



Impact Factor: 4.081

Demographic Status of Kerala: A Trend Analysis

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Abstract: As far as Kerala state is concerned, there were many unique features in its demographic transition and some of them are still remains like high morbidity versus low mortality, high sex ratio etc. This article focuses the status and trend of demographic variables of Kerala based on the data extracted from Census reports and SRS bulletins. The broad objective of this paper is to bring together the scattered data of demography and specifically to check the trend and patter of demographic transition of Kerala. Moving average and linear trend methods were used to analyse the data. The results show that there is a favorable trend in crude birth rate, crude death rate, infant mortality rate, life expectancy, maternal mortality rate and sex ratio. But at the same time there is a distressing situation in the case of child sex ratio, proportion of child population and morbidity status of the state.

Keywords: Crude Birth Rate, Crude Death Rate, Demography, Infant Mortality Rate, Maternal Mortality Rate. Morbidity Rate, Sex Ratio.

Introduction:The striking performance of Kerala state in the demographic face has received universal attention and admiration. The interest was clearly generated from the fact that in terms of per capita income and industrial output Kerala ranks among the poorest states in India. Many authors who have pointed out on subjects like Kerala's high female literacy, political leadership dedicated to social-welfare and greater utilisation of social services as probable reasons for the low levels of mortality and fertility in the state (e g, Nair 1974, Krishnan 1976, Ratcliffe 1978, Nag 1983, Nair 1986).

Census of India is conducted by the government of India through the Office of Registrar General and Census Commissioner of India. The census operations in the State are conducted through the State Government with the Director of Census Operations overseeing these operations. Census of India 2011, the second census of the 21st century reveals that the population of Kerala, the southernmost state of the Indian Union, as on 1st March 2011 is 33.39 million. In absolute figures, it is 33387677 persons with 16021290 males and 17366387 females.

The total area of the State of Kerala is 38863 sq.km. which is only 1.27 per cent of the total area of the country. Among the districts, Palakkad is the largest with 4480 sq.km. closely followed by Idukki with 4358 sq.km. The smallest district is Alappuzha with only 1414 sq.km. of area.

During the period 1931 – 1951, the growth of population was in a fluctuating trend altering between increase and decrease. During 1941 – 51, the growth rate of the

State has almost doubled as compared to 1901-11. From 1951 onwards a steady increase in growth rate has been observed and reaching the highest figure of 26.29 per cent in 1971. The 1981 census showed a declining population growth rate which was the start of a remarkable and welcome trend. This trend has continued in the succeeding censuses. The population growth rate of Kerala for 2001 – 2011 is 4.86, which is less than the growth rate of 1991 – 2001. The growth rate of population during 2001 – 2011 has declined in all the districts of the State as compared to the growth rate in 1991 – 2001. Malappuram district has the highest growth rate during 2001 – 2011 with 13.39% while in 1991-2001 it was 17.09 per cent. Kasaragod, Kozhikode, Malappuram, Palakkad and Eranakulam are the five districts having growth rate higher than the average growth rate of the State during 2001 – 2011. Since 1991 Census, Malappuram district has been having the highest population growth rate in the State. However, it can be seen that the growth rate of that district fell very rapidly over decades after 1981 – 1991 from 28.87% to 13.39% at present. Pathanamthitta district is having the lowest growth rate of – 3.13% during 2001 – 2011.

Objectives

This broad objective of this paper is to collect and present the scattered data related to the demographic features of Kerala. The specific objectives are:

1. To examine the ranking of districts by total population and child population.
2. To analyse the trend of variations in sex ratio and child sex ratio.
3. To analyse the trend of birth rate, death rate, infant mortality rate, maternal mortality rate and Life expectancy.

Methodology

This study is descriptive and analytical in nature and is based on secondary data, which is compiled from Census of India report 2001 and 2011. The simple statistical tools- ratio, rank, average, simple bar diagram, tables and trend analysis method- Moving average were used to analyse the data. The demographic variables – Population, Sex Ratio, Child Sex Ratio, Fertility Rate and Mortality Rates were selected as criteria for analysis.

1. Ranking of Districts by Population Size (2011)

In 2001 Census, the district of Malappuram ranked first in population size. In 2011 Census also, Malappuram district continues to maintain the position as the district with largest population of 41.11 lakhs. As compared to 2001 Census, a major change is noticed in the case of Kasaragod and Pathanamthitta districts. The district of Pathanamthitta which ranked 11th among the districts in 2001 Census has now been relegated to the position of 12th rank in 2011 Census and thus, the district of Kasaragod with a population of 13.03 lakhs has over taken it to take the 11th rank in the current census.

As compared to 2001 census, the percentage of population to the total population of the State has increased in respect of five districts, viz. Malappuram, Ernakulam, Kozhikode, Palakkad and Kasaragod. In the case of Malappuram district, the percentage increase is about 1 per cent while in the case of other four districts, the percentage increase is negligible. Another remarkable feature is that all the five districts where the percentage of population to the total population has increased are the northern districts of the State of Kerala.

Table.1.District wise population (2011)

Districts	Population (2011)	Per cent to total population of the State (2011)	Rank in 2011
Malappuram	4110956	12.31	1
Thiruvananthapuram	3307284	9.91	2
Ernakulam	3279860	9.82	3
Thrissur	3110327	9.32	4
Kozhikode	3089543	9.25	5
Palakkad	2810892	8.42	6
Kollam	2629703	7.88	7
Kannur	2525637	7.56	8
Alapuzha	2121943	6.36	9
Kottayam	1979384	5.93	10
Kasaragod	1302600	3.90	11
Pathanamthitta	1195537	3.58	12
Idukki	1107453	3.32	13
Wayanad	816558	2.45	14
kerala	33387677		

Source: Compiled from Census of India Report 2011

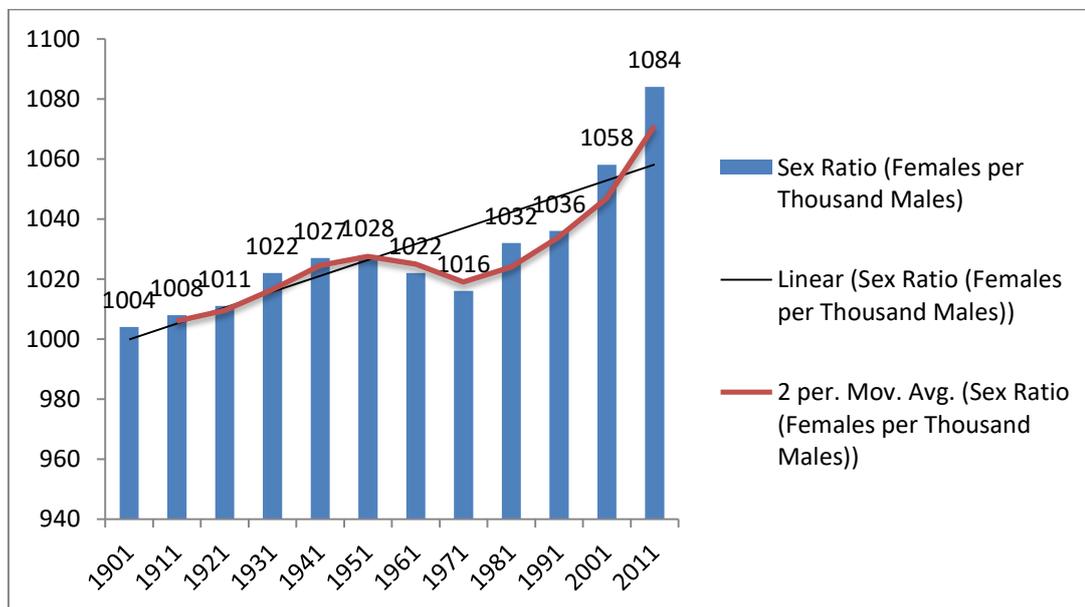
The decadal growth rate of population is closely related with the growth of child population of the age – group 0 – 6. The child population in the age – group which stood at 37.93 lakhs in 2001 census in Kerala has declined to 33.22 lakhs during the period 2001 – 2011. The state of Kerala has thus registered a decline of – 12.41% during 2001 – 2011 in respect of child population in the specified age-group. In all the districts, except Malappuram district (0.23%), the growth rate of child population is negative. The district with the lowest child growth rate in 2011 Census is Pathanamthitta with – 27.97 per cent, which is also the district with the lowest decadal growth rate of general population.

2. Sex Ratio:

The distribution of male and female in the society has direct bearing on the social and economic condition of a State. It also reflects the status of women in the society. In

Indian Census, the practice followed in the United Kingdom is adopted and sex ratio has been defined as the number of females per 1000 males. The sex ratio reflects the comparison between the number of males and females in the population. Kerala State has a very unique position with regard to sex ratio by the fact that in all censuses, the number of females outnumbered the number of males in the State, contrary to the pattern shown at the all India level. The sex ratio of Kerala, despite its continuous increase from 1004 in 1901 Census, had shown a declining trend in 1961 and 1971 censuses (Fig.1). With 2001 Census results that the State of Kerala has registered a sex ratio above the equality ratio with 1058 females per 1000 males, the trend achieved a legacy of at least 100 years. In 2011 Census also, the sex ratio of the State has registered an increase of 26 points and thus achieved a sex ratio of 1084 females per 1000 males.

Fig.1. Sex Ratio of Kerala (1901 – 2011)



Source: Constructed from Census of India 2011

As per 2001 Census, Pathanamthitta district enjoyed the first position among the districts with a sex ratio of 1094, followed by Thrissur with 1092 and Kannur with 1090. This order has been changed in 2011 with the highest sex ratio noticed in Kannur followed by Pathanamthitta and Kollam districts (table.2).

Tabel.2. Ranking of Districts by Sex – Ratio (2011)

District	Sex-Ratio			
	2011	Rank (2011)	2001	Rank (2001)
Kannur	1133	1	1090	3
Pathanamthitta	1129	2	1094	1
Kollam	1113	3	1069	5
Thrissur	1109	4	1092	2

Alapuzha	1100	5	1079	4
Kozhikode	1097	6	1057	8
Malappuram	1096	7	1066	6
Thiruvananthapuram	1088	8	1060	7
Kasaragod	1079	9	1047	9
Palakkad	1067	10	1066	6
Kottayam	1040	11	1025	10
Wayanad	1035	12	995	12
Eranakulam	1028	13	1019	11
Idukki	1006	14	993	13
kerala	1084		1058	

Source: Census of India Report 2011

2.1.Child Sex Ratio:

The data on child sex ratio is very prominent from the point of view that it is an indicator of the likely future trends of sex ratio of the population. A comparison of child sex ratio of the State with 2001 Census indicates that there is a very negligible decrease in child sex ratio during 2001-2011. I.e., from 960 in 2001 to 959 in 2011. In all the districts, the child sex ratio is negative and in the five districts of Thrissur (948), Eranakulam (954), Idukki (958), Kottayam (957), and Alapuzha (947), the child sex ratio is below the state average (959). Thiruvananthapuram district is reported to have the highest sex ratio of 967 female children for 1000 male children in the age group 0-6. The proportion of population in the age group 0 – 6 to total population for State and District show that 11.91 percent of population were from the 0 – 6 age group in 2001. But it has reduced to 9.95 per cent in 2011. In all districts, the proportion of child population to total population is significantly reduced in 2011 census compared with 2001 census (Table.3). Malappuram district is in the first position in the proportion of child population to the total population with 12.61 in 2011.

Table.3. Proportion of Child Population in the Age group 0 – 6 to total population for State and Districts: 2001 and 2011

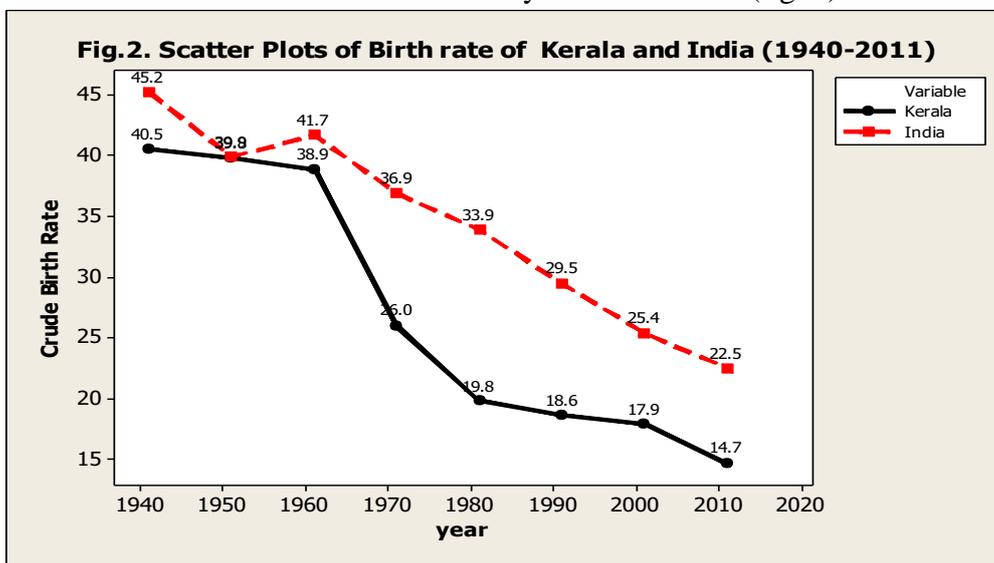
State/District	Proportion of child population in the Age group 0 – 6 to total population					
	2011			2001		
	Person	Male	Female	Person	Male	Female
Thiruvananthapuram	8.79	9.33	8.29	11.39	11.96	10.86
Kollam	9.05	9.76	8.42	11.32	11.94	10.73
Pathanamthitta	7.65	8.29	7.09	10.29	10.95	9.69
Alapuzha	8.77	9.46	8.14	10.73	11.41	10.11
Kottayam	8.52	8.88	8.17	10.88	11.23	10.55
Idukki	9.04	9.26	8.82	11.88	12.03	11.74
Eranakulam	8.82	9.15	8.50	10.91	11.27	10.56

Thrissur	9.30	10.07	8.60	11.18	11.94	10.48
Palakkad	10.26	10.80	9.75	12.18	12.82	11.59
Malappuram	13.45	14.38	12.60	15.21	16.04	14.44
Kozhikkode	10.47	11.19	9.82	12.06	12.66	11.48
Wayanad	10.99	11.41	10.58	13.33	13.58	13.08
Kannur	10.50	11.42	9.70	11.62	12.37	10.92
Kasaragod	11.46	12.15	10.82	13.21	13.80	12.64
Kerala	9.95	10.59	9.36	11.91	12.51	11.35

Source: Census of India Report 2011

3. Crude Birth Rate

The trend of birth rate in Kerala shows that there is a very rapid decline in it than the national average. In 1971, the birth rate of Kerala was 26 per 1000 population. It has declined to 14.7 in 2011. At the same time the birth rate of India was 36.9 in 1971 and it has declined only to 22.5 in 2011 (fig.2.)



Source: Constructed from 1. SRS Bulletin, October 2001. Volume 35 No.2,
 2. “Kerala Economy Four Decades of Development” by P.P Pillai. Published by Institute of Planning and applied Economic Research John Mathai Foundation.
 3. Kerala Economic Review 2009, 2010 and 2011.

3.1. Crude Death Rate

The death rate shows a declining trend for both Kerala and India from 1941 to 2011 (table 4). In 1941, it was 29 per 1000 population for Kerala and 31.2 per 1000 population for India. But, in 2011 the death rate of Kerala has come down to 6.8 per 1000 population while 7.2 per 1000 population in India. The morbidity status of Kerala has to discuss along with mortality rates. Kerala state is facing the so-called health paradox-‘low mortality and high morbidity’. As per 2008 data, the morbidity rate of Kerala was 24.79 while in India it is only 9.38.

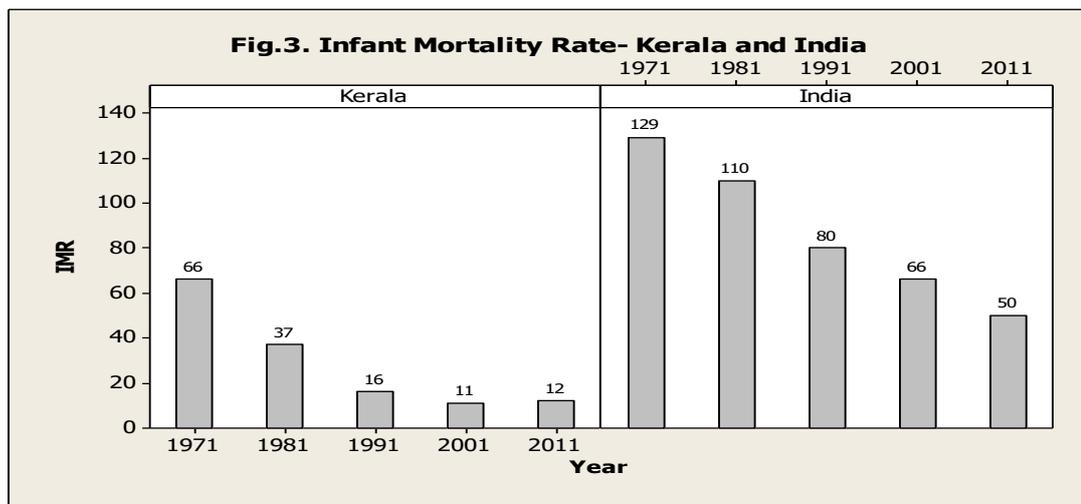
Table.4. Trend in Death rate of Kerala and India (1941-2011)

Year	Crude Death Rate	
	Kerala	India
1941	29.0	31.2
1951	18.0	27.4
1961	16.1	22.8
1971	11.0	19.0
1981	6.9	14.8
1991	5.8	10.2
2001	6.4	8.4
2011	6.8	7.2

Source: SRS Bulletin 2001 and 2011; Kerala Economic Review, Kerala Economy Four Decades of Development.

3.2. Infant Mortality Rate

In the case of Infant Mortality Rate, there is a down ward trend for both Kerala and India (Fig. 3). In 1971, it was 66 and 129 per 1000 population in Kerala and India respectively. It has declined to 12 and 50 in Kerala and India respectively in 2011.

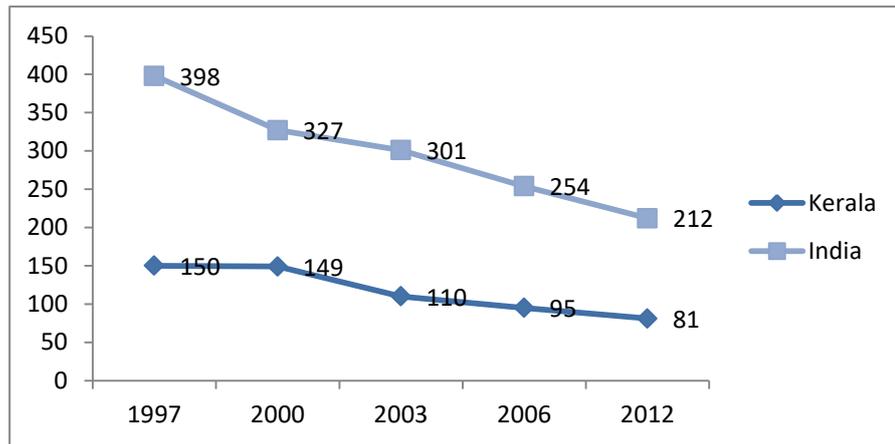


Source: Constructed from SRS Bulletins for various years of Registrar General of India

3.3. Maternal Mortality Rate:

Maternal mortality rate is the death of women during the pregnancy or within 42 days of termination of pregnancy per lakh live births in a given year. The trend of maternal mortality rate of both Kerala and Indian is in downward, which is shown in fig.4.

Fig.4: Trend of maternal mortality rate of Kerala and India (1997-2012)

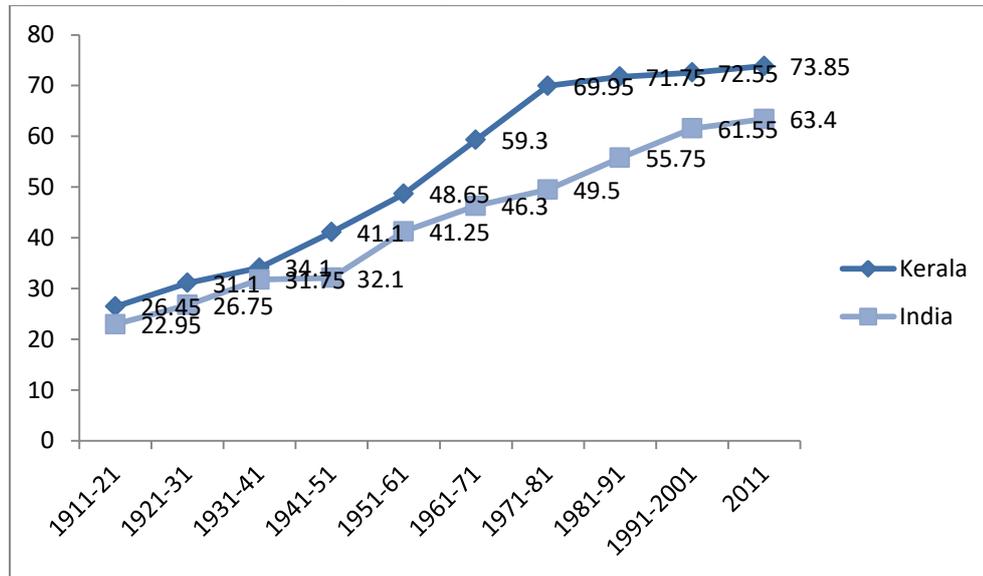


Source: Constructed from SRS Bulletins for various years of Registrar General of India

3.4. Life Expectancy at Birth

The life expectancy of Kerala was 26.45 in 1911-21 periods. It has improved to 73.85 in 2011. In the same periods, the life expectancy of India has improved from 22.95 to 63.4. (fig.5)

Fig. 5: Trends of Life Expectancy at birth – Kerala and India (1911-2011)



Source: Constructed from Databook for DCH; 18 May 2011 and Kerala Economy four decades of

development (P.P. Pillai), Government of Kerala, Economic review for various years

The life expectancy at birth for male has increased from 25.5 years during 1911-21 to 71.4 years by 2011 in Kerala, as against an increase from 22.6 years to 62.6 years in India. Similarly, life expectancy of female has always been higher than that of male in Kerala and has increased from 27.4 years in 1911-21 to 76.3 years by 2011. The higher female life expectancy, compared to male life expectancy is again a

demographic characteristic of the advanced countries; Kerala has the highest expectancy of life for both men and women.

Conclusion:

In almost all basic health indicators, Kerala state is in a better position than the national average. There was a significant fall in birth rate, death rate, infant mortality rate and maternal mortality rate during the reference period. In life expectancy and sex ratio, Kerala state is in a better position than the all India level. The morbidity rate, child sex ratio and the diminishing proportion of child population in total population are the unfavourable trend in the demographic transition of Kerala.

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