CHAPTER: 20

THE IMPACT OF HEALTH CARE SERVICES, INFRASTRUCTURE AND NUTRITION ON CHILD MORTALITY RATES IN RURAL INDIA

Isha Makarand Phadke
Student, IIHMR University

Dr. Anoop Khanna
Professor, IIHMR University

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INTRODUCTION

Child mortality has garnered the attention of academics and policymakers as they serve as critical indicators of a countrys socioeconomic development [1]. According to UNICEF, the under-five mortality rate (U5MR), also called the child mortality rate, represents the likelihood that a child would die between the ages of one and five. This includes both infant mortality rates (IMR) and neonatal death rates, and it is stated as a ratio per 1,000 live births.

The specific targets in Sustainable Development Goal (SDG) 3 pertaining to child mortality are listed in Target 3.2. The target's objective is to eradicate preventable deaths among infants and children under the age of five by 2030 [4]. It is recommended that all countries strive to reduce the rate of newborn death to 12 per 1,000 live births and the rate of under-5 mortality to 25 per 1,000 live births [4].

India experienced significant progress in reducing child mortality rates, particularly between the mid-1980s and early 1990s [2]. The Infant Mortality Rate witnessed a decline of 2 points, decreasing from 30 per 1000 live births in 2019 to 28 per 1000 live births in 2020, with an Annual Decline Rate of 6.7%, reflecting advancements in reducing child mortality. Additionally, the Neonatal Mortality Rate decreased from 22 per 1000 live births in 2019 to 20 per 1000 live births in 2020, demonstrating an annual reduction rate of 9.1% [3].

RESEARCH QUESTIONS

What was the impact of the accessibility of healthcare services and nutrition on child mortality indicators, particularly the infant mortality rate and Under-five Mortality rate, in rural India?

RESEARCH OBJECTIVES

1. To evaluate the status of current Infant Mortality rate and Under-five Mortality Rate
2. To assess the impact of nutritional status on child mortality rates.

3. To determine the extent of correlation between rural healthcare infrastructure and child mortality rates, including, Infant Mortality Rate, and Under 5 Mortality Rate.

RESEARCH METHODOLOGY

This was a quantitative study that utilizes regression analysis to analyze the impact of healthcare infrastructure and nutritional status on child mortality rates. In addition, this study will employ a literature review approach to assess the current impact of nutrition and healthcare infrastructure on mitigating child mortality. The data analysis was conducted qualitatively using the Sample Registration System (SRS) 2020 Volume 55-1 data sets for Infant Mortality Rate. Also, Data sets for Under-five Mortality Rates were derived from NFHS-5 (2019-2021). The parameters related to healthcare services and infrastructure were extracted from Rural Health Statistics 2022. These parameters included the availability of health workers, such as female ANMs at Sub Centers and PHCs, as well as obstetricians, gynecologists, and pediatricians at CHCs. Other parameters considered were the number of PHCs with labor rooms, those functioning on a 24x7 basis, and those with functional Stabilization Units for Newborns.

RESULTS & DISCUSSION

Madhya Pradesh, Chhattisgarh, Bihar, Uttar Pradesh, Assam, Uttarakhand, Jharkhand, and Odisha are the states with the highest rates of infant mortality rate and under-five deaths. The prevalence of Malnutrition (stunting and wasting) was noticeably high in these states. There is a strong correlation between the number of ANMs working at subcenters, the number of obstetricians and gynecologists at CHCs, and the number of PHCs with a labor room, with infant mortality rates. There is a strong correlation between the availability of Pediatricians at CHCs, PHCs functioning on a 24X7 basis, PHCs with functioning Stabilization Units for Newborns and Under-five mortality rate. All the correlations were statistically significant except for the association between Health Worker [Female] / ANM at PHCs and Under-five mortality rates.

CONCLUSION

In conclusion, there is a strong correlation between the number of ANMs working at subcenters, the number of obstetricians and gynecologists at CHCs, and the number of PHCs with a labor room, with infant mortality rates. Also, a significant positive correlation was seen between the availability of Pediatricians at CHCs, PHCs functioning on a 24X7 basis, PHCs with functioning Stabilization Units for Newborns and Under-five mortality rate.

Adequate healthcare infrastructure plays a crucial role in providing essential medical services, including proper nutrition, to children. Accessible and well-equipped healthcare facilities contribute to early detection, timely intervention, and effective management of nutrition-related issues, ultimately reducing child mortality rates. Therefore, investing in healthcare infrastructure and nutrition programs is vital for improving child mortality rates and ensuring the well-being of future generations.

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