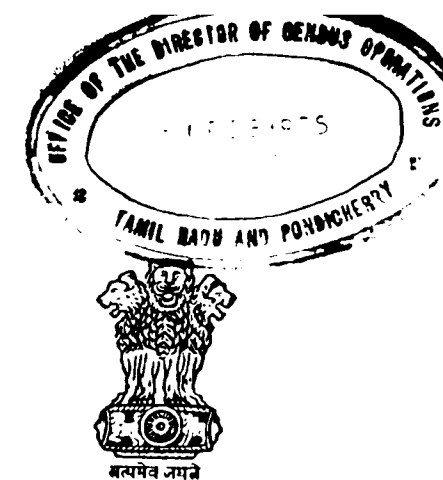




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KERALA

PART I B

REPORT ON VITAL STATISTICS OF THE DECADE
AND
FERTILITY SURVEY

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PREFACE

This book consists of the report on the Vital Statistics of Kerala for the decade 1951-61 and the report on the Fertility Survey conducted in January 1962 under the auspices of the Census Organization in the blocks selected for Post Enumeration Check in connection with the 1961 Census. The former deals with the quality and characteristics of the registration of births and deaths and the improvements introduced in the scheme of the registration of Vital Statistics. The latter contains an analysis of the Fertility Survey with special reference to current fertility and life time fertility. It is hoped that this attempt will serve as a useful basis for further studies in the field.

I would like to place on record my deep sense of gratitude to Shri M. K. Devassy, I. A. S., Superintendent of Census Operations for his valuable guidance and encouragement in bringing out this volume.

I am deeply indebted to Dr. R. S. Kurup, Deputy Director, Bureau of Economics and Statistics, Government of Kerala, for providing me with the basic data for the report on Vital Statistics and for his personal contribution to the chapter on "Schemes for improvement of Vital Statistics".

I am very grateful to Shri S. Raghavachari, Assistant Registrar General, for going through the reports and offering valuable suggestions.

I shall be failing in my duty if I do not acknowledge the devoted assistance rendered by Sarvashri S. Jayashanker and K. Gopinathan, Tabulation Officers of this office in the collection, compilation and analysis of data and the drafting of the reports on Vital Statistics and Fertility Survey respectively.

The charts and maps in the reports were prepared by Sarvashri K. Krishna Pillai and R. Prabhakaran, draftsmen and matters connected with printing were looked after by Shri N. Ravindranathan Thampi, Printing Inspector and Sarvashri N. Aravindan and N. Madhavan, Proof Readers. I am grateful to all of them.

My thanks are also due to the Manager, C. M. S. Press, Kottayam for undertaking the printing of this volume.

Trivandrum,
10th December, 1970.

B. T. PILLAI

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**REPORT ON VITAL STATISTICS
OF THE DECADE**

INTRODUCTION

The term Vital records, in its broadest sense, can include 'those dealing with births, deaths, still-births, foetal deaths, marriages, adoptions, legitimations, recognitions, annulments, divorces and separations; in short all the events which have to do with an individual's entrance into or departure from life, together with changes in civil status. For legal reasons such events have, in many countries, long been recorded in registers of which the most common are the register of births, the register of marriages and the register of deaths. Vital Statistics or registration statistics are prepared from these registers, generally by means of transcripts or transcriptions from the registers or from draft entries in the registers'.¹ Vital and health records are used for epidemiologic purposes such as source of data for measurement of the incidence and prevalence of disease, studies relating to etiology and therapy, studies pertaining to the effect of natality, mortality and migration etc. In general these records facilitate to have an overall picture of the levels of health and demographic conditions of the people and the factors influencing them. In this report an attempt is being made to find out how far the vital records available through registration in Kerala State could be used to depict the birth and death statistics for the period 1951-61.

Growth of Registration System in India

It is very difficult to get an authentic and chronological account of the development of the system of vital registration in India. *The Imperial Gazetteer* of India gives a brief appraisal of the conditions of the Vital Statistics registration that prevailed at the beginning of the present century. An extract of the relevant portion of the *Gazetteer*² is furnished below :—"When the

Royal Commission of 1863 submitted their report there was practically no registration outside the Presidency towns. In accordance with their recommendation, arrangements were made to register deaths in towns and rural areas through the agency of the Police and of the municipal and subordinate revenue establishments. In Bengal, where the bulk of the province is permanently settled and the rural revenue establishments are weak, the difficulties proved greater than elsewhere, and a beginning was not made until 1870, by which time registration of deaths was in full force in other provinces. The registration of births presents more formidable obstacles. Official inquiry regarding the birth of children was apt to excite religious or caste prejudice, or superstitious fear, and the ignorant were suspicious of the motives which promoted an inquisition whose object they would not understand. Birth registration was started in Bombay in 1848 and in Madras about 1855 in other provinces it began at different time between 1870 and 1880; at first in selected areas and afterwards throughout the country. By 1882 it was general in all Provinces except Bengal,

REPORT ON VITAL STATISTICS

A "medical section" should be created in the Registrar General's Office for the purpose of providing statistical help to the Central Health Department in its day to day administration and in the carrying out of special investigations.

The Provincial Organisation:— The provincial statistical organization should correspond to that proposed for the centre and the functions of the provincial officer in charge should be similar to those of the Registrar General. The designation of the provincial officer may be the Provincial Registrar of Vital and Population Statistics. He should be attached to the Provincial Ministry of Health for administrative control and should work independently of, but in close co-operation with the Director of Health Services.

The provision of "a medical section" in the office of the Provincial Registrar for the same functions as those suggested in connection with the Central Health Department is also necessary.

We have also made suitable recommendations for a District Vital Statistics organisation, which will work under the control of the Provincial Registrar.

The employment of statisticians in increasing numbers will become necessary in the Vital Statistics, health and other department of Government. Industry is also likely to employ a growing number of persons trained in modern statistical methods. In the circumstances we recommend the development of facilities for statistical training of a high order in the Universities and in certain other centres."

The above recommendations of the Bhore Committee were studied and discussed in detail at a conference of Health Ministers held in 1948. They appointed an expert Committee of officials called the 'Vital Statistics Committee to examine further the recommendation in detail. The Committee approved the Bhore Committee's recommendation with certain modifications. In

May 1949 the Government of India as a first step towards the development and improvement in the systematic collection of Statistics and bearing upon the size and growth of population decided to constitute a single organization at the centre in the Ministry of Home Affairs under a Registrar General and ex-officio Census Commissioner to deal with population statistics including Vital Statistics and Census. The Government of India also appointed a Population Advisory Committee to advise the Registrar General in scientific and technical matters. In October 1951 the Population Advisory Committee approved an elaborate scheme for the improvement of population data prepared by the then Registrar General Shri R. A. Gopalaswami. Other important reports dealing with the function of Vital Statistics system in India are 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 the Improvement

Definition of Vital Events
(adopted by United Nations)

1.8 The definitions as adopted by the United Nations is reproduced below :

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.

Death is the permanent disappearance of all evidence of life at any time after live-birth has taken place (post-natal cessation of vital functions without capability of

resuscitation). This definition therefore excludes foetal deaths.

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 of 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.

Still-birth means late foetal death occurring after twenty-eight completed weeks of gestation or over.

Maternal death is the death caused to a woman by delivery and complications of pregnancy, child-birth and the puerperium.

Infant death is the death occurring to a child under one year of age.

CHAPTER II

QUALITY OF VITAL STATISTICS DATA

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and Statistics, Kerala are worth mentioning in this connection. Reports on the health conditions of Madras State published annually by the Government of Madras was of immense use for recasting the figures. There were a good number of changes in jurisdiction at the taluk and village level in October 1956 in the erstwhile Travancore-Cochin

State and in January 1957 in the Malabar district. All these changes have restrained us from recasting the figures below the State level for the period 1951-58. The changes in jurisdiction during the period 1951-61 and the population involved in those changes are furnished as an Appendix to this Report.

CHAPTER III

NATALITY STATISTICS FOR THE DECADE 1951-61

Introduction

This chapter is devoted to analyse the number of births, birth-rates and their differentials for the decade 1951-61 by rural-urban break-up and by administrative regions. As explained in the earlier chapter, there was very great difficulty in recasting the birth statistics for the period 1951-61 due to the Reorganisation of States and the consequent changes in the boundaries of the districts and taluks.

Birth and Birth-rates during the Decade

3.2 In 1961 there were 425,751 live-births registered in Kerala State as against 362,122 in 1951. Eventhough the number of births had shown an increase of 17.57 per cent the birth-rate had actually declined from 26.5 in 1951 to 25.0 in 1961. During the decade 1951 to 1961, the birth-rates of individual years show fluctuations but the 5 year averages indicate a very low declining trend. The lowest birth-rate recorded in the decade is in 1954 with 20.4 while the highest is in 1952 with 27.8 for 1,000 population. The following table gives the year-wise number of births registered and birth-rates for the decade 1951-61.

furnished below. The data relate to all the towns which have a population of 1 lakh and over in 1951 (i. e. Trivandrum, Calicut and Alleppey). The percentage of first order births is about 21 and the percentage gradually decreases as the birth order increases. About 52 per cent of total births relate to the birth orders less than 4.

Table 3.12
DISTRIBUTION OF BIRTHS BY ORDER OF BIRTHS, 1961

Birth order	Percentage
1	20.9
2	16.9
3	14.1
4	12.8
5	11.1
6	8.7
7	6.5
8	4.2
9	2.3
10+	2.5

Still-births

3.14 The still-birth-rate per mille of live-births worked out for the past five years shows a higher rate in urban areas as compared to rural areas. The following table illustrates this.

Table 3.13
STILL-BIRTH-RATE, 1961

Year	Still-birth-rate		
	Total	Rural	Urban
1957	12.01	7.50	40.15
1958	10.92	7.10	32.81
1959	10.30	5.44	35.95
1960	11.68	6.95	34.60
1961	9.06	5.07	28.59

3.15 Among the districts of Kerala Quilon district has higher still-birth-rate in rural and urban areas while the lowest rates are recorded in Alleppey district.

MORTALITY STATISTICS

4.10 The registered death-rates of the remaining municipal towns show that Parur town has the highest death-rate in 1961 with 16.0. Badagara municipality has a very low rate of registration with 3.2 deaths per 1,000 population. The subjoined table gives the death-rates of municipal towns with a population of less than 30,000.

Table 4.10

DEATH-RATES IN MUNICIPAL TOWNS WITH A POPULATION OF LESS THAN 30,000, 1961

District	Town	Death-rate
1	2	3
Kozhikode	Badagara	3.2
Palghat	Chittur - Thathamangalam	10.9
Trichur	Kunnamkulam	12.0
	Irinjalakuda	5.2
Ernakulam	Parur	16.0
	Alwaye	10.8
	Perumbavoor	6.0
	Muvattupuzha	11.3
Kottayam	Palai	5.8
	Vaikom	12.0
Alleppey	Sherthai	11.5
	Thiruvalla	9.4
	Kayamkulam	5.6
	Mavelikkara	12.9
Trivandrum	Attingal	6.3
	Neyyattinkara	4.9

MORTALITY STATISTICS

1	2	3	4
1957	21,781	61	48
1958	18,537	50	
1959	20,214	50	
1960	14,987	40	
1961	17,804	42	

4.15 The subjoined table gives the infant deaths and infant death-rates for the districts of Kerala. The three northernmost districts viz. Cannanore, Kozhikode and Palghat have infant death-rates higher than the State average in the year 1961. Among the districts, Palghat district has the highest infant mortality rate in all the three years.

Table 4.15
INFANT DEATHS BY DISTRICTS, 1959-61

District	Infant deaths			Infant death-rates		
	1959	1960	1961	1959	1960	1961
1	2	3	4	5	6	7
Cannanore	3,159	2,361	2,797	61	51	52
Kozhikode	4,240	2,694	3,561	68	47	50
Palghat	4,175					

MORTALITY STATISTICS

Table 4.26

PERCENTAGE DISTRIBUTION OF CAUSE OF DEATH BY DISTRICTS, 1959-61

Cause of death	Year	State	Cannanore	Kozhikode	Palghat	Trichur	Ernakulam	Kottayam	Alleppey	Quilon	Trivandrum
1	2	3	4	5	6	7	8	9	10	11	12
Cholera	1959	...	...	...	...	...	...	...	...	...	...
	1960	...	...	...	...	...	...	...	...	...	...
	1961	...	...	...	...	...	...	...	...	...	...
Small-pox	1959	100.0	8.5	14.6	31.0	26.2	11.2	2.7	2.7	2.3	0.8
	1960	100.0	4.3	48.0	33.4	10.7	...	0.3	1.4	1.7	0.2
	1961	100.0	11.7	46.0</							

**APPEN-
CHANGES IN JURISDICTION DURING THE PERIOD 1951-61 AND**

District / Taluk 1	Area in 1961*		1961 population 4
	Sq. miles 2	Sq. km. 3	
¹ Cannanore District	2,191.3	5,675.5	1,780,294
² Kasaragod taluk	376.3	974.6	271,015
Hosdrug "	382.3	990.2	241,131
Taliparamba "	514.5	1,332.5	310,723
Cannanore "	164.7	426.6	391,636
Tellicherry "	465.2	1,204.9	475,589
North Wynad "	288.3	746.7	90,200
³ Kozhikode District	2,570.2	6,656.8	2,617,189
Badagara taluk	212.3	549.9	319,913
Quilandy "	294.5	762.7	366,343
Kozhikode "	379.1	981.9	660,372
Tirur "	278.4	721.1	561,212
Ernad "	873.3</		

**APPEN-
CHANGES IN JURISDICTION DURING THE PERIOD 1951-61 AND**

District/Taluk 1	Area in 1961*		1961 population 4
	Sq. miles 2	Sq. km. 3	
Talappilly taluk	256.0	663.0	319,588
Trichur „	245.5	635.9	461,915
*Chowghat „	99.2	256.9	301,109
¹⁰ Cranganore „	28.2	73.0	90,293
¹¹ Mukundapuram „	508.1	1,316.0	466,957
¹² Ernakulam District	1,289.5	3,339.8	1,859,913
¹³ Parur taluk	74.0	191.7	221,183
Alwaye „	126.0	326.3	226,545
¹⁴ Kunnathunad „	261.7	677.8	229,282
Kanayannur „	124.6	322.7	379,951
Cochin „	54.4	140.9	313,977
¹⁵ Muvattupuzha „	254.6	659.4	301,623

Table 1
LIVE-BIRTHS FOR KERALA STATE,
1951-61

Year	Total	Males	Females
1951	362,122	185,326	176,796
1952	388,014	199,270	188,744
1953	352,910	181,153	171,757
1954	297,709	153,414	144,295
1955	369,560	190,246	179,314
1956	337,638	174,683	162,955
1957	356,964	184,126	172,838
1958	374,695	192,943	181,752
1959	406,147	209,085	197,062
1960	376,664	194,554	182,110
1961	425,751	219,022	206,729

Table 2
LIVE-BIRTHS BY RELIGIONS FOR
KERALA STATE, 1959-61

|--|

Table 4—concl'd.

STILL-BIRTHS FOR KERALA STATE, 1959-61—concl'd.

State/District 1	Quarter 2	Number of births								
		Total			Rural			Urban		
		1959	1960	1961	1959	1960	1961	1959	1960	1961
		3	4	5	6	7	8	9	10	11
Kozhikode	Total	766	889	615	177	417	247	589	472	368
	I	171	285	161	29	147	105	142	138	56
	II	156	216	154	66	105	49	90	111	105
	III	180	225							

Table 8—concl'd.

DEATHS BY CAUSES AND DISTRICTS 1959—61—concl'd.

Districts 1	Year 2	Quarter 3	Total 4	Deaths by causes								All other causes 12
				Cholera 5	Small- pox 6	Fevers 7	Dysentery and Diarrhoea 8	Respir- atory diseases 9	Injuries and accidents 10	Maternal death 11		
Cannanore	1959	Total	16,993	...	205	3,489	709	2,070	334	152	10,034	
		I	3,108	...	94	632	125	355	77	51	1,774	
		II	3,855	...	60	767	209	501	76	32	2,210	
		III	5,597</									

APPENDICES

APPENDIX I—SCHEDULES AND INSTRUCTIONS

(i) Household Schedule

(ii) Fertility Slip

(iii) Instructions in English for filling up the schedules

REPORT ON FERTILITY SURVEY

quick glance of the entries against column (1) and column (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 column (1) and column (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.

Q.14 In question 14 the number of all the children born alive including any shown in Q.12 but excluding any still-birth is to be recorded.

APPENDIX II — TABLES

- Table 1** Age specific marital fertility rates by different characteristics
- Table 2** Number of women and average number of children born per woman in different durations of married life by characteristics
- Table 3** Average number of children born per woman by age at marriage in different durations of married life by characteristics
- Table 4** Average number of children born per woman of completed fertility by age at marriage and characteristics
- Table 5** Block population summary
- Table 6** Block summary of working population

