



# HEALTH INEQUALITIES RESEARCH IN INDIA: A SYNTHESIS OF RECENT LITERATURE

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## ABSTRACT

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*Health inequalities are always detrimental to the rapid economic growth of a developing nation like India. The achievement of health equality has been a concern for health policy in India. So, the research in health inequalities helped to attract thoughtfulness regarding the wellbeing of the Indian population. This review study thoroughly examines the research on health disparities in India and summarises key developments. This paper uses the SALSA (Search, Appraisal, Synthesis and Analysis) framework to review the studies. The authors have covered two decades of research articles on health disparities in India. The authors conduct a broad review of the literature on studies on health inequalities by scouring popular search engines like PubMed, EconLit, and Web of Sciences for relevant articles published between January 2000 and November 2019; this is followed by a validation check using the Crossref database. Due to abnormalities caused by COVID-19 around the globe, this paper excludes the articles published after December 2019. The authors categorise numerous articles on health inequalities in India, out of which merely a few but most relevant studies have been selected for chronological review. The important domains of each paper, including the year of publication, author(s), location, objective(s), methodology, key findings, and policy implications, are analysed by the authors using content analysis, a qualitative technique. The key findings reveal that most of the studies focus on women and children, followed by youth. The authors also discover that income and wealth are the most widely used indicators of inequality, followed by gender and education. Finally, this paper suggests that the government need to reduce health inequalities by introducing sophisticated measures for the upliftment of vulnerable section of the Indian society.*

**KEYWORDS:** Health Inequality, Health Policy, SALSA Framework, Literature Review, India.

**JEL Codes:** I14, I15.

## 1. INTRODUCTION

Health levels vary among people from various social groups, countries, and backgrounds. The gross inequalities in health seen within and among countries present a challenge around the globe. Health disparities are "differences in health status or the distribution of health determinants among various population groups," according to the World Health Organization (WHO, 2019). Others, however, can be attributed to factors primarily outside of the control of

the individuals involved, such as the external environment and circumstances. Some health inequalities can be linked to biological variances or free choice. Despite India's impressive economic performance following economic reforms in the 1990s, progress in improving Indians' health has been slow and inconsistent. Even though access to healthcare has improved in India, the key factors influencing inequality are socioeconomic position, location, and gender. Furthermore, high out-of-pocket

expenses exacerbate these health disparities (Balarajan, Selvaraj, & Subramanian, 2011).

The health of the nation's economically and socially vulnerable sections has received attention because of the research on health inequities. It has influenced the conversation about public health, brought attention to the need for increased and contentious investments in health, and can be used as a crucial indicator of the efficiency of public health services (Balarajan et al., 2011). By concentrating on variables other than money, such as gender, caste, religion, and occupation, which all affect people's health and quality of life, research on health inequality helps us better understand societal inequalities in health and wellbeing. Research on health inequality is one of the key tenets of the development debate in a developing nation like India, where health inequities have been recognised and well-known for decades but have only recently become policy goals (Marmot, 2005). Health policy in India has always been concerned with achieving health equity. Therefore, the

study of health disparities encouraged consideration for the welfare of the Indian populace. As a result, our study launches a broad but comprehensive evaluation of the health inequality studies in India.

## 2.OBJECTIVES AND METHODOLOGY

The three goals of this study are, (i) to construct a roadmap for future research, (ii) summarise major trends in the area, and (iii) conduct a thorough analysis of the literature on health inequalities in India. The focus of the current paper is the recent (20th century) literature on health disparities. Grant and Booth (2009) and Booth, Sutton and Papaioannou (2016) employ a straightforward analytical framework – SALSA (*Search, Appraisal, Synthesis and Analysis*) - to investigate the primary review types.. According to this framework, a literature review possesses certain characteristics as given in *Table 1*.

**Table 1: SALSA Framework used for Literature Review**

Description	Search [S]	Appraisal [AL]	Synthesis [S]	Analysis [A]
<ul style="list-style-type: none"> <li>Published materials that examine recent literature.</li> <li>Can cover a wide range of subjects at various levels of completeness and comprehensiveness.</li> <li>May include research findings.</li> </ul>	Might include comprehensive searching	Might include quality assessment	Typically, narrative	The analysis may be chronological, conceptual, thematic, etc.

*Source:* Adapted from Booth, Sutton and Papaioannou (2016) and Grant and Booth (2009).

By following the SALSA framework, authors chronologically reviewed studies on health inequalities in the country, published since 2000. The authors explore the key search databases like EconLit, PubMed and Web of Sciences using specific key

terms, as given in *Figure 1*, to identify the articles between January 2000 and November 2019. The study excludes the articles published after December 2019 due to abnormalities caused by COVID-19 around the globe.

**Figure 1: Word Cloud of Key Terms used to Search the Literature**

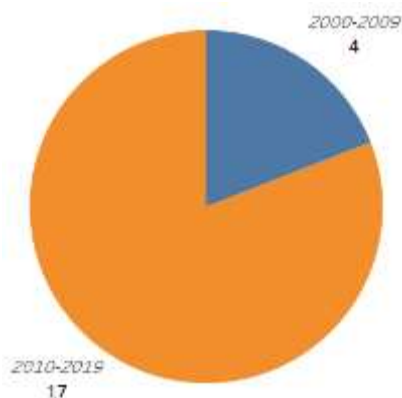


*Source:* Authors' Calculation.

Additionally, the authors only chose studies that had searched for important terms in the title and/or abstract while keeping in mind the goals of the study. The Crossref database was used by the authors to further validate the studies. Finally, the authors categorise a

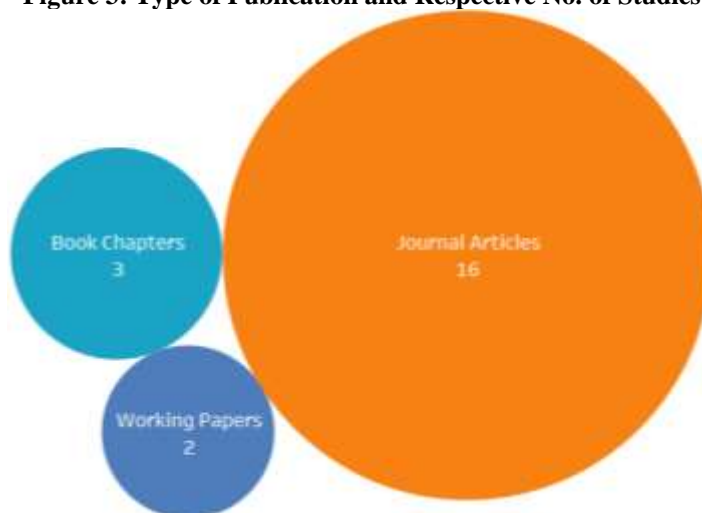
large number of papers on health disparities in India, but only twenty-one significant studies that are most pertinent to our goals have been chosen for the review. These studies cover two decades (*viz.* 2000-2009 and 2010-2019) as given in *Figure 2*.

**Figure 2: Decade-wise No. of Selected Studies**



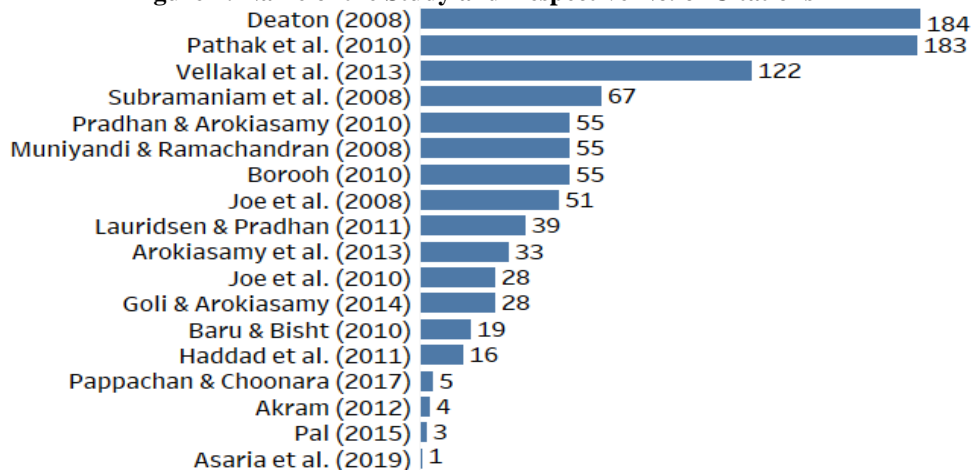
Source: Authors' Calculation.

**Figure 3: Type of Publication and Respective No. of Studies**



Source: Authors' Calculation.

**Figure 4: Name of the Study and Respective No. of Citations\***



\*Book Chapters have been excluded.

*Source:* Authors' Calculation.

Based on publication type, the studies have been categorised into three sections – Journal Articles, Book Chapters and Working Papers – and the same have been accessible in *Figure 3*. As presented in *Figure 4*, most of the studies have over twenty citations as per Google Scholar Citation Index.

By using a chronological review approach, the authors analyse key areas like the publication year, author(s), location, objective(s), methodology, key findings, and policy implications of each paper using content analysis, a qualitative technique.

### 3.HEALTH INEQUALITY LITERATURE IN INDIA

The literature has been analysed extensively and synthesised in terms of key issues/findings/results. Covering almost two decades, the current paper's literature review starts with a study of Deaton (2008) and it ends with the research of Asaria *et al.* (2019). A chronological review of the related literature in inequality regarding health have been organised, synthesised and analysed:

Deaton (2008) compared the distribution of wealth between groups of people and adult height using data from the National Family Health Survey-3 (NFHS-3). Men and women both got taller throughout antiquity as material living standards and the epidemiological climate improved, but men did so more quickly than women, suggesting gender discrimination in diet and healthcare. The study discovered no consistent link between average heights or the disparity in heights and consumption.

Joe *et al.* (2008) conducted an empirical analysis of India's income-related health disparities. Utilizing methods such as concentration curves and concentration indices, the study was carried out utilising data from the National Family Health Survey 3 (NFHS-3). The study examined data on the status of child mortality vaccination and nutritional performance for choosing the markers of child health. The study demonstrated that the poorer segments of the community suffered from poor health regardless of whether children are fed or survive. The study found that health disparities increased when economic disparity increased along with population income levels.

Muniyandi and Ramachandran (2008) analysed into the relationship between social disparities and tuberculosis (TB). To ascertain the association between TB and poverty in terms of income quality of living, dwelling style, and social class, the research examined variations in geographical and demographic prevalence as well as socio-economic inequalities. The study discovered that marginalised groups had a 1.5 times greater incidence of tuberculosis than persons who did not live below the poverty line (TB).

Subramanian, Ackerson, Subramanyam and Sivaramakrishnan (2008) examined the relationship between gender, caste, religion, wealth, education, and urban-rural factors in India's analysis of health inequities. The study made use of information from the National Family Health Survey (NFHS). The researchers came to the conclusion that many health disparities in India can be addressed by public policy by raising living standards and providing more equitable access to boarding schools. However, the researchers cautioned that the best strategies to address these issues require careful thought.

Pradhan and Arokiasamy (2010) India was included in a study that examined global disparities in children's health status and how they varied across and within countries. As a measure of health, the study looked at children up to 36 months old's height. The study's findings revealed that rather than disparities between countries, within-country variances were the main cause of inequality.

Baru and Bisht (2010) noted that despite continued high development, there have been unequal advances in health outcomes in India and investigated the main causes of these discrepancies in health care, including limited public provisioning and widespread commercialization of health. The study's findings have consequences for cost and fairness across income quintiles, particularly for those who are socioeconomically marginalised, according to its findings.

Borooah (2010) evaluated the relative contributions of economic and social status to a person's health—known as the socio-gradient to health—was looked into. The Morbidity and Healthcare Survey conducted by the National Sample Survey Organization from January to June 2004 across all Indian states and union territories was taken into consideration by the researchers (NSSO). The researchers came to the conclusion that people at the bottom of the social scale in India ran the danger of dying young, having bad health, and not receiving treatment.

Joe, Mishra and Navaneetham (2010) examined the socioeconomic disparities in India's child health. The study discovered that the poorest segments of the population were particularly susceptible to the ill health of children after using the concentration curve and concentration index tools on data from the National Family Health Survey 3 (NFHS-3). In addition, the study discovered gender and geographical disparities notwithstanding the state's level of development.

(Pathak, Singh and Subramanian (2010) studied the financial differences in the use of skilled birth attendance and prenatal care in India in three different states: Uttar Pradesh, Maharashtra, and Tamilnadu, between 1992 and 2006. The study made use of three waves of NFHS data. They made use of

multinomial logistic regression, logistic regression, concentration curves, concentration indices, bivariate analysis tools, and multinomial logistic regression. The study's findings revealed growing disparities in how India's various income classes utilised skilled labourers and prenatal care.

Pradhan and Arokiasamy (2010) study the breakdown of socioeconomic factors' effects on "under two" child mortality in India. The study combined information from the National Family Health Survey 3 with the concentration index and its breakdown (NFHS-3). The results showed that, when combined, the economic situation of low-income households, mothers' literacy, and rural location accounted for 96% of the total socioeconomic gap in child survival at the national level. Last but not least, the study emphasised the need for specific health intervention strategies based on the existing data for varied states.

Ito (2011) analysed the utilisation of health services in India using information from the 60th wave of the National Sample Survey (NSS). The researcher supported the creation of financial support systems for the underprivileged as well as more targeted efforts on preventative medicine.

Lauridsen and Pradhan (2011), looked at and dissected health inequalities in the context of India in an effort to comprehend the causes of socio-economic differences in child health. To determine how complete immunisation coverage affected overall socioeconomic disparity, the researchers also examined state-level changes and household-level variables. The concentration index and Gini coefficient were used to analyse the data from the National Family Health Survey (NFHS-3). According to the study's findings, 97% of the overall socio-economic discrepancy in full vaccination coverage at the national level may be attributed to poor family income, illiterate mothers, low state GDP, and high rates of illiteracy at the state level.

Akram (2012) used the critical realism technique and secondary data to present a comprehensive assessment of health and healthcare in India. The study critically analysed many aspects of the proposed universal healthcare system in terms of unmet medical requirements and escalating health disparities. The report recommended a comprehensive strategy concentrating on fundamental health supplies in addition to medication and curative health.

Arokiasamy, Jain, Goli and Pradhan (2013) studied how social and economic factors affected child health inequalities in the cities of India's less developed and more developed states. The investigation was conducted using information provided by the National Family Health Survey 3 (NFHS-3). The study used the concentration index to show the extent of socioeconomic inequality, and it used the decomposition of inequalities process to look into the underlying reasons of disparities. In less developed states, parent illiteracy, poor economic

standing, being Muslim, and birthing orders of three or more are major causes of health disparities. In more developed states, household economic position, parent illiteracy, and caste are critical drivers. The report recommended a number of health policy actions for developing nations.

Vellakkal et al. (2013) In their study, examined how non-communicable disease (NCD) prevalence varied by socioeconomic status. Data from the 2007 Global Ageing and Adult Health Survey was used by the researchers. The instruments utilised to portray the socioeconomic aspects of health inequality and the general population's experience were the concentration index and slope index. The researchers noted that the poor underreported their medical states and had difficulties accessing healthcare for diagnosing NCDs.

Goli and Arokiasamy (2014) sought to measure the pace and speed of convergence in terms of both aspects i.e., the country's socioeconomic, geographic divides and the average health. The study employed information from the Sample Registration System (SRS) (1981–2007, 2009) and three NFHS rounds. The analysis found indications of convergence as health inequities declined and were replaced by escalating divergences after 1990.

Pal (2015) by breaking down the inequality and determining the relative contributions of different components, it was possible to analyse the inequality caused by income in maternal health utilisation in India. Data from the National Family Health Survey 3 (NFHS-3) were used to perform the study. To obtain the concentration indices for regression-based decomposition, the study used the Shapley Value method. According to the analysis, demand-side factors including parental education and household income are important predictors of use inequality.

Pappachan and Choonara (2017) noticed that despite economic growth, India still had a high rate of child mortality, with notable variations occurring both within and within various states. The study concluded that child mortality is mostly caused by poverty, malnutrition, and poor sanitation. The researchers came to the conclusion that India's health system is underdeveloped, which has a significant impact on access to healthcare. The data indicate that ensuring universal access to healthcare and education can reduce infant mortality.

Bharati (2018) It was noted that India had the greatest rate of undernutrition among women in the world, particularly among those from disadvantaged and underprivileged social groups. The study's main focus was the undernutrition that affects women in northeast India and how it is related to the country's economic situation. The study made use of information from the third National Family Health Survey (NFHS-3). The wealth index and categorical logistic regression were employed by the researcher to establish a link between health and economic disparity. According to the study, undernutrition has

harmful social and economic repercussions, with social costs driving undernutrition in society. According to the study's findings, women in particular must better their socioeconomic status because they are the ones who are shaping both the present and the future of society.

De (2018) In order to evaluate the availability and utilisation of accessible reproductive and child healthcare services, researchers used NFHS-3 data to examine various demographic, socioeconomic, and healthcare features of the north-eastern part of India. The concentration index and wealth index were used to evaluate state-level changes in child mortality inequality. The researcher categorised the states based on the study's findings and the degree of inequity in child mortality. The survey found that the highest levels of inequality were found in Tripura, Manipur, and Meghalaya, while the lowest levels were found in Sikkim and Arunachal Pradesh.

Asaria *et al.* (2019) found considerable socioeconomic differences in newborn mortality in India. The National Family Health Survey 4 (NFHS-4) and SRS provided the data for the study, which was conducted between 2011 and 2015. Using the Chiang method, the study determined the life expectancy at birth for each quintile of sex, place, and wealth. According to the study's findings, the difference in average life expectancy between families in the richest and poorest quintiles was 7.6 years nationwide.

In this section, a systematic review of peer-reviewed literature has been synthesised. Now, the paper will discuss the major findings in the next section.

#### 4. DISCUSSION

A chronological review of major studies confirms that most studies were led by India-based authors. After rigorous examination, it was discovered there has been a rise in research on health inequalities in India after the first decade of the twenty-first century. Studies have shown that in India the most discussed inequalities in health are related to child health, followed by women health. The study also finds that wealth and income are prevalent measures of inequality, followed by education and gender. After reviewing the available literature on health inequality in India, the authors discover that most of the studies used various rounds of NFHS as a prominent data source. The NSS and SRS data have also been used by some studies. Several tools for measuring inequality have been reported in the literature, but the popular tool of analysis among researchers was Concentration Index, followed by the Wealth Index and Gini Coefficient. The findings of the present study cannot be generalised due to the limited number of peer-reviewed studies specific to the field.

#### 5. CONCLUSION

In a developing nation like India, where there are significant social inequalities and rapid economic

growth, research on health disparity is crucial for assessing the efficacy of health policies and initiatives. Although the study of health inequality has its roots in fields like demography, economics, and sociology, it has developed into a vast and interdisciplinary area of study. According to WHO (2019), health inequalities also contribute to health inequality. This novel study suggests that, policy and health programme evaluations should be the focus of future research in order to better target neglected groups. To effectively measure the relationships between the proposed policy goals and the observed patterns in health inequities, significant study and improved methodologies are therefore required. The authors conclude by urging the government to implement advanced measures for the upliftment of the most vulnerable segments of Indian society in order to eliminate health inequities.

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