equivalent examination	36	5.1	243	4.9
3 Graduated from college	17	N	121	4.9
4 Others comprising just literates and uneducated	4,343	5.1	1,051	4.9
IV—*Nature of work*				
1 Technical, professional and related workers	100	4.6	181	5.2
2 Administrative, executive and managerial workers	15	N	116	5.1
3 Clerical and related worker	23	N	257	4.9
4 Sales workers	173	5.1	750	5.4
5 Farmers	4,434	5.1	379	5.2
6 Hunters, loggers and related workers	78	5.4	54	5.6
7 Production process workers and craftsmen	297	5.4	618	5.3
8 Unskilled workers	332	5.1	329	5.2
V—*Nature of industry*				
1 (i) Agriculture, where occupation is farming	4,434	5.1	379	5.2
(ii) Agriculture, where occupation is other than farming	76	5.4	52	5.4
2 Quarrying and mining	4	N	5	N
3 Manufacture	284	5.4	687	5.3
4 Building and construction	35	4.9	78	4.7
5 Commerce	209	4.9	820	5.3
6 Transport, storage and communication	25	5.9	170	4.9
7 Services	517	5.0	711	5.1

N=Not calculated since the number of women in the sample is below 25

TABLE 32—Average Number of Children born per Woman of Completed Fertility by Age at Marriage by Different Characteristics

Age at marriage	Religion								Tribe						Woman's education			
	Hindu		Muslim		Jain		Christian		Bhil, etc.		Dhodia		Other tribes		Formal schooling but high school or equivalent examination not passed		High school or equivalent examination	
	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
Below 18	5.1	5.3	5.4	5.7	5.7*	5.8	N	7.0†	4.9	N	4.4*	4.4†	5.3	5.0*	5.1	5.4	N	N
18–22	5.0	4.9	4.7	5.1	5.5†	5.3*	N	N	4.5	N	3.8†	N	5.3	N	4.6	4.9	N	N
23+	4.5	4.2	5.4†	3.8†	N	N	N	N	3.6†	N	N	N	4.5†	N	3.9*	3.7*	N	3 7

Age at marriage	Woman's education-*contd.*				Husband's education							
	Graduated from college		Others comprising just literates and uneducated		Formal schooling but high school or equivalent examination not passed		High school or equivalent examination		Graduated from college		Others comprising just literates and uneducated	
	R	U	R	U	R	U	R	U	R	U	R	U
1	20	21	22	23	24	25	26	27	28	29	30	31
Below 18	N	N	5.1	5.3	5.3	5.4	5.9†	5.4	N	5.4	5.1	5.2
18–22	N	N	5.0	4.5	5.1	5.1	N	4.9*	N	4.8†	4.9	4.7
23+	N	N	4.5	3.9	4.0	3.9*	N	N	N	N	4.6	3.8*

Age at marriage	Nature of work															
	Technical, professional and related workers		Administrative, executive and managerial workers		Clerical and related workers		Sales workers		farmers		Hunters, loggers and related workers		Production process workers and craftsmen		Unskilled workers	
	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
1	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47
Below 18	5.1	5.6	N	5.0	N	5.1	5.2	5.7	5.1	5.2	6.0†	5.9*	5.2	5.5	5.2	5.6
18-22	4.1†	4.6*	N	5.7†	N	4.8*	4.7	4.9	5.0	5.4	5.3*	5.3†	5.4	5.2	5.1	4.7
23+	4.0*	3.6†	N	N	N	N	4.9†	4.4*	4.5	N	N	N	N	3.8†	4.4†	N

Age at marriage	Nature of industry															
	Agriculture, where occupation is farming		Agriculture where occupation is other than farming		Quarrying and mining		Manufacture		Building and construction		Commerce		Transport, storage and communication		Services	
	R	U	R	U	R	U	R	U	R	U	R	U	R	U	R	U
1	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63
Below 18	5.1	5.2	6.0†	5.6†	N	N	5.3	5.6	4.9†	4.8*	4.9	5.6	7.1†	5.5	5.1	5.4
18-22	5.0	5.4	5.2†	4.8†	N	N	5.4	5.1	N	5.0†	4.7	4.9	N	5.3*	4.8	4.9
23+	4.5	N	N	N	N	N	N	4.3†	N	N	4.8†	4.5	N	N	4.2*	3.5*

N=Average is not calculated since the number of women is upto 10

* Average is based on number of women between 25 and 49

† Average is based on number of women between 11 and 25

TABLE 33—Marital Fertility Rates by Different Characteristics

(Women between ages 13 and 47)

Characteristics	Rural		Urban	
	No. of women	Marital fertility rate	No. of women	Marital fertility rate
1	2	3	4	5
I—*Religion/Tribe*				
Religion				
1 Hindu	21,145	180.1	13,025	196.2
2 Muslim	1,285	195.3	1,903	193.4
3 Jain	103	213.6	651	172.0
4 Christian	17	N	119	159.7
5 Other religions	20	N	38	26.3*
Tribe				
1 Bhil, Vasava, Tadvi and Dungri Garasia	1,167	108.8	79	177.2
2 Dhodia	275	134.5	131	213.7
3 Other tribes	1,298	124.0	162	216.0
II—*Woman's education*				
1 Formal schooling but high school or equivalent examination not passed	2,760	179.0	6,020	195.3
2 High school or equivalent examination	23	N	320	178.1
3 Graduated from college	9	N	54	166.7
4 Others comprising just literates and uneducated	22,518	173.6	9,414	198.0
III—*Husband's education*				
1 Formal schooling but high school or equivalent examination not passed	8,157	179.4	9,355	192.8
2 High school or equivalent examination	341	205.3	1,662	179.9
3 Graduated from college	65	153.8	643	158.6
4 Others comprising just literates and uneducated	16,747	170.6	4,448	208.4
IV—*Nature of work*				
1 Technical, professional and related workers	452	185.8	806	182.4
2 Administrative, executive and managerial workers	139	187.1	510	186.3
3 Clerical and related workers	142	211.3	1,519	159.3
4 Sales workers	824	182.0	3,330	186.5
5 Farmers	19,292	173.0	1,489	198.8
6 Hunters, loggers and related workers	444	177.9	187	219.3
7 Production process workers and craftsmen	1,558	185.5	4,352	213.0
8 Unskilled workers	1,715	170.8	2,064	206.9
V—*Nature of industry*				
1 (i) Agriculture, where occupation is farming	19,292	173.0	1,489	198.8
(ii) Agriculture, where occupation is other than farming	432	182.9	183	207.7
2 Quarrying and mining	14	N	28	321.4
3 Manufacture	1,596	184.2	4,851	211.5
4 Building and construction	212	250.0	419	174.2
5 Commerce	863	179.6	3,659	168.4
6 Transport, storage and communication	205	200.0	1,026	281.7
7 Services	2,421	175.1	3,938	182.8

N=Not calculated since the number of women in the sample is below 25

* Data appear to be defective

TABLE 34—Age Specific Marital Fertility Rates (A.S.M.F.R.) by Characteristics

Characteristics : Religion and tribe

Age group	Hindu				Muslim				Jain*			
	No. of women		A. S. M. F. R.		No. of women		A. S. M. F. R.		No. of women		A. S. M. F. R.	
	R	U	R	U	R	U	R	U	R	U	R	U
1	2	3	4	5	6	7	8	9	10	11	12	13
13–17	885	273	38.4	69.6	19	29	105.3	137.9	N	4	N	0.0
18–22	4,566	2,542	203.2	250.6	240	373	304.2	244.0	N	88	N	238.6
23–27	4,102	2,815	250.9	283.1	295	394	223.7	246.2	N	152	N	210.5
28–32	4,521	2,915	226.6	223.3	282	427	202.1	241.2	N	150	N	233.3
33–37	2,470	1,782	169.2	155.4	165	252	187.9	142.9	N	97	N	154.6
38–42	2,922	1,716	107.5	88.6	174	272	109.2	106.6	N	97	N	82.5
43–47	1,679	982	36.9	25.5	110	156	27.3	51.3	N	63	N	15.9
48+	3,105	1,585	9.0	3.8	202	271	5.0	14.8	N	108	N	0.0

Age group	Bhil, Vasava, Tadvi and Dungri Garasia				Dhodia				Other tribes			
	No. of women		A. S. M. F. R.		No. of women		A. S. M. F. R		No. of women		A. S. M. F. R.	
	R	U	R	U	R	U	R	U	R	U	R	U
1	14	15	16	17	18	19	20†	21	22	23	24	25
13–17	48	N	41.7	N	4	N	250.0	N	23	N	130.4	N
18–22	246	N	162.6	N	34	N	235.3	N	222	N	175.7	N
23–27	226	N	128.3	N	51	N	137.3	N	267	N	142.3	N
28–32	252	N	107.1	N	70	N	142.9	N	313	N	127.8	N
33–37	127	N	78.7	N	45	N	133.3	N	157	N	127.4	N
38–42	168	N	101.2	N	49	N	40.8	N	194	N	77.3	N
43–47	100	N	20.0	N	22	N	136.4	N	122	N	49.2	N
48+	166	N	12.0	N	46	N	21.7	N	182	N	0.0	N

N=A. S. M. F. R. have not been calculated in cases where the number of women in the differential group falls below 300

* Differential groups not considered due to small number of women in case of women in the groups 1 Christian 2 Other religions

† Data appear to be defective

TABLE 35—Age Specific Marital Fertility Rates (A.S.M.F.R.) by Characteristics

Characteristic : Woman's education

Age group	Others comprising just literates and uneducated				Formal schooling but high school or equivalent examination not passed				High school or equivalent examination†			
	No. of women		A. S. M. F. R.		No. of women		A. S. M. F. R.		No. of women		A. S. M. F. R.	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	2	3	4‡	5	6	7	8	9	10	11	12	13
13–17	825	191	43.6	78.5	154	120	39.0	75.0	N	1	N	0.0
18–22	4,482	1,735	209.1	262.2	836	1,256	186.6	237.3	N	87	N	137.9
23–27	4,358	1,907	237.0	262.2	598	1,425	239.1	285.6	N	99	N	242.4
28–32	4,915	1,970	211.8	257.4	538	1,582	217.5	180.1	N	73	N	219.2
33–37	2,693	1,346	166.0	165.7	291	829	137.5	131.5	N	26	N	115.4
38–42	3,297	1,413	103.7	97.0	240	736	125.0	77.4	N	19	N	105.3
43–47	1,948	852	38.0	29.3	103	372	19.4	29.6	N	15	N	0.0
48+	3,601	1,513	88.9	5.9	165	539	6.1	3.7	N	12	N	0.0

N=A. S. M. F. R. have not been calculated in cases where the number of women in the differential group falls below 300

† *Differential group not considered due to small number of women in case of Woman's education,* (Graduated from college)

‡ Data appear to be defective

TABLE 36—Age Specific Marital Fertility Rates (A.S.M.F.R.) by Characteristics

Characteristic : Husband's education

Age group	Others comprising just literates and uneducated				Formal schooling but high school or equivalent examination not passed				High school or equivalent examination				Graduated from college			
	No. of women		A.S.M.F.R.		No. of women		A.S.M.F.R.		No. of women		A.S.M.F.R.		No. of women		A.S.M.F.R.	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	2	3	4	5	6	7	8	9	10	11	12†	13	14	15	16	17
13–17	603	114	39.8	87.7	358	159	44.7	75.5	17	38	117.6	52.6	N	1	N	0.0
18–22	3,267	866	196.8	262.1	1,929	1,726	220.8	254.3	112	391	196.4	214.8	N	100	N	200.0
23–27	3,239	891	233.4	271.6	1,624	2,013	240.8	279.2	83	375	301.2	266.7	N	181	N	221.0
28–32	3,674	979	208.5	253.3	1,727	2,132	220.6	219.0	49	367	224.5	209.8	N	157	N	184.7
33–37	1,973	605	172.3	196.7	968	1,314	146.7	149.2	41	209	122.0	86.1	N	77	N	103.9
38–42	2,508	607	105.3	107.1	1,000	1,311	103.0	83.9	28	178	178.6	95.5	N	77	N	51.9
43–47	1,483	386	41.8	41.5	551	700	25.4	25.7	11	104	0.0	9.6	N	50	N	20.0
48+	2,860	665	9.8	3.0	877	1,189	5.7	6.7	25	139	0.0	7.2	N	71	N	0.0

N=A. S. M. F. R. have not been calculated in cases where the number of women in the differential group falls below 300

† Data appear to be defective

TABLE 37—Age Specific Marital Fertility Rates (A.S.M.F.R.) by Characteristics

Characteristic : Nature of work

Age group	Technical, professional and related workers				Administrative, executive and managerial workers				Clerical and related workers				Sales workers			
	No. of women		A.S.M.F.R.		No. of women		A.S.M.F.R.		No. of women		A.S.M.F.R.		No. of women		A.S.M.F.R.	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
13–17	12	14	83.3	71.4	N	3	N	0.0	N	14	N	214.2	18	49	0.0	40.8
18–22	113	150	230.1	266.7	N	78	N	282.1	N	296	N	189.2	167	544	251.5	257.4
23–27	105	189	276.2	254.0	N	110	N	227.1	N	334	N	266.5	153	715	241.8	279.7
28–32	89	171	213.5	193.0	N	115	N	287.0	N	347	N	190.2	175	792	217.1	204.5
33–37	53	96	113.2	135.4	N	92	N	97.8	N	209	N	67.0	136	469	125.0	132.2
38–42	46	126	65.2	71.4	N	68	N	88.2	N	206	N	58.3	116	495	137.9	92.9
43–47	34	60	0.0	50.0	N	44	N	0.0	N	113	N	17.7	59	266	0.0	33.8
48+	66	121	0.0	16.5	N	72	N	13.9	N	144	N	0.0	114	484	8.8	6.2

Age group	Farmers				Hunters, loggers and related workers				Production process workers and craftsmen				Unskilled workers			
	No. of women		A.S.M.F.R.		No. of women		A.S.M.F.R.		No. of women		A.S.M.F.R.		No. of women		A.S.M.F.R.	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33
13–17	745	39	49.7	76.9	16	N	0.0	N	47	71	63.8	98.6	48	51	0.0	78.4
18–22	3,940	275	203.6	229.1	127	N	196.8	N	350	836	197.1	276.3	372	465	190.9	264.5
23–27	3,753	304	236.3	282.9	83	N	277.1	N	351	975	233.6	273.8	333	426	216.2	262.9
28–32	4,214	316	206.9	234.2	76	N	197.4	N	341	1,006	240.5	258.4	378	466	240.7	218.9
33–37	2,266	187	168.1	197.9	51	N	196.1	N	169	639	171.6	176.8	202	269	158.4	200.7
38–42	2,765	227	105.2	123.3	63	N	95.2	N	181	536	121.5	84.0	258	253	85.3	102.8
43–47	1,609	141	42.3	35.5	28	N	0.0	N	119	289	16.8	13.8	124	134	40.3	44.8
48+	2,825	238	9.6	4.2	50	N	20.0	N	178	329	16.9	0.0	208	195	4.8	0.0

NOTE :

Age Specific Marital Fertility Rate have not been calculated in cases where the number of women in the different groups falls below 300

TABLE 38—Age Specific Marital Fertility Rates (A.S.M.F.R.) by Characteristics

Characteristic : Nature of industry

Age group	Agriculture, where occupation is farming				Agriculture, where occupation is other than farming				Manufacture*				Building and construction			
	No. of women		A.S.M.F.R.		No. of women		A.S.M.F.R.		No. of women		A.S.M.F.R.		No. of women		A.S.M.F.R.	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
13–17	745	39	49.7	76.9	16	N	0.0	N	43	84	23.3	95.2	N	3	N	333.3
18–22	3,940	275	203.6	229.1	125	N	200.0	N	359	911	197.8	273.3	N	82	N	195.1
23–27	3,753	304	236.3	282.9	79	N	291.1	N	350	1,069	228.6	247.1	N	93	N	236.6
28–32	4,214	316	206.9	234.2	74	N	202.7	N	344	1,164	247.1	255.2	N	83	N	216.9
33–37	2,266	187	168.1	197.9	50	N	200.0	N	191	709	172.8	172.1	N	69	N	144.9
38–42	2,765	227	105.2	123.3	61	N	98.4	N	191	593	109.9	86.0	N	57	N	105.3
43–47	1,609	141	42.3	35.5	27	N	0.0	N	118	321	25.4	18.7	N	32	N	0.0
48+	2,825	238	9.6	4.2	49	N	20.4	N	166	366	18.1	0.0	N	46	N	0.0

Age group	Commerce				Transport, storage and communication				Services			
	No. of women		A.S.M.F.R.		No. of women		A.S.M.F.R.		No. of women		A.S.M.F.R.	
	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban	Rural	Urban
1	18	19	20	21	22	23	24	25†	26	27	28	29
13–17	19	51	0.0	58.8	N	20	N	200.0	66	62	30.3	64.5
18–22	177	619	242.9	248.8	N	215	N	274.4	536	814	205.2	242.0
23–27	161	766	236.0	280.7	N	253	N	320.2	483	873	238.1	250.9
28–32	184	856	222.8	205.6	N	253	N	253.0	537	859	236.5	202.6
33–37	139	526	122.3	266.2	N	115	N	600.0	282	515	124.1	137.9
38–42	119	545	134.5	88.1	N	111	N	99.1	333	536	90.1	84.0
43–47	64	296	0.0	33.8	N	59	N	16.9	184	279	27.2	35.8
48+	125	524	8.0	57.3	N	68	N	0.0	281	432	3.6	13.9

N=Age Specific Marital Fertility Rates have not been calculated in cases where the number of women in the differential groups falls below 300

* Differential groups not considered due to small number of women in group "Quarrying and mining"

† Data appear to be defective

LIST OF AGENTS FOR THE SALE OF GOVERNMENT OF INDIA PUBLICATIONS
(AS ON 17-2-1964)

AGARTALA—

Laxmi Bhandar Books & Scientific Sales (R)

AGRA—

National Book House, Jeoni Mandi
Wadhawa & Co., 45, Civil Lines
Banwari Lal Jain, Publishers, Moti Katra (R)
English Book Depot, Sadar Bazar, Agra Cantt. (R)

AHMADNAGAR—

V.T. Jorakar, Prop., Rama General Stores, Navi Path (R)

AHMEDABAD—

Balgovind Kuber Dass & Co., Gandhi Road
Chandra Kant Chimanlal Vora, Gandhi Road
New Order Book Co., Ellis Bridge
Mahajan Bros., Opp., Khadia Police Gate (R)
Sastu Kitab Ghar, Near Relief Talkies, Patthar Kuva, Relief Road

AJMER—

Book-Land, 663, Madar Gate
Rajputana Book House, Station Road
Law Book House, 271, Hathi Bhata
Vijay Bros., Kutchery Road (R)
Krishna Bros., Kutchery Road (R)

ALIGARH—

Friends' Book House, Muslim University Market

ALLAHABAD—

Superintendent, Printing & Stationery, U.P.
Kitabistan, 17-A, Kamla Nehru Road
Law Book Co., Sardar Patel Marg, P. Box 4
Ram Narain Lal Beni Modho, 2-A, Katra Road
Universal Book Co., 20, M.G. Road
The University Book Agency (of Lahore), Elgin Road
Wadhwa & Co., 23, M.G. Marg (R)
Bharat Law House, 15, Mahatma Gandhi Marg (R)
Ram Narain Lal Beni Prashad, 2-A, Katra Road (R)

AMBALA—

English Book Depot, Ambala Cantt.
Seth Law House, 8719, Railway Road, Ambala Cantt. (R)

AMRITSAR—

The Law Book Agency, G. T. Road, Putligarh
S. Gupta, Agent, Government Publications, Near P.O. Majith Mandi
Amar Nath & Sons, Near P. O. Majith Mandi

ANAND—

Vijaya Stores, Station Road (R)
Charotar Book Stall, Tulsi Sadan, Stn. Road (R)

ASANSOL—

D. N. Roy & R. K. Roy, Booksellers, Atwal Building (R)

BANGALORE—

The Bangalore Legal Practitioner Co-operative Society Ltd., Bar Association Building
S.S. Book Emporium, 118, Mount Joy Road
The Bangalore Press, Lake View, Mysore Road, P.O. Box 507
The Standard Book Depot, Avenue Road
Vichara Sahitya Private Ltd., Balepet
Makkala Pustaka Press, Balamandira, Gandhinagar
Maruthi Book Depot, Avenue Road (R)
International Book House Private Ltd., 4-F, Mahatma Gandhi Road
Navakarnataka Pubns. Private Ltd., Majestic Circle (R)

BAREILLY—

Agarwal Brothers, Bara Bazar

BARODA—

Shri Chandrakant Mohan Lal Shah, Raopura (R)
Good Companions Booksellers, Publishers & Sub-Agent (R)
New Medical Book House, 540, Madan Zampa Road (R)

BEAWAR—

The Secretary, S. D. College, Co-operative Stores Ltd. (R)

BELGHARIA—

Granthlok, Antiquarian Booksellers & Publishers (24-Parganas), 5/1 Amlica Mukherjee Road

BHAGALPUR—

Paper Stationery Stores, D. N. Singh Road

BHOPAL—

Superintendent, State Government Press
Lyall Book Depot, Mohd. Din Bldg., Sultania Road
Delite Books, Opp., Bhopal Talkies (R)

BHUBANESWAR—

Ekamra Vidyabhaban, Eastern Tower, Room No. 3 (R)

BIJAPUR—

Shri D. V. Deshpande, Recognised Law Booksellers, Prop. Vinod Book Depot, Near Shiralshetti Chowk (R)

BIKANER—

Bhandani Bros. (R)

BILASPUR—

Sharma Book Stall, Sadar Bazar (R)

BOMBAY—

Superintendent, Printing & Stationery, Queens Road
Charles Lambert and Co., 101, Mahatma Gandhi Road
Co-operator's Book Depot, 5/32, Ahmed Sailor Bldg., Dadar
Current Book House, Maruti Lane, Raghunath Dadaji St.
Current Technical Literature Co., Private Ltd., India House, 1st Floor
International Book House Ltd., 9, Ash Lane, M. G. Road
Lakkani Book Depot, Girgaum
Elpees Agencies, 24, Bhangwadi, Kalbadevi
P.P.H. Book Stall, 190-B, Khetwadi Main Road
New Book Co., 188-190, Dr. Dadabhai Naoroji Road
Popular Book Depot, Lamington Road
Sunder Das Gian Chand, 601, Girgaum Road, Near Princess Street

BOMBAY-*contd.*

D. B. Taraporewala Sons & Co., (P) Ltd., 210, Dr. Dadabhai Naoroji Road
Thacker & Co., Rampart Row
N. M. Tripathi Private Ltd., Princess Street
The Kothari Book Depot, King Edward Road
P. H. Rama Krishna and Sons, 147, Rajaram Bhuvan, Shivaji Park Road No. 5 (R)
C. Jamnadas & Co., Booksellers, 146-C, Princess St.
Indo Nath & Co., A-6, Daulat Nagar Borivli
Minerva Book Shop, Shop No. 1/80, N. Subhas Road
Academic Book Co., Association Building, Girgaum Road (R)
Dominion Publishers, 23, Bell Building, Sir P. M. Road (R)
Bombay National History Society, 91 Walkeshwar Road (R)
Dowamadeo & Co., 16, Naziria Building, Ballard Estate (R)
Asian Trading Co., 310, the Miraball, P. B. 1505 (R)

CALCUTTA—

Chatterjee & Co., 3/1, Bacharam Chatterjee Lane
Dass Gupta & Co., Ltd., 54/3, College Street
Hindu Library, 69 A, Bolaram De Street
S. K. Lahiri & Co., Private Ltd., College Street
M.C. Sarkar & Sons Private Ltd., 14, Bankim Chatterjee Street
W. Newman & Co., Ltd., 3. Old Court House Street
Oxford Book & Stationery Co., 17, Park Street
R. Chambray & Co., Ltd., Kent House, P. 33, Mission Road Extension
S. C. Sarkar & Sons Private Ltd., I.C. College Square
Thacker Spink & Co., (1933) Private Ltd., 3, Esplanade East
Firma K. L. Mukhopadhaya, 6/1A, Banchha Ram Akrar Lane
K. K. Roy, P. Box No. 10210, Calcutta-19 (R)
Sm. P. D. Upadhyay, 77, Muktaram Babu Street (R)
Universal Book Dist., 8/2, Hastings Street (R)
Modern Book Depot, Chowringhee Centre (R)
Soor & Co., 125, Canning Street
S. Bhattacharjee, 49, Dharamtala Street (R)
Mukherjee Library, 10, Sarba Khan Road
Current Literature Co., 208, Mahatma Gandhi Road
The Book Depository, 4/1, Madan Street (1st Floor) (R)
Scientific Book Agency, Netaji Subhas Road (R)
Reliance Trading Co., 17/1, Banku Bihari Ghose Lane, District Howrah (R)
Indian Book Dist. Co., 6512, Mahatma Gandhi Road (R)

CALICUT—

Touring Book Stall (R)

CHANDIGARH—

Superinterdent Government Printing & Stationery, Punjab
Jain Law Agency, Flat No. 8, Sector No. 22
Rama News Agency, Booksellers, Sector No. 22
Universal Book Store, Booth 25, Sector 22-D
English Book Shop, 34, Sector 22-D (R)
Mehta Bros, 15-Z, Sector 22-B (R)
Tandan Book Depot, Shopping Centre, Sector 16 (R)
Kailash Law Publishers, Sector 22-B (R)

CHHINDWARA—

The Verma Book Depot (R)

COCHIN—

Saraswat Corporation Ltd., Palliarakav Road

CUTTACK—

Press Officer, Orissa Sectt.
Cuttack Law Times
Prabhat K. Mahapatra, Mangalabag, P.B. 35
D. P. Sur & Sons, Mangalabag (R)
Utkal Stores, Balu Bazar (R)

DEHRADUN—

Jugal Kishore & Co., Rajpur Road
National News Agency, Paltan Bazar
Bishan Singh and Mahendra Pal Singh, 318, Chukhuwala
Utam Pustak Bhandar, Paltan Bazar (R)

DELHI—

J.M. Jaina & Brothers, Mori Gate
Atma Ram & Sons, Kashmere Gate
Federal Law Book Depot, Kashmere Gate
Bahri Bros., 188, Lajpat Rai Market
Bawa Harkishan Dass Bedi (Vijaya General Agencies) P. B. 2027, Ahata Kedara, Chamalian Road
Book-Well, 4, Sant Narankari Colony, P. B. 1565
Imperial Publishing Co., 3, Faiz Bazar Daryaganj
Metropolitan Book Co., 1, Faiz Bazar
Publication Centre, Subzimandi
Youngman & Co., Nai Sarak
Indian Army Book Depot, 3, Daryaganj
All India Educational Supply Co., Shri Ram Buildings, Jawahar Nagar (R)
Dhanwant Medical & Law Book House, 1522, Lajpat Rai Market (R)
University Book House, 15, U. B. Bangalore Road, Jawahar Nagar (R)
Law Literature House, 2646, Balimaran (R)
Summer Brothers, P. O. Birla Lines (R)
Universal Book & Stationery Co., 16 Netaji Subhash Marg
B. Nath & Bros., 3808, Charkhawalan (Chowri Bazar) (R)
Rajkamal Prakashan Private Ltd., 8, Faiz Bazar
Premier Book Co., Printers, Publishers & Booksellers, Nai Sarak (R)
Universal Book Traders, 80, Gokhale Market
Tech. & Commercial Book Coy., 75, Gokhle Market (R)
Saini Law Publishing Co., 1416, Chabiganj, Kashmere Gate (R)
G.M. Ahuja, Booksellers & Stationers, 309, Nehru Bazar (R)
Sat Narain & Sons, 3141 Mohd. Ali Bazar, Mori Gate

DEHLI-*contd.*
- Kitab Mahal (Wholesale Div.) Private Ltd., 28, Faiz Bazar
- Hindu Sahitya Sansar, Nai Sarak (R)
- Munshi Ram Manohar Lal, Oriental Booksellers & Publishers, P. B. 1165, Nai Sarak (R)
- K. L. Seth, Suppliers of Law, Commercial Tech. Books, Shanti Nagar, Ganeshpura (R)
- Adarsh Publishing Service, 5 A/10 Ansari Road (R)

DHANBAD—
- Ismag Co-operative Stores Ltd., P.O. Indian School of Mines
- New Sketch Press, Post Box 26 (R)

DHARWAR—
- The Agricultural College, Consumers Co-op. Society (R)
- Rameshraya Book Depot, Subhas Road (R)
- Karnatakaya Sahitya Mandira of Publishers and Booksellers

ERNAKULAM—
- Pai & Co., Cloth Bazar Road (R)
- South India Traders C/o Constitutional Journal

FEROZEPUR—
- English Book Depot, 78, Jhoke Road

GAUHATI—
- Mokshada Pustakalaya

GAYA—
- Sahitya Sadan, Gautam Budha Marg

GHAZIABAD—
- Jayana Book Agency (R)

GORAKHPUR—
- Vishwa Vidyalaya Prakashan, Nakhes Road

GUDUR—
- The General Manager, The N.D.C. Publishing & Ptg. Society Ltd. (R)

GUNTUR—
- Book Lovers Private Ltd., Kadriguda, Chowrasta

GWALIOR—
- Superintendent Printing & Stationery, M.B.
- Loyal Book Depot, Patankar Bazar, Lashkar
- M. C. Daftari, Prop. M. B. Jain & Bros., Booksellers, Sarafa, Lashkar (R)

HUBLI—
- Pervaje's Book House, Koppikar Road (R)

HYDERABAD—
- Director, Government Press
- The Swaraj Book Depot, Lakdikapul
- Book Lovers Private Ltd. (R)
- Labour Law Publications, 873, Sultan Bazar (R)

IMPHAL—
- Tikendra & Sons Bookseller (R)

INDORE—
- Wadhawa & Co., 56, M.G. Road
- Swarup Brother's Khajuri Bazar (R)
- Madhya Pradesh Book Centre, 41, Ahilya Pura (R)
- Modern Book House, Shiv Vilas Palace (R)
- Navyug Sahitya Sadan, Publishers & Booksellers, 10, Khajuri Bazar (R)

JABALPUR—
- Modern Book House, 286, Jawaharganj
- National Book House, 135, Jai Prakash Narain Marg (R)

JAIPUR—
- Government Printing & Stationery Department, Rajasthan
- Bharat Law House, Booksellers & Publishers, Opp. Prem Prakash Cinema
- Garg Book Co., Tripolia Bazar
- Vani Mandir, Sawai Mansingh Highway
- Kalyan Mal & Sons., Tripolia Bazar (R)
- Popular Book Depot, Chaura Rasta
- Krishna Book Depot, Chaura Rasta (R)
- Dominion Law Depot, Shah Building, P. B. No. 23 (R)

JAMNAGAR—
- Swedeshi Vastu Bhandar

JAMSHEDPUR—
- Amar Kitab Ghar, Diagonal Road, P. B. 78
- Gupta Stores, Dhatkidih
- Sanyal Bros, Booksellers & News Agents, Bistapur Market (R)

JAWALAPUR—
- Sahyog Book Depot (R)

JHUNJHUNU—
- Shashi Kumar Sarat Chand (R)
- Kapram Prakashan Prasaran, 1/90 Namdha Niwas Azad Marg (R)

JODHPUR—
- Dwarka Das Rathi, Wholesale Books and News Agents
- Kitab-Ghar, Sojati Gate
- Choppra Brothers, Tripolia Bazar

JULLNUDUR—
- Hazooria Bros., Mai Hiran Gate (R)
- Jain General House, Bazar Bansanwala
- University Publishers, Railway Road (R)

KANPUR—
- Advani & Co., P. Box 100, The Mall
- Sahitya Niketan, Shradhanand Park
- The Universal Book Stall, The Mall
- Raj Corporation, Raj House, P. B. 200, Chowk (R)

KARUR—
- Shri V. Nagaraja Rao, 26, Srinivasapuram (R)

KODARMA—
- The Bhagwati Press, P. O. Jhumri Tilaiya, Dt. Hazaribagh

KOLHAPUR—
- Maharashtra Granth Bhandar, Mahadwar Road (R)

KOTA—
- Kota Book Depot (R)

KUMTA—
- S. V. Kamat, Booksellers & Stationers (N. Kanara)

LUCKNOW—
- Soochna Sahitya Depot (State Book Depot)
- Balkrishna Book Co., Ltd., Hazratganj
- British Book Depot, 84, Hazratganj

LACKNOW-*contd.*
Ram Advani, Hazratganj, P. B. 154
Universal Publishers (P) Ltd., Hazratganj
Eastern Book Co., Lalbagh Road
Civil & Military Educational Stores, 106/B Sadar Bazar(R)
Acquarium Supply Co., 213, Faizabad Road (R)
Law Book Mart, Amin-Ud-Daula Park (R)

LUDHIANA—
Lyall Book Depot, Chaura Bazar
Mohindra Brothers, Katcheri Road (R)
Nanda Stationery Bhandar, Pustak Bazar (R)
The Pharmacy News, Pindi Street (R)

MADRAS—
Superintendent, Government Press, Mount Road
Account Test Institute, P. O. 760 Emgore
C. Subbiah Chetty & Co., Triplicane
K. Krishnamurty, Post Box 384
Presidency Book Supplies, 8, Pycrofts Road, Triplicane
P. Vardhachary & Co., 8, Linghi Chetty Street
Palani Parchuram, 3, Pycrofts Road, Triplicane
NCBH Private Ltd., 199, Mount Road (R)
V. Sadanand, The Personal Bookshop, 10, Congress Buildings, 111, Mount Road (R)

MADURAI—
Oriental Book House, 258, West Masi Street
Vivekananda Press, 48, West Masi Street

MANDYA SUGAR TOWN—
K. N. Narimhe Gowda & Sons (R)

MANGALORE—
U. R. Shenoye Sons, Car Street, P. Box 128

MANJESHWAR—
Mukenda Krishna Nayak (R)

MATHURA—
Rath & Co., Tilohi Building, Bengali Ghat (R)

MEERUT—
Prakash Educational Stores, Subhas Bazar
Hind Chitra Press, West Kutchery Road
Loyal Book Depot, Chhipi Tank
Bharat Educational Stores, Chhippi Tank (R)
Universal Book Depot, Booksellers & News Agents (R)

MONGHYR—
Anusandhan, Minerva Press Buildings (R)

MUSSOORIE—
Cambridge Book Depot, The Mall (R)
Hind Traders (R)

MUZAFFARNAGAR—
Mittal & Co., 85-C, New Mandi (R)
B. S. Jain & Co., 71, Abupura (R)

MUZAFFARPUR—
Scientific & Educational Supply Syndicate
Legal Corner, Tikmanio House, Amgola Road (R)
Tirhut Book Depot (R)

MYSORE—
H. Venkataramiah & Sons, New Statue Circle
Peoples Book House, Opp., Jagan Mohan Palace
Geeta Book House, Booksellers & Publishers Krishnamurthipuram (R)
News Paper House, Lansdowne Building (R)
Indian Mercentile Corporation, Toy Palace Ramvilas (R)

NADIAD—
R. S. Desay, Station Road (R)

NAGPUR—
Superintendent, Government Press & Book Depot
Western Book Depot, Residency Road
The Asstt. Secretary, Mineral Industry Association, Mineral House (R)

NAINITAL—
Coural Book Depot, Bara Bazar (R)

NANDED—
Book Centre, College, Law General Books, Station Road (R)
Hindustan General Stores, Paper & Stationery Merchants, P. B. No. 51 (R)
Sanjoy Book Agency, Vazirabad (R)

NEW DELHI—
Amrit Book Co., Connaught Circus
Bhawani & Sons, 8–F, Connaught Place
Central News Agency, 23/90, Connaught Circus
Empire Book Depot, 278 Aliganj
English Book Stores, 7-L, Connaught Circus P.O.B. 328
Faqir Chand & Sons, 15-A, Khan Market
Jain Book Agency, C-9, Prem House, Connaught Place
Oxford Book & Stationery Co., Scindia House
Ram Krishna & Sons (of Lahore) 16/B, Connaught Place
Sikh Publishing House, 7-C, Connaught Place
Suneja Book Centre, 24/90, Connaught Circus
United Book Agency, 31, Municipal Market, Connaught Circus
Jayana Book Depot, Chhaparwala Kuan, Karol Bagh
Navayug Traders, Desh Bandhu Gupta Road, Dev Nagar
Saraswati Book Depot, 15, Lady Harding Road
The Secretary, Indian Met. Society, Lodi Road
New Book Depot, Latest Books, Periodicals, Sty. & Novelles, P.B. 96, Connaught Place
Mehra Brothers, 50-G, Kalkaji
Luxmi Book Stores, 42, Janpath (R)
Hindi Book House, 82, Janpath (R)
People Publishing House (P) Ltd., Rani Jhansi Road
R. K. Publishers, 23, Beadon Pura, Karol Bagh (R)
Sharma Bros., 17, New Market, Moti Nagar
Aapki Dukan, 5/5777, Dev Nagar (R)
Sarvodaya Service, 66A-1, Rohtak Road, P.B. 2521 (R)
H. Chandson, P. B. No. 3034 (R)
The Secretary, Federation of Association of Small Industry of India, 23-B/2, Rohtak Road (R)
Standard Booksellers & Stationers, Palam Enclave (R)
Lakshmi Book Depot, 57, Regarpura (R)
Sant Ram Booksellers, 16, Few Municipal Market Lody Colony (R)

PANJIM—
Singhals Book House P.O.B. 70 Near the Church (R)
Sagoon Gaydev Dhoud, Booksellers, 5-7 Rua, 3 Idc Jameria (R)

PATHANKOT—
The Krishna Book Depot, Main Bazar (R)

List of Agents-*contd.*

PATIALA—

Superintendent Bhupendra State Press
Jain & Co., 17 Shah Nashin Bazar

PATNA—

Superintendent Government Printing (Bihar)
J. N. P. Agarwal & Co., Padri-Ki-Haveli Raghunath Bhawan
Luxmi Trading Co., Padri-Ki-Haveli
Moti Lal Banarsi Dass, Bankipore
Bengal Law House, Chowhatta (R)

PITHORAGARH—

Maniram Punetha & Sons (R)

PONDICHERRY—

M/s. Honesty Book House, 9 Rue Duplix (R)

POONA—

Deccan Book Stall, Deccan Gymkhana
Imperial Book Depot, 266, M. G. Road
International Book Service, Deccan Gymkhana
Raka Book Agency, Opp. Natu's Chawl, Near Appa Balwant Chowk
Utility Book Depot, 1339, Shivaji Nagar (R)

PUDUKOTTAI—

Shri P. N. Swaminathan Sivam & Co., East Main Road (R)

RAJKOT—

Mohan Lal Dossabhai Shah, Booksellers and Sub-Agents

RANCHI—

Crown Book Depot, Upper Bazar
Pustak Mahal, Upper Bazar (R)

REWA—

Superintendent, Government State Emporium V. P.

ROURKELA—

The Rourkela Review (R)

SAHARANPUR—

Chandra Bharata Pustak Bhandar, Court Road (R)

SECUNDERABAD—

Hindustan Diary Publishers, Market Street

SILCHAR—

Shri Nishitto Sen Nazirpatti (R)

SIMLA—

Superindent, Himachal Pradesh Government
Minerva Book Shop, The Mall
The New Book Depot, 79, The Mall

SINNAR—

Shri N. N. Jakhadi, Agent, Times of India, Sinnar (Nasik) (R)

Government of India Kitab Mahal, Janpath, Opp. India Coffee House, New Delhi
Government of India Book Depot, 8 Hastings Street, Calcutta
} For local seles

SHILLONG—

The Officer-in-Charge, Assam Government B. D.
Chapala Bookstall, P. B. No. 1 (R)

SONEPAT—

United Book Agency (R)

SRINAGAR—

The Kashmir Bookshop, Residency Road

SURAT—

Shri Gajanan Pustakalaya, Tower Road

TIRUCHIRPALLI—

Kalpana Publishers, Woisur
S. Krishnaswami & Co., 35, Subhash Chander Bose Road
Palamiappa Bros. (R)

TRIVANDRUM—

International Book Depot, Main Road
Reddear Press & Book Depot, P.B. No. 4 (R)

TUTICORIN—

Shri K. Thiagarajan, 10-C, French Chapal Road (R)

UDAIPUR—

Jagdish & Co., Inside Surajapole
Book Center, Maharana, Bhopal Consumers, Co-op. Society Ltd. (R)

UJJAIN—

Manak Chand Book Depot, Sati Gate (R)

VARANASI—

Students Friends & Co., Lanka (R)
Chowkhamba Sanskrit Series Office, Gopal Mandir Road, P.B. 8
Glob Book Centre (R)
Kohinoor Stores, University Road, Lanka
B. H. U. Book Depot (R)

VELLORE—

A. Venkatasubhan, Law Booksellers

VIJAYAWADA—

The Book & Review Centre, Eluru Road, Governpet (R)

VISAKHAPATAM—

Gupta Brothers, Vizia Building
Book Centre, 11/97, Main Road
The Secy. Andhra University, General Co-op. Stores Ltd. (R)

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Sarda & Co. (R)

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High Commissioner for India in London, India House, London, W.C. 2

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Higginbothams & Co., Ltd., Mount Road, Madras

M. Gulab Singh & Sons Private Ltd., Mathura Road, New Delhi

Foreign

S/S. Education Enterprice Private Ltd., Kathmandu (Nepal)

S/S. Aktie Bologat, C.E. Fritzes Kungl, Hovobokhandel, Fredsgation-2 Box 1656, Stockholm-16 (Sweden)

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The Proprietor, Book Centre, Lakshmi Mansons, 49, The Mall, Lahore (Pakistan)

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The Head Clerk, Govt. Book Depot Ahmedabad

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The Employment Officer, Employment Exchange, Dhar

The Asstt. Director, Footwear Extension Centre, Polo Ground No. 1, Jodhpur

The Officer 1/C., Extension Centre, Club Road, Muzaffarpur

The Director, Indian Bureau of Mines, Govt. of India, Ministry of Mines & Fuel, Nagpur

The Asstt. Director, Industrial Extension Centre, Nadiad (Gujarat)

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Government Printing & Stationery, Rajkot

The Officer I/C., Extension Centre, Industrial Estate, Kokar Ranchi

The Director, S. I. S. I. Industrial Extension Centre, Udhna, Surat

The Registrar of Companies, Narayani Building, 27, Erabourne Road, Calcutta-1

The Registrar of Companies, Kerala, 50, Feet Road, Ernakulam

The Registrar of Companies, H. No. 3-5-83, Hyderguda, Hyderabad

Registrar of Companies, Assam, Manipur and Tripura, Shillong

Registrar of Companies, Sunlight Insurance Building, Ajmeri Gate Extention, New Delhi

The Registrar of Companies, Punjab and Himachal, Pradesh, Link Road, Jullundur City

Registrar of Companies, Bihar, Jammal Road, Patna-1

Registrar of Companies, Raj, & Ajmer; Shri Kamta Prasad House, 1st Floor, 'C' Scheme, Ashok Marg, Jaipur

The Registrar of Companies, Andhra Bank Building, 6 Linghi Chetty Street, P. B. 1530, Madras

The Registrar of Companies, Mahatma Gandhi Road, West Cott. Bldg. P. B. 334, Kanpur

The Registrar of Companies, Everest 100, Marine Drive, Bombay

The Registrar of Companies. 162, Brigade Road, Bangalore

The Registrar of Companies, Gwalior

Asstt. Director, Extension Centre, Bhuli Road, Dhanbad

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The Registrar of Companies, Gujarat State, Gujarat Samachar Building, Ahmedabad

Publication Division, Sales Depot, North Block, New Delhi

The Development Commissioner, Small Scale Industries New Delhi

The Officer I/C., University Employment Bureau, Lucknow

Officer I/C., S.I.S.I. Extension Centre, Malda

Officer I/C., S. I. S. I. Extension Centre, Habra, Tabaluria, 24-Parganas

Officer I/C., S. I. S. I. Model Carpentry Workshop, Piyali Nagar, P.O. Burnipur

Officer I/C., S. I. S. I. Chrontanning Extension Centre, Tangra 33, North Topsia Road, Calcutta-46

Officer I/C., S. I. S. I. Extension Centre, (Footwear), Calcutta

Asstt. Director, Extension Centre, Hyderabad

Asstt. Director, Extension Centre, Krishna Distt. (A.P.)

Employment Officer, Employment Exchange, Jhabua

Dy. Director Incharge, S. I. S. I., C/o Chief Civil Admn. Goa, Panjim

The Registrar of Trade Unions, Kanpur

The Employment Officer, Employment Exchange, Gopal Bhavan, Mornia

The Officer I/C., State Information Centre, Hyderabad

The Registrar of Companies, Pondicherry

The Asstt. Director of Publicity and Information, Vidhana Saubha (P. B. 271) Banglore