



Government of Kerala



ANNUAL VITAL STATISTICS REPORT - 2022

ERNAKULAM DISTRICT



**Department of Economics & Statistics
District Office, Ernakulam**

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PREFACE

This project aims to conduct a comprehensive analysis of birth and death statistics in Ernakulam District, Kerala during the year 2022. The study will collect data on birth, death, infant death, child death and stillbirth from the Department of Economics & Statistics, Ernakulam. The data will then be analyzed using statistical tools to determine their vital events. Additionally, the study will examine for any significant difference in month wise or area wise data in Ernakulam district. The findings of this study will provide valuable insights into the birth and death analysis of the Ernakulam district, which could help to get an idea about the different vital events happened in the year 2022 and their change over area (Urban/Rural) and month.

The analysis begins by collecting accurate and up-to-date birth and death records from various sources, including government registry. The data will encompass vital information such as gender, location and other relevant factors. The findings of this study will contribute to a better understanding of the demographic dynamics within Ernakulam District.

In conclusion, this project provides a detailed analysis of birth and death statistics in Ernakulam District, Kerala during 2022. By examining patterns, trends, and potential influencing factors, the study aims to support evidence-based decision-making for the betterment of the district's population. The results can facilitate informed interventions and strategies aimed at promoting the well-being in Ernakulam District.



Shojan A.P
Deputy Director

HIGHLIGHTS

- Number of live births registered during the year 2022 is 39226.
- Out of the total registered births, the share of male and female are 50.83% and 49.17% respectively.
- Sex Ratio at Birth (SRB) for the year 2022 is 967.
- Among the months, highest SRB is reported in August (1017) and lowest in October (903).
- Crude Birth Rate (CBR) at Ernakulam in 2022 is 11.95.
- The highest number of births occurred in the month of March (9.18%) and the lowest in April (7.51%).
- The number of registered deaths during the year 2022 is 36327.
- Out of the total registered deaths, the male and female deaths are 55.61% and 44.39% respectively.
- Crude Death Rate (CDR) at Ernakulam in 2022 is 11.07.
- Highest CDR has been reported in February (1.011) and the lowest in April (0.752).
- The percentage of infant death to total death during 2022 is 0.62%.

VITAL RATES IN KERALA - 2022 (AT A GLANCE)

Age - Sex Structure of Population

I	Sex Ratio	
1	Sex Ratio at Birth	967
2	Sex Ratio at Death	798
II	Fertility Indicators	
1	Crude Birth Rate	11.95
III	Mortality Indicators	
1	Crude Death Rate	11.07
2	Percentage of Infant Death to Total Death	0.62%
3	Infant Mortality Rate	5.71
4	Stillbirth Rate	3.99

CHAPTER I

Introduction

1.1 Birth - Death Analysis

Birth - death analysis is a statistical method used to model and analyze the dynamics of populations over time. It involves studying the rates of births and deaths within a population and how they change over time, as well as the effects of other factors such as migration and disease. This type of analysis is widely used in various fields, including ecology, epidemiology, and demography, to understand population dynamics and make predictions about future trends. By studying birth and death rates, we can gain insights into how populations grow or decline and what factors contribute to these changes. Death and birth statistics are statistics on live births, deaths and foetal deaths. The most common way of collecting information on these events is through civil registration, an administrative system used by governments to record vital events which occur in their populations. Efforts to improve the quality of statistics will therefore be closely related to the development of civil registration systems in countries.

In birth - death analysis, mathematical models are developed to describe the processes of birth and death within a population, and statistical techniques are used to estimate parameters such as the birth and death rates. These models can then be used to make predictions about future population trends or to test hypotheses about the effects of different factors on population dynamics. Overall, birth - death analysis is a valuable tool for understanding the complex dynamics of populations and can provide important insights into how they are changing over time. Reference textbooks are Elements of Vital Statistics by Bernard Benjamin (1960), Quadrangle Books and The Demographic Structure of the Indian Society by Thomas Robert Malthus, where Demography is the systematic study of population.

1.2 About the Data

Birth - death analysis is widely used in various fields, including ecology, epidemiology, and demography, to understand population dynamics and make predictions about future trends. This data set contains the total number of registered births, deaths, infant deaths and stillbirths. of all panchayats in Ernakulam district in the year 2022. The data consists of 9 variables.

Variables associated with this data:

1. Rural/Urban: - In this data we deal with all rural and urban areas in Ernakulam district, Kerala, India.

RURAL	<i>Malayattoor Neeleeswaram</i>	URBAN
<i>Aikaranad</i>	<i>Maneed</i>	<i>Corporation</i>
<i>Alangad</i>	<i>Manjalloor</i>	<i>Aluva</i>
<i>Amballoor</i>	<i>Manjapra</i>	<i>Angamaly</i>
<i>Arakuzha</i>	<i>Marady</i>	<i>Eloor</i>
<i>Asamannoor</i>	<i>Mazhuvannoor</i>	<i>Kalamassery</i>
<i>Avoly</i>	<i>Mookkannur</i>	<i>Koothattukulam</i>
<i>Ayavana</i>	<i>Mudakkuzha</i>	<i>Kothamangalam</i>
<i>Ayyampuzha</i>	<i>Mulanthuruthy</i>	<i>Maradu</i>
<i>Chendamangalam</i>	<i>Mulavukad</i>	<i>Muvattupuzha</i>
<i>Chengamanad</i>	<i>Narakal</i>	<i>North Paravur</i>
<i>Chellanam</i>	<i>Nayarambalam</i>	<i>Perumbavoor</i>
<i>Cheranalloor</i>	<i>Nedumbassery</i>	<i>Piravom</i>
<i>Chittattukara</i>	<i>Nellikuzhi</i>	<i>Thrikkakara</i>
<i>Choornikkara</i>	<i>Okkal</i>	<i>Tripunithura</i>
<i>Chottanikkara</i>	<i>Paingotloor</i>	
<i>Edakkattuvayal</i>	<i>Paipra</i>	
<i>Edathala</i>	<i>Palakuzha</i>	
<i>Edavanakkad</i>	<i>Pallarimangalam</i>	
<i>Elanji</i>	<i>Pallippuram</i>	

<i>Elankunnapuzha</i>	<i>Pambakkuda</i>
<i>Ezhikkara</i>	<i>Parakkadavu</i>
<i>Kadamakudy</i>	<i>Pindimana</i>
<i>Kadungalloor</i>	<i>Poothrikka</i>
<i>Kalady</i>	<i>Pothanicad</i>
<i>Kalloorkkadu</i>	<i>Puthenvelikkara</i>
<i>Kanjoor</i>	<i>Ramamangalam</i>
<i>Karukutty</i>	<i>Rayamangalam</i>
<i>Karumallur</i>	<i>Sreemoolanagaram</i>
<i>Kavalangad</i>	<i>Thirumarady</i>
<i>Keerampara</i>	<i>Thiruvaniyoor</i>
<i>Keezhmad</i>	<i>Thuravoor</i>
<i>Kizhakkambalam</i>	<i>Udayamperoor</i>
<i>Koovappady</i>	<i>Varapetty</i>
<i>Kottappady</i>	<i>Varapuzha</i>
<i>Kottuvally</i>	<i>Vadakkekara</i>
<i>Kumbalam</i>	<i>Vadavucode Puthencruz</i>
<i>Kumbalangi</i>	<i>Valakom</i>
<i>Kunnathunadu</i>	<i>Vazhakulam</i>
<i>Kunnukara</i>	<i>Vengola</i>
<i>Kuttampuzha</i>	<i>Vengoor</i>
<i>Kuzhuppilly</i>	

2. No. of Registration Units (RUs)
3. No. of RUs who have submitted monthly return
4. Level of Reporting in (%)
5. No. of registered births: - The data consist of no.of registered births of male and Female in 2022.

6. No. of registered deaths: - The data consist of no.of deaths registered in Ernakulam district of male and female.
7. No. of infant death: - Infant mortality refers to the death of a baby or infant who is less than one year old. This data includes the number of infant deaths in 2022.
8. No. of child deaths: - Child death refers to the death of an individual who is considered a child, typically defined as a person who has not yet reached the age of 18 years. The data consist of the number of deaths of male and female children in 2022.
9. No. of registered stillbirths: - Stillbirth is defined as the death of a baby before or during delivery, after the 20th week of pregnancy or when the baby weighs 350 grams or more. This data includes the number of registered stillbirths in 2022.

1.3 Methodology

The data for this study is collected from the Economics and Statistics Dept Govt of Kerala. It contains the number of registered births and deaths, infant deaths (less than one year), child deaths (age 1 year or more but less than 5 years) and stillbirths of each month for the year 2022 in Ernakulam District. The data will be analyzed using statistical tools such as descriptive statistics, correlation analysis, regression analysis in Excel and Vital Statistics. Also, chi square goodness of fit and Z test is used to check the significance of female and male birth and death rates. R programming is used to do these tests. By the p value of these tests, we gathered necessary conclusions. The results of the study will be presented in the form of tables and graphs, and any trends or patterns in the data will be identified.

CHAPTER II

Analysis of Vital Events – Registered Births

2.1 Registered Births by Gender

Total number of live births registered during the year 2022 was 39226. Out of the total live births registered, 19939 are male births, 19287 are female births. It is seen that more males (50.83%) were born than females (49.17%) which resulted in a sex ratio at birth of 967 females per 1000 males.

The following Table 1 shows the registered live births by gender. Also, the chart 1 presents the pictorial presentation of the percentage of live births registered by gender.

Gender	No. of Registered Births	Percentage
Male	19939	50.83
Female	19287	49.17
Total	39226	100

Table 1 - Registered Births by Gender

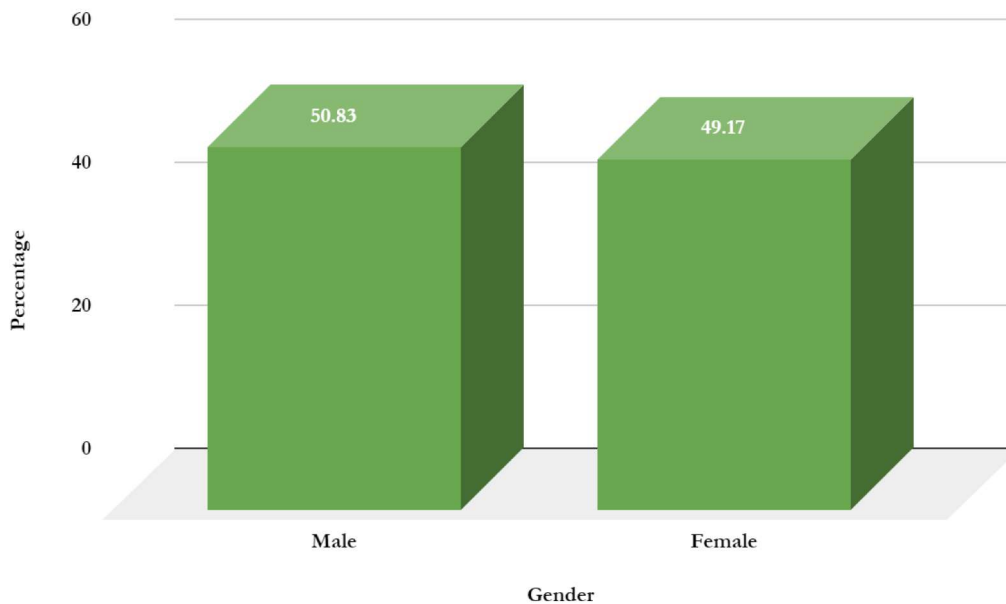


Chart 1 - Registered Births by Gender

2.2 Registered Births by Month

In 2022, the highest number of births registered in March with 3601 (9.18%) of the total births in the State. It was followed by the months of June (8.97%), November (8.87%) & October (8.47%). The month of April (7.51%) had the least number of births registered in 2022. The month wise live births registered during 2022 are shown in the following table 2 and chart 2.

Months	No. of Registered Births	Percentage
January	3072	7.83
February	3105	7.92
March	3601	9.18
April	2944	7.51
May	3178	8.1
June	3517	8.97
July	3289	8.38
August	3177	8.1
September	3279	8.36
October	3323	8.47
November	3479	8.87
December	3262	8.32

Table 2 - Month - Wise Distribution of Registered Births

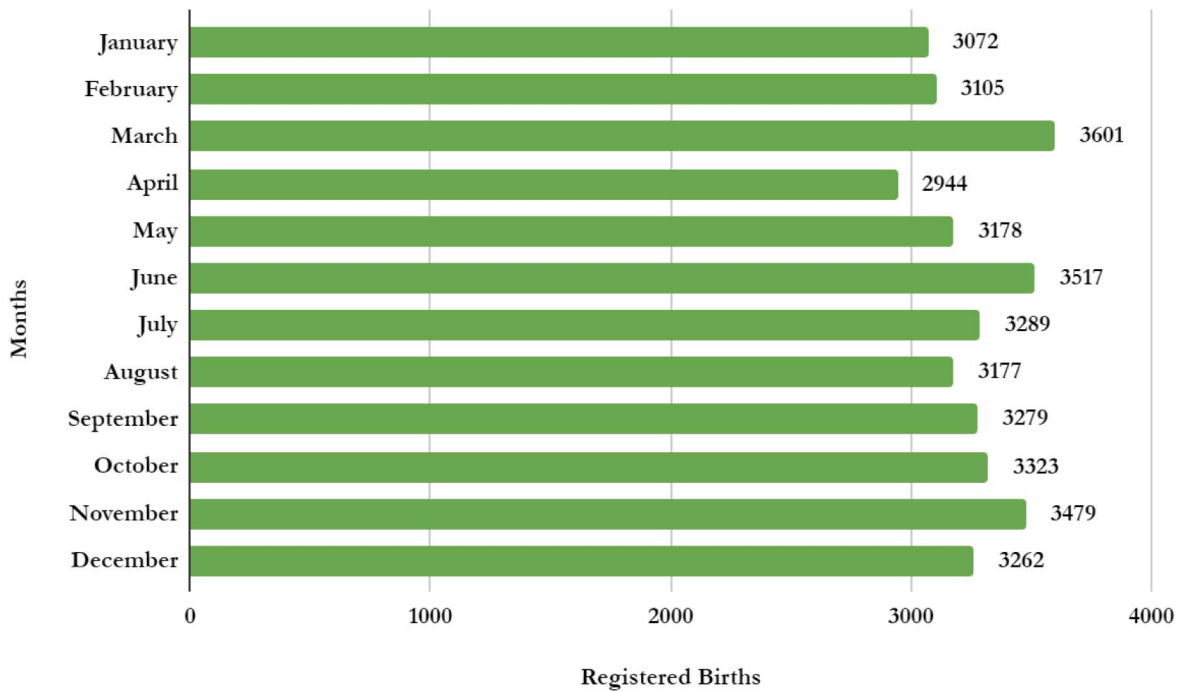


Chart 2 - Month - Wise Distribution of Registered Births

From the chart it is clear that there may not be any significant seasonal variation in the number of births in Ernakulam. To prove this, statistical tests, such as the chi-square test, can be used to assess the significance of any observed differences in the monthly birth rates.

The hypothesis is as follows:

H_0 : Number of registered births is independent of months

H_1 : Number of registered births is dependent of months

Pearson's Chi-squared Test	
X - squared	132
p - value	0.2329

Here the p-value is greater than 0.05. So, we fail to reject the null hypothesis. From this test we can conclude that the number of registered births is independent of months.

2.3 Sex Ratio at Birth (SRB)

The Sex Ratio at Birth is defined as the number of female live births per 1,000 male live births and it is an important indicator to map the sex differential of the population at the beginning of their life. Sex Ratio at birth for the year 2022 is 967. Among the months, the highest SRB was reported in August (1017) and the lowest in October (903).

Months	Male	Female	Sex Ratio at Birth
January	1570	1502	957
February	1578	1527	968
March	1821	1780	977
April	1529	1415	925
May	1586	1592	1004
June	1797	1720	957
July	1655	1634	987
August	1575	1602	1017
September	1656	1623	980
October	1746	1577	903
November	1783	1696	951
December	1643	1619	985

Table 3 - Sex Ratio at Birth

Here are some conclusions that can be drawn from the sex ratio at birth:

- *Biological factors:* The sex ratio at birth can provide insights into biological factors that influence sex determination and conception. Factors such as genetics, hormonal influences, and fertility patterns can contribute to variations in the sex ratio at birth.
- *Demographic imbalances:* Large disparities in the sex ratio at birth may indicate societal and cultural preferences for having children of a particular gender. In some cases, gender imbalances at birth can arise due to sex-selective practices, such as prenatal sex determination and selective abortion.

- *Social and cultural factors:* The sex ratio at birth can reflect social and cultural norms, including preferences for male offspring. It can provide indications of gender preferences and societal attitudes towards gender roles within a population.
- *Future population dynamics:* The sex ratio at birth can have implications for future population dynamics. A skewed sex ratio at birth can result in imbalanced population structures, with potential consequences for social, economic, and cultural aspects in the long term.

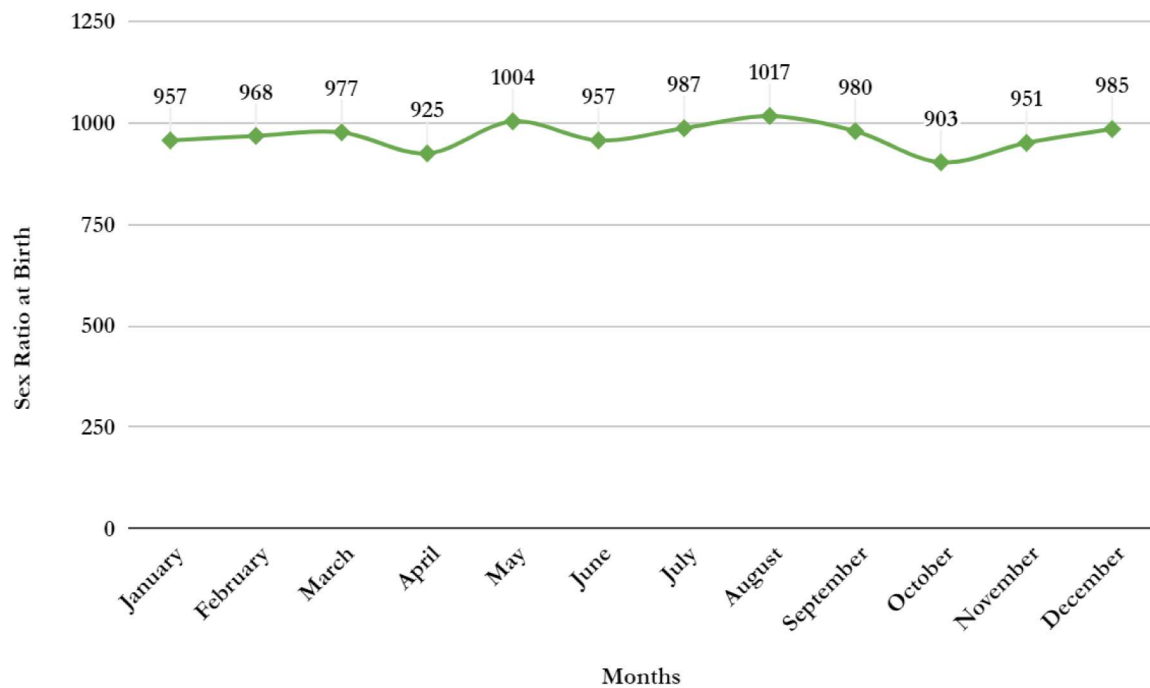


Chart 3 - Month - Wise Distribution of Sex Ratio at Birth

This graph indicates a consistent and stable pattern of the ratio of female births to male births over time. It suggests that there is no significant deviation from the expected average sex ratio at birth within the population being studied.

Analysis of Vital Events - Registered Deaths

3.1 Registered Deaths by Gender

The number of live deaths registered during the year 2022 was 36,327. Out of the total live deaths registered, 20201 are male deaths, 16126 are female deaths. Table 4 shows the number of registered deaths by gender.

Gender	Registered Deaths
Male	20201
Female	16126

Table 4 - Registered Deaths by Gender

3.2 Registered Deaths by Area

According to the number of deaths registered by place of occurrence, 18428 deaths were reported from rural areas and 17899 deaths from urban areas. Table 5 shows the number of registered deaths by place of occurrence.

Area	Registered Deaths
Rural	18428
Urban	17899

Table 5 - Registered Deaths by Area

By analyzing the data, we have to check whether there is any significant difference between rural and urban deaths, considering the influence of the higher urban population and the majority of births occurring in urban areas. For this use a chi-square test for independence. The hypothesis for the test is as follows:

H_0 : There is no significant difference between rural and urban deaths.

H_1 : There is a significant difference between rural and urban deaths.

Pearson's Chi-squared test	
X - squared	2746.5
p - value	$2.2 e^{-16}$

Here the p-value is less than 0.05. So, we reject the null hypothesis. From this we can conclude that there is a significant difference between rural and urban deaths. That is the increase in urban deaths cannot be attributed to the higher urban population and the majority of births occurring in urban areas.

3.3 Sex Ratio at Death

The sex ratio at death is typically expressed as the number of female deaths per 1,000 males. It represents the ratio of female deaths to male deaths in a given population or subgroup. Sex ratio at death for the year 2022 is 798. Among the months, the highest SRD was reported in August (952) and the lowest in April (695).

Months	Male	Female	Sex Ratio at Death
January	1620	1352	835
February	1872	1447	773
March	1647	1408	855
April	1529	1063	695
May	1586	1210	763
June	1797	1392	775
July	1655	1466	886
August	1575	1499	952
September	1656	1348	814
October	1746	1323	758
November	1783	1280	718
December	1643	1338	814

Table 6 - Month - Wise Sex Ratio at Death

Here are some conclusions that can be drawn from the sex ratio at death:

- *Life expectancy differences:* Generally, women tend to have longer life expectancies compared to men. If the sex ratio at death is significantly higher (i.e., more female deaths per thousand males), it suggests that women have a higher likelihood of surviving to older ages compared to men in that population.
- *Health and mortality patterns:* The sex ratio at death can indicate differences in health and mortality patterns between males and females. Certain diseases, lifestyle factors, and occupational hazards may impact one gender more than the other, leading to variations in the sex ratio at death.
- *Aging population:* As a population ages, the sex ratio at death may shift towards more females. This is because women generally have higher life expectancies and may live longer than their male counterparts as the population gets older.
- *Socioeconomic and cultural factors:* The sex ratio at death can also be influenced by socioeconomic and cultural factors. Access to healthcare, lifestyle choices, and cultural practices can impact mortality rates differently for males and females, leading to variations in the sex ratio at death.
- *Gender disparities:* Large disparities in the sex ratio at death may highlight gender inequalities and differential access to healthcare and resources. It can be an indicator of societal factors affecting the well-being and survival of males and females within a population.

CHAPTER IV

Child Deaths, Infant Deaths, Stillbirths

4.1 Child Mortality Rate

Child mortality rate, also known as under-five mortality rate, refers to the number of deaths of children under the age of five per 1,000 live births in a given population. It is a crucial indicator of the health and well-being of children in a country or region.

Child mortality rates are used to assess the effectiveness of healthcare systems, the availability of essential services, and the overall socio-economic conditions that impact child survival. A high child mortality rate suggests significant health challenges, including inadequate access to healthcare, malnutrition, infectious diseases, and other socio-economic disparities.

Months	Child Deaths	Child Mortality Rate
January	5	1.63
February	5	1.61
March	4	1.11
April	5	1.51
May	4	1.26
June	4	1.14
July	5	1.52
August	8	2.52
September	7	2.13
October	10	3.01
November	13	3.74
December	10	3.07

Table 7 - Month - Wise Child Mortality Rate

In 2022, the highest number of child deaths registered in November (13). It was followed by the months of October (10) and December (10). The month of March (4), May

(4) and June (4) had the least number of child deaths registered in 2022. The month-wise child deaths registered during 2022 are shown in Table 7.

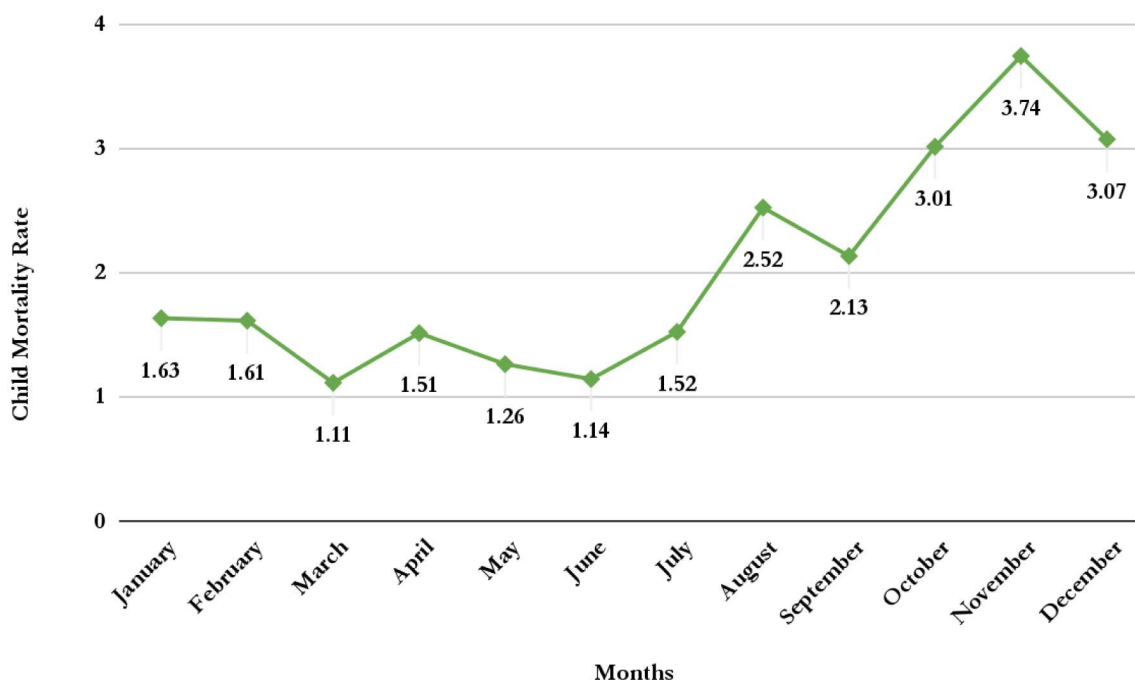


Chart 4 - Month - Wise Distribution of Child Mortality Rate

The graph clearly shows that the lowest child mortality rate was recorded in March (1.11) and the highest in November (3.74). Several conclusions can be drawn:

- *Seasonal variation:* The significant difference in child mortality rates between March and November suggests the presence of seasonal patterns. It implies that certain factors, such as environmental conditions, diseases, or other seasonal influences, may contribute to the fluctuation in child mortality rates.
- *Health and disease patterns:* Understanding the specific causes of child deaths during different months can provide insights into prevalent health conditions or diseases that affect children. It may be worth investigating if there are specific diseases, outbreaks, or health challenges during November that contribute to the higher child mortality rate.

- *Public health interventions:* Analyzing the seasonal patterns of child mortality rates can help inform public health interventions and strategies. It can aid in identifying areas where preventive measures, such as immunization campaigns or health education programs, could be implemented more effectively to reduce child mortality during specific months.
- *Resource allocation:* Understanding the seasonal variation in child mortality rates can guide resource allocation and planning. It highlights the need for sufficient healthcare resources, trained personnel, and targeted interventions during periods of higher child mortality rates.

4.2 Infant Mortality Rate

Infant mortality rate (IMR) is a measure that reflects the number of deaths of infants under one year of age per 1,000 live births in a given population during a specified time period, usually a year. It is an important indicator of the overall health and well-being of a population, particularly in terms of maternal and child healthcare, socio-economic conditions, and access to medical services.

Months	Infant Deaths	Infant Mortality Rate
January	24	7.81
February	19	6.12
March	25	6.94
April	19	5.74
May	11	3.46
June	22	6.26
July	15	4.56
August	26	8.18
September	29	8.84
October	18	5.42
November	12	3.45
December	7	2.15

Table 8 - Month- Wise Infant Mortality Rate

In 2022, the highest number of infant deaths registered in September (29). It was followed by the month of August (26). The month of December (7) had the least number of infant deaths registered in 2022. The month-wise infant deaths registered during 2022 are shown in Table 8.

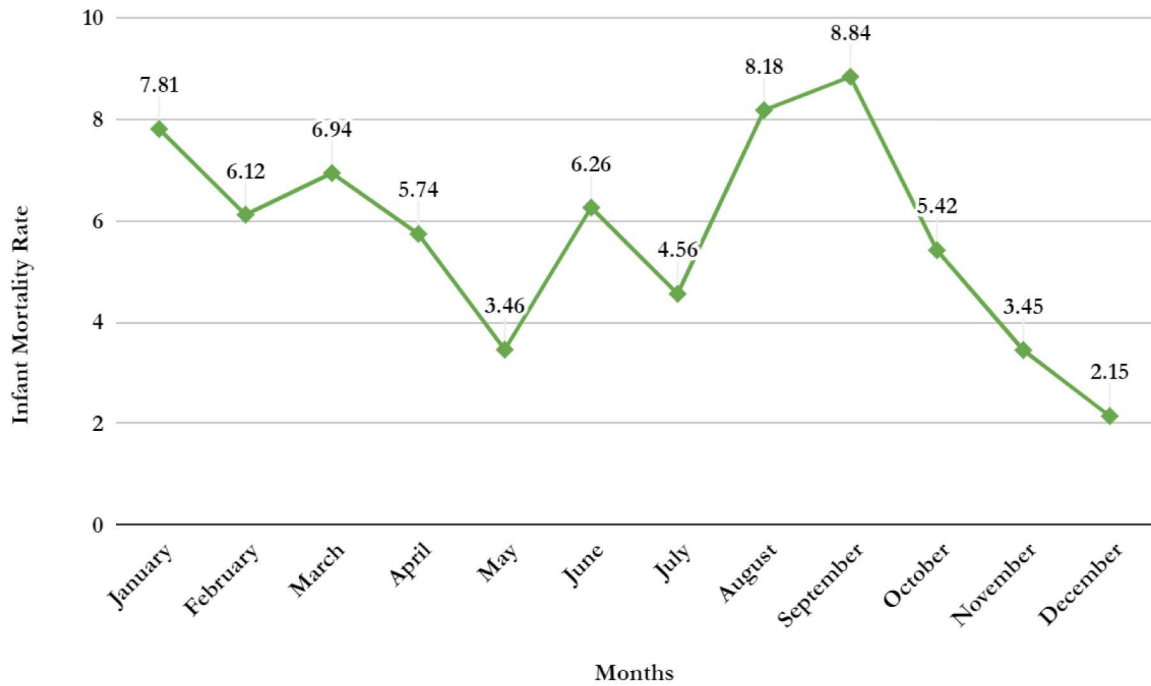


Chart 5 - Month - Wise Distribution of Infant Mortality Rate

Based on the chart, the lowest infant mortality rate was recorded in December (2.15) and the highest in September (8.84).

Two - Sample Proportion Test Regarding Rural & Urban Infant Deaths

To determine whether there is a significant difference between the proportions of rural and urban infant deaths, we use a statistical test such as the two-sample proportion test (also known as the z-test). This test compares the proportions of two independent groups and assesses if there is a statistically significant difference between them. The hypothesis for the test is as follows:

H_0 : There is no significant difference between the proportion of rural and urban infant deaths.

H_1 : There is a significant difference.

2-sample test for equality of proportions with continuity correction	
X - squared	1.0244
p - value	0.3115

Here the p-value is greater than 0.05. So we fail to reject the null hypothesis. From this we can conclude that there is no significant difference between the proportion of rural and urban infant deaths. That is infant deaths are independent of the area (rural/urban).

Two - Sample Proportion Test Regarding Male & Female Infant Deaths

To determine whether there is a significant difference between the proportions of male and female infant deaths, we can use the two-sample proportion test (z-test). The hypothesis is as follows:

H_0 : There is no significant difference between the proportion of male and female infant deaths.

H_1 : There is a significant difference.

2-sample test for equality of proportions with continuity correction	
X - squared	4.9733
p - value	0.02574

Here the p-value is less than 0.05. So, we reject the null hypothesis. From this we can conclude that there is a significant difference between the male and female infant deaths.

The significant difference highlights the importance of considering gender as a factor in understanding infant mortality. It indicates that there may be underlying factors or vulnerabilities that contribute to the observed difference in mortality rates between male and female infants.

Comparison with other states

Infant mortality rates (IMR) in India vary significantly across different states. According to the latest available data from the Sample Registration System Statistical Report 2019, the IMR in Bihar was 33 per 1,000 live births, while in Uttar Pradesh, it was 37 per 1,000 live births. In comparison, Kerala had the lowest IMR in India with 7 per 1,000 live births. The reasons for this variation are complex and multifactorial. Some of the main factors that contribute to high infant mortality rates in certain states include poverty, lack of access to healthcare, poor sanitation and hygiene, inadequate nutrition, and limited education and awareness among mothers regarding maternal and child health.

In contrast, Kerala has made significant progress in improving maternal and child health over the years through a combination of factors such as investments in healthcare infrastructure, education, and awareness programs, and the implementation of innovative public health strategies. Overall, reducing infant mortality rates requires a sustained effort from both government and civil society organizations to address the underlying causes of the problem and ensure access to quality healthcare, nutrition, and education for all.

4.3 Stillbirth Rate

Stillbirth rate refers to the number of stillborn infants per 1,000 live births and stillbirths within a specific population during a given time period. It is a measure of fetal mortality and is often used as an indicator of the quality of antenatal care and overall maternal and infant health.

Months	Stillbirths	Stillbirth Rate
January	6	1.95
February	12	3.85
March	11	3.05
April	11	3.72
May	11	3.45
June	22	6.22
July	17	5.14
August	16	5.01
September	18	5.46
October	8	2.40
November	15	4.29
December	10	3.06

Table 9 - Month - Wise Stillbirth Rate

In 2022, the highest number of stillbirths registered in June (22). It was followed by the month of September (18). The month of January (6) had the least number of stillbirths registered in 2022. The month - wise stillbirths registered during 2022 shown in Table 9.

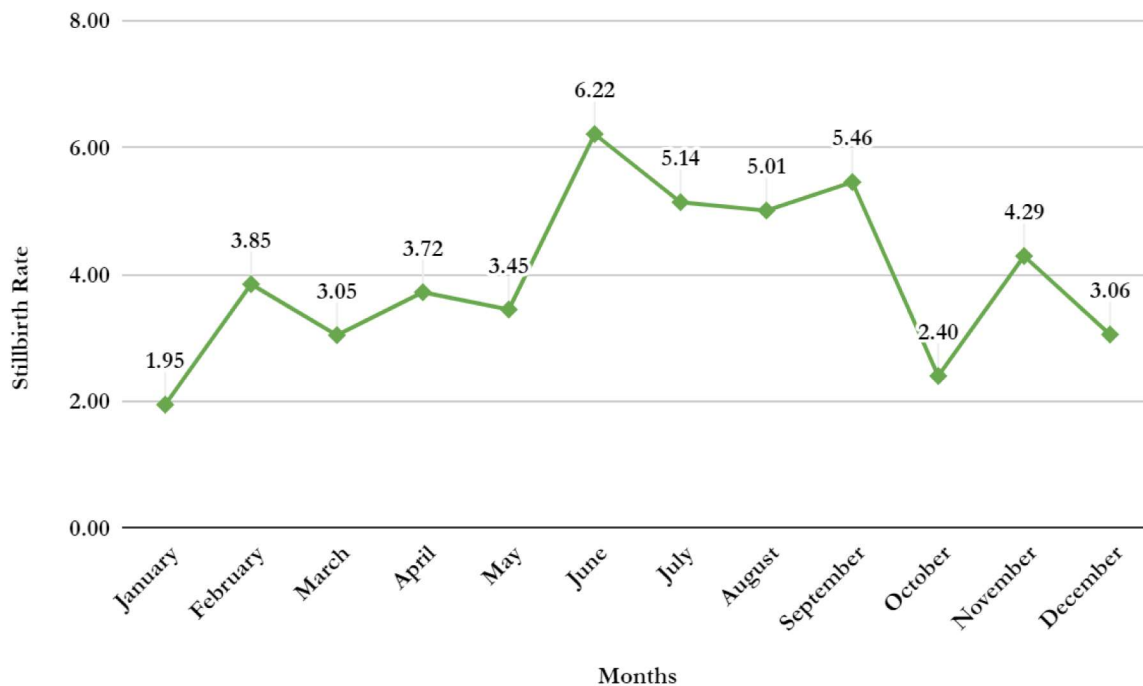


Chart 6 - Month - Wise Distribution of Stillbirth Rate

According to the chart, the lowest stillbirth rate was recorded in January (1.95) and the highest in June (6.22).

Comparison with other states

According to the latest available data from the Sample Registration System Statistical Report 2019, the stillbirth rate in Kerala is 5 per 1,000 births, with no significant difference in the stillbirth rate for male and female fetuses. Similarly, there is no significant difference in the stillbirth rate for male and female fetuses in most states in India. However, some states do show a slight preference for male children, which can result in a higher rate of female stillbirths.

For example, states like Haryana and Punjab have a lower gender ratio, with less than 950 females per 1,000 males, which suggests a preference for male children. This can contribute to a higher rate of stillbirths for female fetuses in these states. In states like Bihar

and Uttar Pradesh, the stillbirth rate is higher compared to Kerala, with stillbirth rates of 22 and 18 per 1,000 births, respectively. However, there is no significant difference in the stillbirth rate for male and female fetuses in these states.

Overall, while there may be slight differences in the stillbirth rate for male and female fetuses in some states, efforts are being made to address gender discrimination and promote gender equality in India. The focus should be on improving access to healthcare services and addressing the underlying social and economic factors that contribute to stillbirths, regardless of the gender of the fetus.

CHAPTER V

CONCLUSION

In conclusion, this statistics project aims to analyze the birth and death rates in the year 2022 in Ernakulam District. The study focuses on the population increase/decrease and the ratio between death and birth, which is uniformly distributed over the months. The variables under consideration for this study are the number of registered births, deaths, infant deaths, child deaths, and stillbirths. The data for this study will be collected from the relevant government agencies and statistical databases. The results of the study will be presented in the form of tables and graphs, and any trends or patterns in the data will be identified.

From the live birth data, we can conclude that more males (50.83%) were born than females (49.17%) which resulted in a sex ratio at birth of 967 females per 1000 males and the share of female infant deaths in total female deaths is 0.577% while the same for male is 0.648%. Also, in the case of child death, it is seen that there are 40 male child deaths (17.857%), whereas that of female deaths is 37 (16.518%). According to the number of still births registered by area in Ernakulam district, 48 births (30.57%) were reported from rural areas and 109 births (69.43%) from urban areas. Sex ratio at birth is higher for the month August (1017). The highest male sex ratio at birth is 1821 in the month March and for females, the highest one is 1720 in the month June. Least sex ratio at birth is 903 in the month of October and in the case of male and female least one is in the month of April and May respectively. Crude Death Rate (CDR) at Ernakulam in 2022 is 11.07. Highest CDR has been reported in February (1.011) and the lowest in April (0.752).

In general, the analysis of vital statistics for Ernakulam district can help identify trends and potential areas for improvement in healthcare, education, and other areas. The data collected over a year can provide valuable insights into the overall health and wellbeing of the population in the district.

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