SYNOPSIS

Bridging the Gap: A Social Determinants Analysis of Child Mortality in India

Dissertation Submitted to:

IIHMR UNIVERSITY

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1. TITLE: Bridging the Gap: A Social Determinants Analysis of Child Mortality in Rural India.

2. INTRODUCTION

Child mortality is a crucial indicator of a nation's overall health and well-being. India has made significant progress in reducing child mortality rates, with the under-five mortality rate (U5MR) dropping from 45 per 1,000 live births in 2015 to 29.1 in 2022, and the infant mortality rate (IMR) decreasing from 36.2 per 1,000 live births in 2015 to 25.7 per 1,000 in 2024. Additionally, stunting among children under five has been reduced from 50% in 2000 to 31.7% in 2022.

India has seen a steady decline in infant mortality rate (IMR), under-five mortality rate (U5MR), and neonatal mortality rate (NMR) since 2014. This progress puts us on track to meet the child mortality TARGET-3.2 set by the Sustainable Development Goals (SDGs) by 2030.

Healthcare accessibility and nutrition are critical factors impacting child mortality rates, especially IMR and U5MR, in rural India. Limited access to quality healthcare services and inadequate nutrition contribute to higher mortality rates among infants and young children in these areas. These issues are exacerbated by socio-economic disparities, hindering efforts to improve child health outcomes.

While India's progress in reducing U5MR by over 50% from 1992-93 to 2019-21 is commendable, the rural areas still have a higher proportion of these deaths, with annual decreases of 1.6% in rural and 2.7% in urban areas (NFHS-5).

The Government of India has implemented several programs to combat child mortality, including the National Health Mission (NHM)- RMNCH+A, National Rural Health Mission (NHM)- Facility Based Newborn Care (FBNC), Janani Shishu Suraksha Karyakram (JSSK), Rashtriya Bal Swasthya Karyakram (RBSK), Mother and Child Health Wings (MCH Wings), National Iron+ Initiative, and Poshan Abhiyan.

Despite a considerable decline in infant mortality rates, India still accounts for a quarter of global neonatal deaths. Nearly 600,000 newborns die within 28 days of birth annually, as highlighted by a recent UNICEF study titled "Every Child Alive." The persistent challenge of ensuring equitable child health outcomes in India is highlighted by the ongoing rural-urban disparity in under-five mortality rates. Also, child mortality rates persistently remain elevated in rural areas. Targeted policies are needed to address this gap, but significant disparities persist across regions and socio-economic groups.

This dissertation, titled "Bridging the Gap: A Social Determinants Analysis of Child Mortality in Rural India," aims to analyze the persistent child mortality gaps in India and evaluate the impact of social determinants, healthcare accessibility, and nutrition on these outcomes. By addressing

these critical issues, the dissertation seeks to contribute to the reduction of child mortality and the improvement of overall health and well-being in India.

3. RESEARCH QUESTION

What is the impact of healthcare accessibility and nutrition on child mortality, specifically IMR and U5MR, in rural India?

4. OBJECTIVES

1. Assess the present Infant Mortality Rate (IMR) and Under-5 Mortality Rate (U5MR).

2. Examine the impact of nutrition on child mortality.

3. Investigate the relationship between healthcare infrastructure in rural areas and child mortality rates.

5. HYPOTHESIS

Enhanced healthcare accessibility and improved nutrition are hypothesized to be associated with lower rates of child mortality in rural India.

6. MATERIAL AND METHODS:

STUDY DESIGN: The research employs a quantitative methodology to explore how healthcare accessibility and nutrition affect child mortality rates in rural India. Through regression analysis, it examines the relationship between different aspects of healthcare infrastructure, nutritional status, and both Infant Mortality Rate (IMR) and Under-five Mortality Rate (U5MR). Furthermore, a literature review supplements these quantitative results, offering a holistic view of the current state of child mortality in rural India. The study's design intends to offer evidence-based insights to guide policymaking efforts aimed at enhancing child health outcomes in rural regions.

SETTING: BDO INDIA LLP-GURUGRAM

STUDY POPULATION

Inclusion criteria: Rural Indian children under five.

Study tools: Sample Registration System (SRS), NFHS-5, Rural Health Statistics 2022.

DURATION OF STUDY: Feb 2024 to June 2024

DATA COLLECTION PROCEDURE: Quantitative analysis of SRS 2020 and NFHS-5 (2019-2021), supplemented by Rural Health Statistics 2022. Literature review of peer-reviewed journals and government reports.

Research Procedure - Quantitative Analysis

The study examined datasets comprising the SRS 2020 for Infant Mortality Rate and NFHS-5 (2019-2021) for Under-five Mortality Rates. Data on healthcare infrastructure from Rural Health Statistics 2022, encompassing factors such as health worker availability and facility functionality, were utilized. Regression and correlation analyses were conducted to evaluate the associations between healthcare infrastructure and child mortality rates. Pareto charts were employed to visualize the distribution of infant mortality rates across states, assisting in prioritizing interventions.

OPERATIONAL DEFINITIONS:

a) Health Worker [Female]/ANM at Sub Centre in Rural Areas:
Number of Female Health Workers or Auxiliary Nurse Midwives (ANMs) working in rural Sub-centers, per state. Each Sub-center requires one ANM according to Indian Public Health Standards (IPHS) norms.

b) Health Worker (Female) / ANM at PHCs in Rural Areas:
Number of Female Health Workers or Auxiliary Nurse Midwives (ANMs) working in rural Primary Health Centers (PHCs), per state. Each PHC requires one ANM according to IPHS norms.

c) Obstetricians & Gynecologists at CHCs:
Number of Obstetricians and Gynecologists in current positions at rural Community Health Centers (CHCs), per state. Each CHC should ideally have one Obstetrician and Gynecologist according to IPHS norms.

d) Pediatricians at CHCs:
Number of Pediatricians in current positions at rural Community Health Centers (CHCs), per state. Each CHC should ideally have one Pediatrician according to IPHS norms.

e) Number of PHCs with labor room:
Count of rural Primary Health Centers (PHCs) equipped with a labor room, out of the total PHCs in a state.

f) PHCs functioning on 24X7 basis:
Count of rural Primary Health Centers (PHCs) operating 24/7 within each state, out of the total PHCs in the state.

g) PHCs with functioning Stabilization Units for Newborn:
Count of rural Primary Health Centers (PHCs) possessing functional stabilization units for newborns, out of the total PHCs across the state.

7. DATA ANALYSIS PLAN:

Quantitative analysis using regression to study the impact of healthcare infrastructure and nutrition on child mortality. Literature review to supplement findings.

8. ETHICAL CONSIDERATIONS:

Ethical standards maintained in data collection and analysis, respecting privacy, and confidentiality.

9. IMPLICATIONS OF RESEARCH:

Insights may inform policy interventions to improve healthcare access and nutrition, potentially reducing child mortality in rural India.

10. REFERENCES:

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