ANALYSIS OF INFANT MORTALITY RATE IN KERALA: DISTRICT LEVEL STUDY

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Abstract: The latest census of India has indicated a marginal growth in state and country overall infant mortality rate. But on another hand, one serious problem also observed at national. State and local level that rapidly declined the infant mortality.so the featured trend study good relevant study of infant death. For that district-level study selected. for the study to analyze the infant mortality rate. another reporting factor which will help planner and policy maker to find future determining infant death of the given study region. Therefore, in this present paper, an attempt has been made to analysis the infant mortality Kerala district level and provide some clues for government and local policymaker to overcome these burning problems of India. The present study is entirely based on a secondary source of data and data are collected from a government official report. The data has been taken as a unit analysis of infant mortality in the study region.: using Excel and statistical software SPSS was applied for the processing of secondary data.it is observed that the infant mortality some variations from one district to another district in the study area. High differences in district wise infant mortality rate in the given study area.

Keywords: infant mortality rate, infant health, National Vital Statistics System

I. INTRODUCTION:

II. Infant mortality rates the under five year (U5MR) of a natural accepted and long well indicators of a children. Infant mortality rate is measure by probability of dying before first age. its expressed as commonly in 1000 live birth. The under the 5-mortality rate infant mortality is good indicator of the cumulative exposure to the risk of during the year first. And the IMR is well and global accepted indicator of the socio economic and health status of the population. It's used to assessing the impact of some intervention programmed at improving child survival.in 1960 infant mortality was identified as a problem related to socio economic development. because of that some exclusive inverse related with Gross Domestic Production (GDP). The relationship between infant mortality rate and GDP explained by socio economic development plays in determining income. In 1950 to 1955 India and china shared some crude death rate (CRD) as well the infant mortality rate (IMR) life expectancy birth .in that period china progressed more rapidly than India on an indicator. Infant mortality rate per 1000 live birth in India 1950-1955 is 190. (NIMS, I., & UNICEF. (2012). Children are important assets of a nation, therefore reduction in infant and child mortality is likely the most important objective of the Millennium Development Goals (MDG). Infant and child mortality rates reflect a country's level of socio-economic development and quality of life and are used

for monitoring and evaluating population, health programs and policies. It is an outcome rather than a cause and hence directly measures results of the distribution and use of resources, Haines (1995). The world map Figure 1 shows the level of Infant Mortality Rate (IMR) across various countries in 2006. While countries like Australia and Canada have IMRs well below 10 per 1,000 live birth, most of the African countries are struggling with mortality levels over 50 and in some cases 100 deaths per 1,000 live births. According to the United Nations estimates, 10 million infant deaths occur annually in the world. India accounts for a quarter of those. Thus, any study of Indian infant mortality has global significance. in 1996 Sweden reported the world lowest infant mortality (IMR) 3.5 per 1000.a high normal world be Malawi's which was calculated at 140 at 1000 in 1997.and the infant mortality considered as good indicator of the health status of the population. (Arthur and Thomas T. Kane ,20001). Infant mortality is likely only one of the public health problems that we have been speaking for decades but that has now taken on a different form as we become more aware of the global consequences of troubling trends and the risk issues that persist as the economic gap between the wealthy and the poor becomes broader. Clearly, we can no longer afford to lose sight of the scope of this problem and must continue all of our efforts not only in international settings, but also here at household.

II.OBJECTIVES:

The main objective of the present paper as follows.

- To analyse the pattern of infant mortality rate during the year 2010 to 2017 in Kerala district level.
- To highlight the highest infant mortality rate of the study region in period 2010 to 2017.
- To study the factors responsible for variations in infant mortality rate in the study region.
- To suggest the remedies, balance the infant mortality rate in the study region.

III. STUDY AREA:

The state of Kerala on first July 1949 the two state were merged to form Travancore -cochin.in November 1956, the state of Kerala was formed by the states re organisation an act merging the Malabar district, Travancore-cochin and the taluk of Kasaragod, south Kerala. Kerala state has total area is 38863 sq.km.as per 2011 census report total population is 3,340, 061.and it has 16027412 male population and 173,78,649 has female population. And the child population size (0-6 period) of the Kerala state is 3472955.In last census report infant mortality rate (IMR) was rural, urban, and total 7.1,6.6 and 7 respectively. They are 1768244 has male and 1704711 are female. The educational bag round of Kerala very good in compare with other state. Sex ratio of the Kerala state in last census report was 1084, ratio of female per 1000 male. And child sex ratio (0-6) ratio of female per 1000 male has 964.the total area of the state is 38,683 sq.km. total 14 district included in the state. State capital is Thiruvananthapuram.

Kerala state profile

IV. DATA METHODOLOGY:

The present study is based on secondary data source. The secondary data collected from socio-economic status of Kerala state (2010 -2017). the census report 2011 has reported in every demographical and economic aspect of the study area. And Kerala state government conducted a every year in report in annual vital statistics. Its conducted by vital statistics division department of economic and statistics. The tahsil has been taken as unit for analysis of infant mortality rate (IMR) in the study region.MS-EXCEL and statistical software SPSS was applied for the processing of secondary data which is received from annual vital statistics report of Kerala state. Data is processed a represented with bar graph and some statistical analysis. The infant mortality is number of infant dearth under the age 1 per 1000 live birth in given year.

Infant Mortality Rate = $\frac{\textit{Number of Death of Infant Age 1 in Given Year}}{\textit{Total Live Birth In that Yyear}}$

By using above formula calculate the infant mortality rate (IMR) in the given study region.

IV. **RESULT AND DISCUSSION**:

Infant mortality measured by probability of dying before first age. Using secondary data from vital statistics report before 7 year. Taking the annual vital statistics report report 2010 to 2017.infant mortality is very important indicator.to study the feature trend of IMR in any region.to study the infant mortality rate of the area district level data is used. For this analysis 2010 to 2017 district level data is collected and each district average infant mortality is calculated. Which is the table number 1 and graph number two. Indicate the trend of infant mortality rate district wise Kerala state. From the year 2010 to 2017.during the period high and low IMR in some district wise. Show in some variations in district wise. If all data is observed then it's found that distribution infant mortality not uniform in the study region. In gender wise and area base not uniform in the period.in period of study Kasaragod (3.14), Kannur (5.1), Wayanad (4.03), Kozhikode (14.86), Thrissur (7), Ernakulam (6.32), Kottayam (8.5) Thiruvananthapuram (10.59). The high infant mortality in the district is Kozhikode and Thiruvanathappuram.and lowest infant mortality rate is Kollam district. There is gender imbalance in infant mortality male and female distribution in the study region. Gender imbalance means that exceed disparity bet ween male and female before the one-month population.

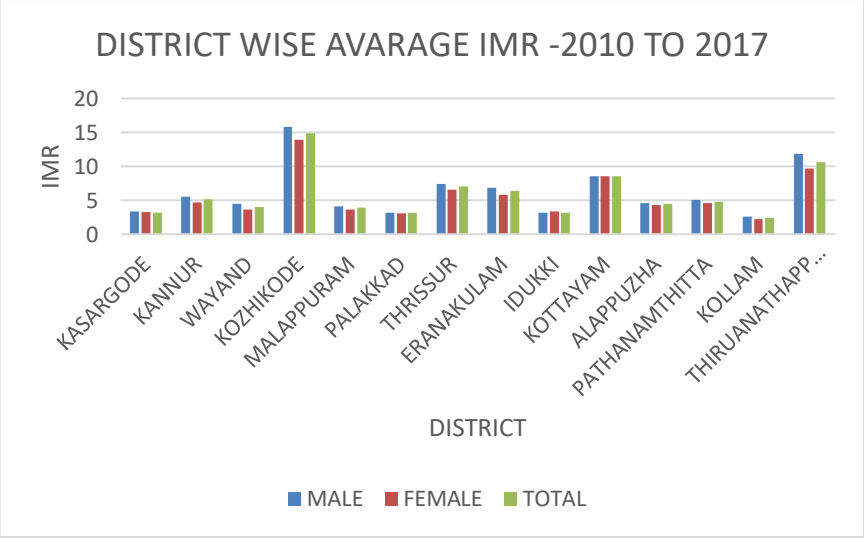
TABLE NO:1 KERALA STATE DISTRICT WISE AVARAGE INFANT MORTALIRT RATE 2010 TO 2017

(PROBABILITY OF DYING BEFORE FIRST AGE)

DISTRICT	MALE	FEMALE	TOTAL
KASARGODE	3.31	3.22	3.14
KANNUR	5.47	4.69	5.1
WAYAND	4.47	3.58	4.03
KOZHIKODE	15.75	13.9	14.86
MALAPPURAM	4.13	3.64	3.9
PALAKKAD	3.19	3.02	3.11
THRISSUR	7.39	6.55	7
ERANAKULAM	6.81	5.78	6.32
IDUKKI	3.11	3.3	3.2
KOTTAYAM	8.49	8.5	8.5
ALAPPUZHA	4.6	4.31	4.49
PATHANAMTHITTA	5.03	4.52	4.77
KOLLAM	2.62	2.17	2.41
THIRUANATHAPPURAM	11.85	9.7	10.59

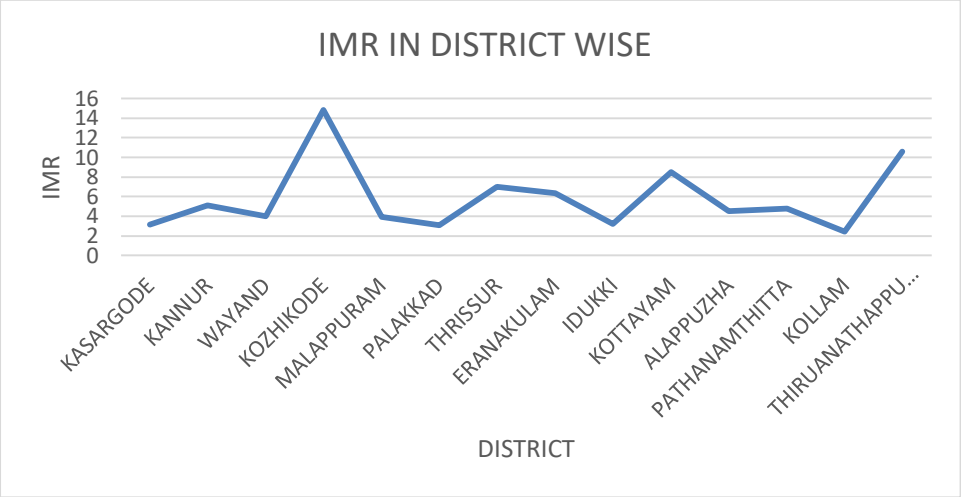
SOURSE: ANNUAL VITAL STATISTICS REPORT Kerala STATE.

TABLE NO:1



GRAPH NO:1

According to my study at Kerala state, district level infant mortality rate in the period 2010 to 2017. the highest IMR is Kozhikode (14.86). and lowest infant mortality is Kollam district. they show in table no:2. they have some variations in district wise.



GRAPH NO:2

TABLE NO:2 shows in the study period of 2010 to 2014, the average infant mortality rate in Kerala district wise minimum rate is 2.17 and maximum rate is 15.15.the total average is 5.822.the recorder was published in Kerala state was 7.5.

Descriptive Statistics

	Minimum	Maximum	Mean	Std. Deviation	Variance
AVARG_IMR	2.17	15.75	5.8220	3.41114	11.636
Valid N (listwise)					

TABLE NO:2

V. CONCLUSION:

The increased probability of infant mortality (IMR) attributable to family income inequality and low parental instruction seems to work through pathways of assessable deprivation and chronic psychological stress that affect a person's health damaging behaviors. The policies that are likely to significantly reduce the family's socioeconomic inequality in infant mortality are occupied. Infant mortality rates declined for four of the 10 leading causes of death, but there were no important changes in the rates by cause of death in the before year.

- The average Kerala state infant mortality rate is 7.
- The distribution of infant mortality rate is not uniform in study region. The highest IMR is Kozhikode district and lowest is Kollam
- In Kerala state 10 is recorded infant mortality rate in 2011 census.
- In area based I infant death is higher is rural. not uniform in urban and rural infant death in the study period.

VII. RECOMENTATION:

In order to save the country from negative impact of dying before age first. All segment of India society. all political parties are together shall have to find out the solution in this problem.in Kerala before some year controlled infant mortality rate. That are more impact to the infant mortality rate declining. More over Kerala educational improvement, culture, medical facility improvement and standard living conditions.

- Government carry out serios and continuous effort to change the attituded of people towards infant birth.in this process newspaper and media can support to government create public awareness those regarded.
- A strict action should be taken against unregistered and registered infant birth, which determination of infant death.
- To more effort on IMR and minimize gender deference on IMR in the society. Without improvement of standard of women in can success in the regarded.
- Growth the number of particular medical centres and expansion in the provision of health services
- Encourage female participation in health education, in adding to the graduation of thousands of women's nursing operates in the coming years.
- . Deliver a database for the mortality rate of infants and children less than five years of age to their standing in human development needles.

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