ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 11| Issue: 8| August 2025|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2025: 8.691 || ISI Value: 1.188

PERCEPTION TOWARDS FOOD SAFETY ITS IMPACT ON INFANT MORTALITY

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ABSTRACT
In today's world, children constitute a major proportion of the global population and they are the one who are easily affected by food borne diseases because of their weak immune system. It has been reported that 10% of the 5.8 million people living in the world are children less than 5 years of age, and among them annually 1.8 million children die from the direct effects of diarrhoeal diseases. (World Health Organisation, 1998)[1]. Infant mortality is an important measure of public health. It is regarded as a reliable and sensitive index of the total health of a community and is often used as an indicator to gauge the level of socio-economic development of a country (Margaret Kosek, et. al., 2003)[9]. The Government of India also has taken many steps to reduce the infant mortality rate. Educational programs and written educational pieces are circulated among the consumers and food handlers. Media campaigns are also organized which helps in awareness reaching a large number of the consumers and mothers at homes. Videotapes are also telecasted at particular locations where people come together (Mary Alice Gettings and Nancy Ellen Kiernan, 2001)[12]. In spite of the precautions taken by the government to create awareness, infant mortality rate has been increasing year by year. In India, out of 7.6 million children, 49.3 percent (or 3.754 million) children died in the first five years of their life in 2010. And more than 16.8 lakh children below five years died of infectious diseases and, more than half of them could not complete the first month of their life. Out of the total deaths 52 percent or above 0.875 million were children who died in the first 28 days of their life. Mothers take utmost care for their child and try to protect their child from death and food borne disease. However a question arises, why the child mortality rate is high in India even though the mothers take high protection and safety for their child. Hence, the researcher has made an attempt to analyse the cause and effects of infants' death rate and their food borne diseases due to mothers' carelessness in preparing food at home. The main objective of the study is to analyse the and identify the reasons for infant mortality rate and its cause and effect.

LITERATURE REVIEW
Moterjemi, Y. (2000) in his study stated that children constitute a major proportion of the global population today. It has been reported that 10% of the 5.8 billion people living in the world are children less than five years of age. It is estimated that annually 1.8 million children die from the direct effect of diarrhoeal diseases. However, many more are affected by the effects associated with diarrhoeal diseases and malnutrition.[1]

Arlington, V. A. (2005) stated that diarrhoea is the second leading cause of child mortality. Each year more than 1.5 million children under the age five die of acute diarrhoea. The incidence of diarrhoea increases after the introduction of complementary food due to the unhygienic preparation of weaning food, especially children aged 6 to 24 months.[2]

Fritz, K., Kaferstein, (2003) in his study stated that infant diarrhoea is the dominant food-borne illness problem in the developing world, and indeed one of massive proportions. Approximately 1.5 billion episodes of diarrhoea occur annually in children under the age of five, resulting in some 1.8 million deaths. It is estimated that upto 70 percent of diarrhoeal episodes may be caused by food borne contaminants.[3]

METHODOLOGY
Since the present study has pre-determined objectives and methodology, it is descriptive and analytical in nature. The study was conducted among the mothers of infants residing in the southern districts of Tamil Nadu. Five districts were selected from Tamil Nadu, namely Thoothukudi, Virudhunagar, Madurai, Ramnad and Kanyakumari. Purposive sampling method has been used to select the sample. In total, 160 respondents per district (approximately) were selected. The total sample size came to 747 respondents. The respondents of this study were only mothers who have infants at the age of 0 – 5 years. The age of the mothers ranged between 18 – 46 years. Quantitative data (using questionnaire) were collected from the respondents. The questionnaire was pilot tested among 75 mothers to confirm the questionnaire clarity. Based on the feedback on the pilot study, certain modifications were carried out.

RESULTS AND DISCUSSION
INFANT MORTALITY
Infant mortality is the death of a child less than one year of age. Childhood mortality is the death of a child before its fifth birthday. National statistics tend to group these two mortality rates together. Globally, ten million infants and children die each year before their fifth birthday. Generally the most common cause worldwide has been dehydration from diarrhoea, a preventable

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disease. And other factors contributing to infant mortality are mothers' level of education, environmental conditions, and poor personal hygiene (Wikipedia, 2013)[8]. This table analyses the rate of infant mortality in the southern district of Tamil Nadu.

Fig. 1
Rate of Infant Mortality

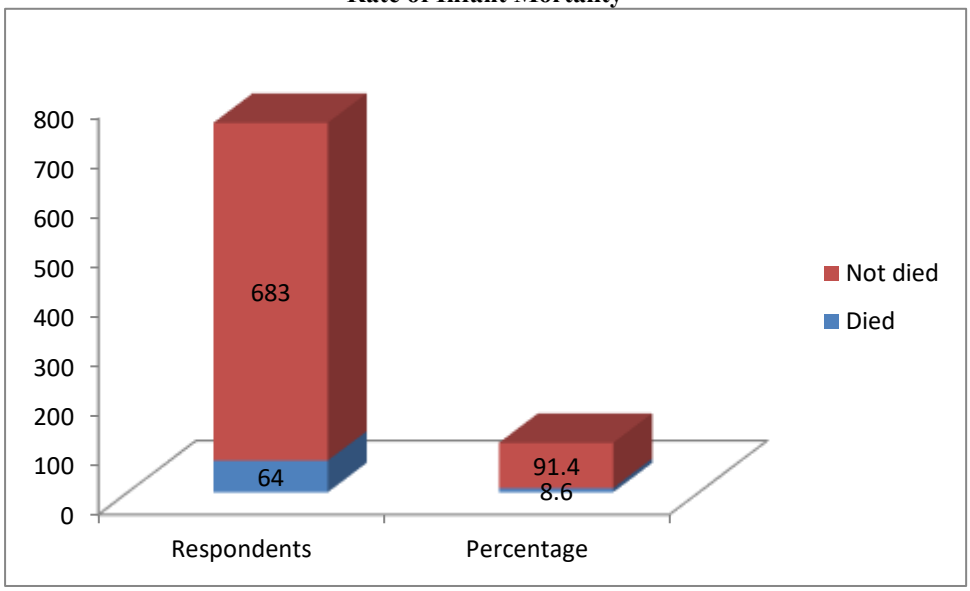

Fig 1 explains the infant mortality rate in the southern districts of Tamil Nadu. Majority of the respondents (91.4%) have not come across infant mortality. Only 8.6% of the infants have died within the first few years of their life. Majority of the respondents have not come across infant mortality.

INFANT MORTALITY RATE AND ITS CAUSE

Infant Mortality Rate is a measure of a nation's health and social condition. It is a composite of a number of component rates which have their separate relationships with various social factors and can often be seen as an indicator to measure the level of socio economic disparity within a country. Diarrhoeal diseases are a leading cause of preventable death, especially among children under five in developing countries. Over 1.8 million children under 5 years of age die of diarrhoeal disease each year (Boschi Pinto, C., et al., 2008)[7]. This table explains the various causes for infant mortality rate.

Fig 2
Root Cause for Infant Mortality

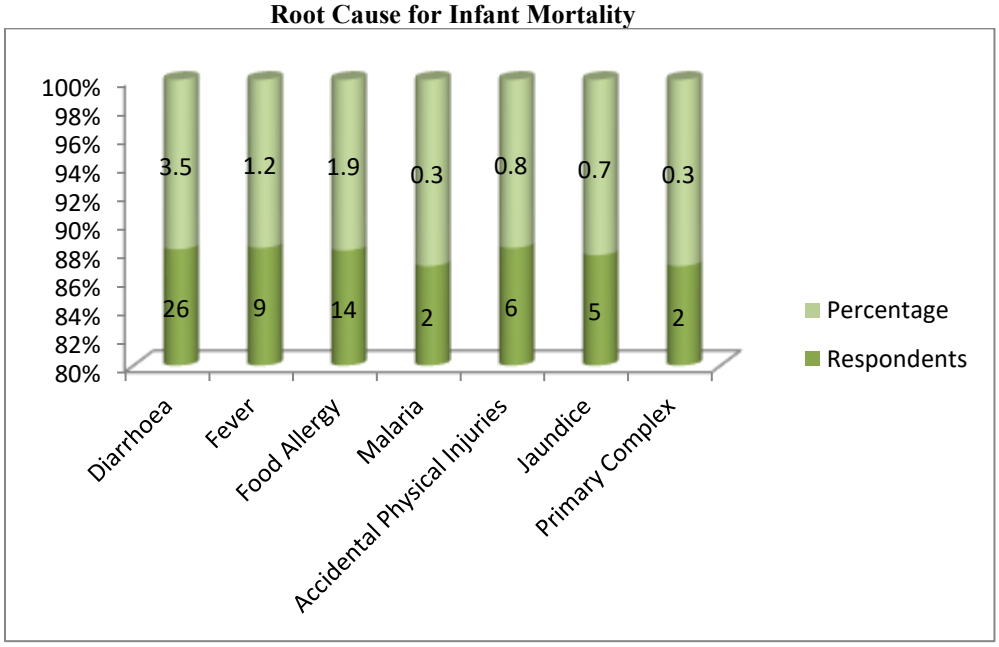

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Fig 2 analyses the various causes for infant mortality. Out of 747 respondents, only 8.6% of them have experienced infant mortality. Majority of the infants (3.5%) died due to diarrhoea, 1.9% of the infants died because of malaria, 1.2% of the infants died of fever, 0.8% of the infants died of accidental physical injuries, 0.7% of the infants died of jaundice and 0.3% of the infants died of primary complex. Majority incidents of the infant mortality were caused by diarrhoea.

INFANT MORTALITY AND INFANTS AGE

The infant mortality rate is an estimate of the number of infant deaths for every 1,000 live births. This rate is often used as an indicator to measure the health and well-being of a nation, because factors affecting the health of entire populations can also impact the mortality rate of infants (CDC, 2012)[9]. Approximately 1.72 million children die each year and also, the under-five mortality and infant mortality rates have been increasing, from 190 and 202 deaths per thousand live births respectively in 1970, to 50 and 64 deaths per thousand live births in 2009 (Wikipedia, 2011)[8]. This table shows the mortality rate among different age groups of infants.

Fig 3
Age of Infant during Death

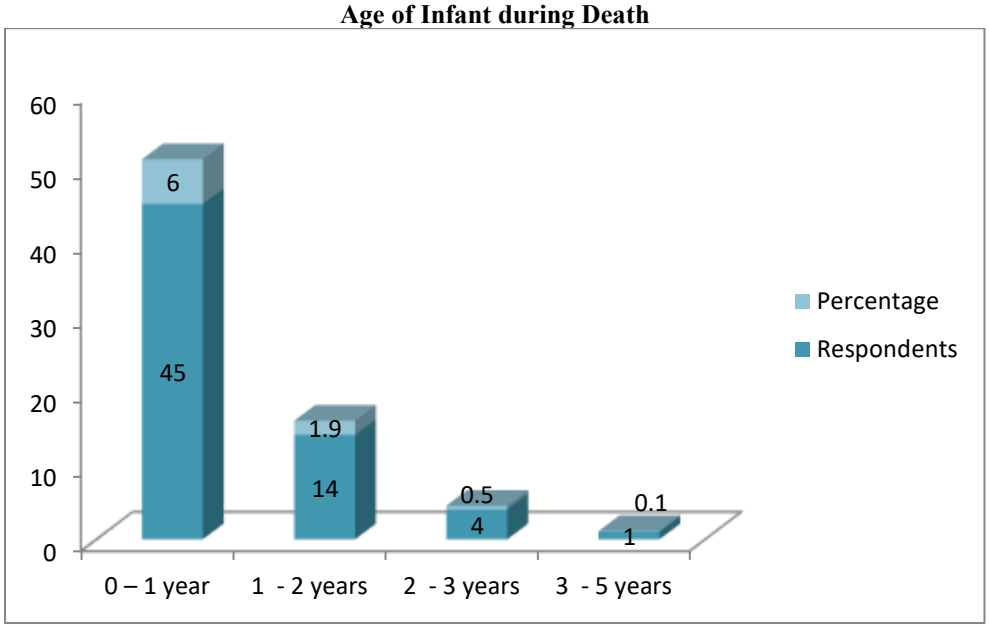

Fig 3 reveals the age of infants at the time of death. About, 6.0% of the infants died during 0 – 1 year, 1.9% of the infants died during 1 – 2 years, 0.5 % of the infants died during 2 – 3 years and the remaining 0.1% of the infants died during 3 – 5 years. Majority of the infants died during 0 – 1 year of age.

FREQUENT HEALTH PROBLEMS OF INFANTS

Diarrhoea, fever and food allergy are the major causes for infant morbidity and mortality worldwide. Among them diarrhoeal diseases affect rich and poor, old and young, and those in developed and developing countries alike. Yet a strong relationship exists between poverty, and unhygienic environment, and severity of diarrhoeal episodes occurs especially among children under five years. Reasons for frequent health problems among infants are poor housing, dirty floors, lack of access to sufficient clean water and a lack of refrigerated storage for food (USDA, 2006)[15]. This table analyses the incidence of health problems among the infants.

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Fig 4
Frequent health problem of infant

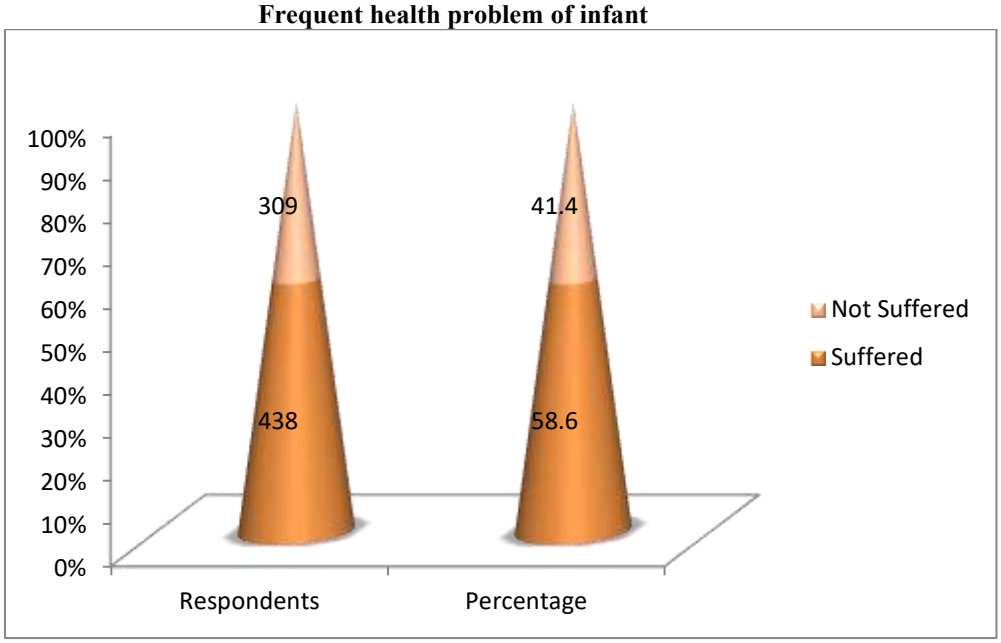

Fig 4 explains the occurrence of frequent health problems among infants. More than half of the infants (58.6%) have suffered from frequent health problems. And the remaining 41.4% have not suffered from any health problem. Majority of the infants have suffered from frequent health problems.

CONCLUSION

Millions of people become sick each year and thousands die after eating contaminated or mishandled food. Infants with weakened immune systems are especially vulnerable to food borne illnesses. Diarrhoeal disease is considered a leading cause for death and frequent health problems of infant under five years old. Contaminated food is the major cause of diarrhoea, when it is prepared or stored in unhygienic conditions. Diarrhoea is both preventable and treatable if mothers strictly adhere to safe sanitation and hygienic practices. A considerable percentage of diarrhoeal disease can be also prevented through safe drinking-water. Therefore empowering mothers with the wherewithal to ensure household food safety is the need of the hour to prevent infant mortality.

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