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AN EVALUATION OF SUSTAINABLE DEVELOPMENT OF HEALTH IN JHARKHAND STATE OF INDIA

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Abstract

This research examines the convergence of sustainable development and health within the specific context of Jharkhand state, India. Jharkhand, a state blessed with abundant natural resources, encounters substantial obstacles in attaining sustainable development while safeguarding the health and welfare of its inhabitants. The study investigates multiple facets, including healthcare accessibility, environmental sustainability, demographic variables, and governance concerns that impact both health outcomes and sustainable development in the region. The study consolidates current literature and empirical data to provide approaches for advancing sustainable development practices that prioritize equitable health, environmental preservation, and socio-economic progress in Jharkhand. The study seeks to contribute to the discussion on achieving sustainable development goals and improving public health outcomes in resource-rich but vulnerable regions like Jharkhand by tackling these interconnected concerns.

Introduction

The Rio Declaration on Environment and Development states that human beings are at the centre of concerns for sustainable development and that they are entitled to a healthy and productive life, in harmony with nature. A blind race for development had led to the Bhopal Gas Leak Tragedy in the Union Carbide factory, killing a large number of people and debilitating those who survived the man-made disaster, producing its shadow on future generations too, in India. Thus goals of sustainable development can only be achieved in the absence of a high prevalence of debilitating diseases. There is an urgent need to address the causes of ill health, including environmental causes, and their impact on development, with emphasis on women, children, people with disabilities, elderly persons Indigenous people and BPL groups. Jharkhand lags on various Social Indicators in this context, as has been noted in this paper

Sustainable development

Sustainable development encompasses environmental and economic sustenance and socio-demographic and health dimensions. It means development that meets the needs of the present without compromising the ability of future generations to meet their own needs (4). A complementary definition is improving the quality of life while living within the carrying capacity of supporting ecosystems (6).

There are many forces responsible for the concept of sustainability. These include social issues, economic concerns, resource allocation, environmental damage, population growth, access to potable water, health and energy usage, among others. (7) health plays a central point at which the outcome of these forces interact.

Environmental concerns are significantly linked to sustainable development. Activities which

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continually degrade the environment are not sustainable (8A). According to the United Nations Commission on Sustainable Development, "air and water pollution in urban areas are associated with excess morbidity and mortality. Environmental pollution as a result of energy production, transportation, industry or lifestyle choices adversely affects health. This would include such factors as ambient and indoor air pollution, water pollution, inadequate waste management, noise, pesticides and radiation" (United Nations 2001:38).

Dincer and Rosen (2004:5)(8) provide a compelling argument that there are four dimensions of sustainability:

1) Societal sustainability.
2) Economic sustainability.
3) Environmental sustainability; and
4) Technological sustainability.

Health has a direct cause or causal impact on the above first three dimensions of sustainable development.

Health status of Jharkhand: Disparity

Jharkhand, an eastern Indian state abundant in mineral resources, confronts a substantial obstacle: attaining sustainable development that harmonizes economic advancement with social advancement and environmental preservation. This article examines the complex connection between these factors, with a specific focus on how the development path of Jharkhand affects the well-being of its people.

Jharkhand possesses a wealth of natural resources, including minerals, forests, and fertile land. Expand further Nevertheless, the swift process of industrialization and extraction of resources has incurred a price. The population of Jharkhand are facing threats to their health and well-being due to environmental deterioration, air and water pollution, and deforestation. This study analyzes the present situation in Jharkhand and puts up recommendations for attaining sustainable development with a focus on prioritizing public health.

Health issues faced in the state of Jharkhand:

Waterborne illnesses: Contaminated water sources resulting from the discharge of industrial waste and insufficient sanitation facilities are responsible for the occurrence of waterborne illnesses such as diarrhoea, hepatitis A, and acute diarrheal disorders (ADD).

Air pollution caused by coal mining and industrial activity contributes to respiratory ailments such as asthma, chronic obstructive pulmonary disease (COPD), and lung infections.

Vector-borne diseases: Climate change and environmental degradation contribute to the proliferation of mosquitoes and other disease-carrying organisms, resulting in a rise in malaria, dengue, and encephalitis cases.

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Jharkhand experiences elevated levels of malnutrition, particularly among infants and pregnant women, despite its abundant land resources. Expand further These variables, such as poverty, limited nutritional variety, and insufficient access to clean water, can be identified as the main causes.

The purpose of sustainable development:

Implementing sustainable development strategies that prioritize environmental conservation and appropriate utilization of resources is essential for enhancing public health in Jharkhand. These are the main areas that we need to concentrate on:

Investing in adequate water treatment facilities, supporting rainwater collection, and providing suitable sanitation infrastructure are crucial for reducing waterborne diseases and maintaining clean water and sanitation.

Enhancing healthcare: Allocating resources to healthcare infrastructure, enhancing accessibility to medical services in remote regions, and advocating for health awareness campaigns are vital for enhancing overall health outcomes.

In Jharkhand where people live on very low incomes, mostly they earn daily living and have no savings. In the name of development, their living environment such as air, and water resources i.e. river and farm produce all get polluted. These pollutants gradually make them sick. They often cause contamination-based diseases. These illnesses have a dual impact. First, It stops their ability to earn, fully or partially. Secondly, medical expense increases their expenditure.

- A majority of the rural poor in Jharkhand expect to pay between Rs 50 – 200 per visit to the doctor. This coupled with the loss of an entire day's pay due to the distance from the hospital significantly strains a poor family's financial resources (9).
- The average cost of fees, medicine, and transport can amount to twice a family's monthly income. Inpatient care, specialized tests, and surgeries are unaffordable to the majority (9).

Debt and savings are the most common means of financing unplanned healthcare expenses (9).
These expenditures compel them to either get into debt or sell their resources. This makes them poorer and less productive. Local money lenders take this advantage and often grab their resources. Debt makes them and their family vulnerable and reduces their dignity. And they become poorer. Poverty leads to poor nutrition for them and their family, less opportunity for education and consequently, they get trapped in the loop of poverty. Every illness reduces their hope of getting out of the poverty loop.

The source of data is NFHS 3 of the following discussion. The other sources of data if referred to the source are then mentioned there.

Fertility and child mortality

Jharkhand is confronted with a multifaceted problem concerning fertility and child mortality. Presented below is a comprehensive study based on data, which includes references to support the

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findings.

Fertility: The Total Fertility Rate (TFR): The total fertility rate (TFR) in Jharkhand is now estimated to be approximately 2.8 children per woman. However, the latest data may not be easily available. The current fertility rate, which stands slightly above the national replacement threshold of 2.1 children per woman, has decreased from earlier values of 3.5 children per woman in the period of 2005-2012 [31, 32].

Different versions: There is variation in fertility rates among different social groups and geographies. Districts such as Lohardaga, Pakaur, and Gumla exhibit higher Total Fertility Rates (TFRs), necessitating specific measures [32].

Child mortality refers to the number of deaths that occur among children under the age of five. Infant mortality rate (IMR) specifically refers to the number of deaths that occur among infants within the first year of life. According to the latest statistics (2019-2021) from the National Family Health Survey-5 (NFHS-5), Jharkhand's Infant Mortality Rate (IMR) is predicted to be 38 deaths per 1,000 live births, which is a decrease from 44 in NFHS-4 (2015-2016) [33].

The Under-Five Mortality Rate (U5MR) based on NFHS-5 data is 34 deaths per 1,000 live births. This indicates some progress, but also emphasizes the need for additional enhancements.

Obstacles:

Elevated fertility: A greater Total Fertility Rate (TFR) can lead to population pressure, which has the potential to put a burden on resources allocated for child health and education.

Lack of sufficient healthcare infrastructure: Insufficient numbers of doctors, staff nurses, and well-equipped facilities in remote locations can impede the ability to obtain high-quality maternal and child healthcare [34].

Malnutrition: Elevated rates of malnutrition in mothers and children can heighten the likelihood of child death [35].

Inadequate Sanitation and Hygiene: Insufficient availability of clean water and sanitation facilities leads to the spread of diarrhoeal illnesses, which is a significant factor in the death of children [36].

Positive Developments: Decreasing Fertility Rates: The decline in Total Fertility Rate (TFR) indicates progress in the implementation of family planning programs [31].

The decline in Infant Mortality Rate (IMR) and Under-5 Mortality Rate (U5MR) indicates advancements in enhancing child health outcomes [33].

Government Schemes: The Integrated Child Development Services (ICDS) program and Janani

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Suraksha Yojana (JSY) are initiatives that seek to enhance the health of mothers and children [37].

Anticipating the Future:

Jharkhand should prioritize the implementation of family planning programs, as it is essential to continue promoting family planning and empowering women with the ability to make reproductive choices.

Enhancing Healthcare: It is crucial to invest in infrastructure, recruit medical personnel to rural areas, and improve service quality.

Addressing malnutrition is crucial, and it can be achieved through programs that prioritize enhancing the nutritional intake of both mothers and children. These programs should emphasize dietary diversification and education.

Enhancing Sanitation and Hygiene: Guaranteeing availability of uncontaminated water and sanitation infrastructure decreases the likelihood of child mortality.

Community Engagement: By actively collaborating with local communities and empowering them to make informed and beneficial decisions, a lasting and sustainable influence can be achieved.

Malnutrition

Jharkhand faces a significant challenge with malnutrition, despite efforts to address it. Here's a data-driven analysis incorporating references:

Prevalence:

Wasting: Based on WHO growth charts, 11.4% of children under 5 in Jharkhand suffer from severe wasting, a life-threatening condition [20].

Stunting: National Family Health Survey-5 (NFHS-5) data (2019-2021) reveals 39.6% of children under 5 are stunted, indicating chronic malnutrition [21]. This reflects an improvement from 45.3% in NFHS-4 (2015-2016) [21].

Underweight: NFHS-5 data shows 39% of children under 5 are underweight, indicating another dimension of malnutrition [21]. This represents a decrease from 48% in NFHS-4 [21].

Anaemia: Over two-thirds (67%) of children aged 6-59 months are anaemic, highlighting a crucial micronutrient deficiency [21].

Causes:

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Poverty: Limited access to diverse and nutritious food is a major contributor, often linked to poverty and lack of livelihood opportunities [22].

Food Insecurity: Seasonal variations in food availability and inadequate food storage practices contribute to food insecurity, impacting dietary intake [22].

Poor Sanitation and Hygiene: Unsafe drinking water, inadequate sanitation facilities, and poor hygiene practices increase the risk of diarrhoeal diseases, hindering nutrient absorption [23].

Inadequate Infant Feeding Practices: Improper breastfeeding practices and a lack of knowledge about complementary feeding contribute to malnutrition in children under 2 years old [23].

Positive Developments:

Government Schemes: Initiatives like the Integrated Child Development Services (ICDS) scheme and the National Food Security Act (NFSA) aim to improve access to food and nutrition for children and pregnant women [24].

Reduction in Stunting Rates: The decline in stunting rates (from NFHS-4 to NFHS-5) suggests some progress in addressing chronic malnutrition [21].

Jharkhand needs to focus on:

Poverty Alleviation: Addressing poverty through livelihood development programs can improve access to nutritious food.

Dietary Diversification: Promoting kitchen gardens, promoting local production of fruits and vegetables, and educating communities on balanced diets are crucial.

Improved Sanitation and Hygiene: Investing in sanitation facilities and hygiene promotion campaigns reduces the risk of diarrhoeal diseases.

Promoting Breastfeeding and Early Childhood Nutrition: Encouraging exclusive breastfeeding for the first 6 months and introducing complementary feeding practices effectively are essential.

Monitoring and Evaluation: Regular monitoring of malnutrition levels and the effectiveness of interventions allows for adjustments and course correction.

Vaccination

The percentage of children aged between 1-2 years who have been fully immunized (BCG, measles and 3 doses of polio / DPT) in Jharkhand is 34% i.e. among the lowest in the country.

A closer look at the diseases in which immunization programs have not progressed well in Jharkhand indicates that DPT and measles immunization significantly lag behind Polio and BCG vaccinations.

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Correspondingly, state-wise number of cases due to measles and tetanus as a percentage of the population is among the highest in Jharkhand. (9)

Integrated Child Development Services (ICDS)

The ICDS programme provides nutrition and health services for children under age 6 years and pregnant or breastfeeding women, as well as preschool activities for children aged 3-6 years. These services are provided through community-based Anganwadi centres. Among the 92 per cent of children under six years of age in Jharkhand who are in areas covered by an anganwadi centre, 42 per cent receive services of some kind from the centre. The most common services children receive are supplementary food (37% of children under 6 years), vaccinations (27% of children under 6 years), and early childhood care or preschool (17% of children aged 3-6 years). Fourteen per cent of children receive growth monitoring services at an Anganwadi centre.

Adults' nutritional status

About two in five adults (43% of women and 39% of men) in Jharkhand are underweight. The nutritional status of adult women in Jharkhand is worse than in all other states except Bihar and Chhattisgarh and of adult men is worse in Jharkhand than in all other states except Rajasthan and Madhya Pradesh. In Jharkhand, only 5 per cent of women and men are overweight or obese, compared with 13 per cent of women and 9 per cent of men in the nation as a whole. Overall, only 52 per cent of women and 57 per cent of men in Jharkhand are at a healthy weight for their height.

Anaemia

Anaemia is a major health problem in India, especially among women and children. Anaemia can result in maternal mortality, weakness, diminished physical and mental capacity, increased morbidity from infectious diseases, perinatal mortality, premature delivery, low birth weight, and (in children) impaired cognitive performance, motor development, and scholastic achievement. Among children between the ages of 6 and 59 months, the great majority—70 per cent—are anaemic. This includes 29 per cent who are mildly anaemic, 39 percent who are moderately anaemic, and 2 percent who suffer from severe anaemia. Girls (73%) are slightly more likely to have anaemia than boys (68%). Children of mothers who have anaemia are much more likely to be anaemic. Although anaemia levels vary somewhat according to background characteristics, anaemia among children is widespread in every group. About half of the children are anaemic even if their mothers have 10 or more years of education or are in the highest wealth quintile. Seventy per cent of women in Jharkhand have anaemia, including 50 per cent with mild anaemia, 19 per cent with moderate anaemia, and 1 percent with severe anaemia. Anaemia is particularly high for women with no education (74%), women from the scheduled tribes (85%), and women in the two lowest wealth quintiles (over 70%).

Tuberculosis

In Jharkhand, 598 persons per 100,000 are estimated to have medically treated tuberculosis, based on reports from household respondents. The prevalence of medically treated tuberculosis is higher in Jharkhand than in most other states. People who cook with solid fuels such as wood, charcoal,

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dung cakes, straw, shrubs, grass, or agricultural crop waste are much more likely to have tuberculosis than people who use electricity or gas for cooking. Most respondents have heard of tuberculosis (77% of women and 87% of men), but even among people who have heard of tuberculosis, only about one-third (37% of women and 30% of men) know that it can be spread through the air by coughing or sneezing. About half of women and two-thirds of men have misconceptions about how tuberculosis is spread. However, most women and men know that tuberculosis can be cured (86% of women and 92%.of men who have heard of tuberculosis). Only about 1 in 8 women and 1 in 10 men say that if a family member had tuberculosis, they would want to keep it a secret from their neighbours.

Diabetes, asthma, and goitre

According to self-reports, about two per cent of women and one per cent of men aged 35-49 suffer from diabetes. The prevalence of diabetes increases with age and household wealth status. The prevalence of asthma is 3 times higher for women aged 15-49 than for men in the same age group (1,291 per 100,000 women, compared with 407 per 100,000 men). The prevalence of goitre or other thyroid disorders is also higher for women than for men aged 15-49 (858 per 100,000 women, compared with only 74 per 100,000 men).

Source of Health Care in Jharkhand

According to NFHS III, the private medical sector is the primary provider of healthcare for the majority of households in the state, with 71% of urban households and 76% of rural households relying on it. Households with higher wealth (68%) are less inclined to utilize private medical services compared to households in the lowest quintiles of the wealth index (76%). The primary factors cited by households who do not utilize government health facilities are inadequate quality of service (56%) and absence of a nearby facility (55%).

In addition to being knowledgeable about healthy practices and preventive measures, curative and preventive healthcare services must be accessible, inexpensive, and efficient. These topics will be examined in the following sections. Healthcare Accessibility The availability of healthcare, specifically the closeness of a health facility, is a crucial factor in influencing both the percentage of the population that can access medical assistance and the likelihood of individuals seeking help for illnesses at an early stage when they are believed to be less serious.

According to the Indian constitution, the obligation of providing healthcare through the public sector is shared between the central government and the state governments. The public sector health care system is organized into three tiers: Primary Health Care, Hospital Health Care, and Tertiary Health Care. The administrative structure is organized as follows: -

(a) Primary Health Sub-Centers (PHSC)
(b) Primary Health Centers (PHC)
(c) Community Health Centers (CHC)
(d) District hospitals
(e) Tertiary Care Hospitals and referral centers.

Availability of healthcare is measured below on two aspects - infrastructure and personnel. As per

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Vision Document-Jharkhand (9) following are the details of health infrastructure and personnel. Although CHC and SHC are comparable to the national level the health service situation is very poor in Jharkhand.

Infrastructure

The government healthcare system in Jharkhand encounters obstacles, notwithstanding recent endeavours to enhance it. Presented here is an analysis based on facts, with a specific focus on government facilities.

Availability of infrastructure:

Sub-Centers (SCs) are auxiliary facilities or branches that support and complement the main centre or organization. According to the statistics from 2019-20 [1], Jharkhand now has 3,848 government SCs, which is 43.81% below the needed number of 6,848.

There are currently 237 government Primary Health Centers (PHCs), with 171 located in rural areas and 60 in urban areas. However, there is a significant gap of 73.33% in rural areas and 69.39% in urban areas as compared to the required number of 1,287 PHCs [1].

The state currently has 291 government Community Health Centers (CHCs), with 231 located in rural areas and 60 in urban areas. However, there is a shortfall of 72 CHCs, with a gap of 37.13% specifically in rural areas [1].

Human Resources (Government Facilities Focus):

Medical practitioners: There is a scarcity of data regarding the availability of expert doctors, particularly at government hospitals. Nevertheless, a research published in 2020 [2] emphasizes a widespread scarcity of experts in Community Health Centers (CHCs). Primary Health Centers (PHCs) also experience variations in the availability of doctors.

According to the 2021 data, the ratio of doctors to staff nurses in Jharkhand is 1:1.5 [3]. This indicates that there may be challenges in getting doctors, particularly in government facilities.

Data are scarce regarding the precise rates at which government facilities are being used and used. Nevertheless, the aggregate data for public health services, encompassing government establishments, offer several valuable observations:

Services provided by the Outpatient Department (OPD): In 2021, around 43.6% of the population utilized outpatient department (OPD) services in public facilities [3].

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Utilization of inpatient department (IPD) services in public facilities was reported as 20.4% of the population based on 2021 data [3]. This suggests possible difficulties in obtaining sophisticated healthcare, particularly in government establishments situated in remote regions.

Summary:

Jharkhand is experiencing a substantial deficiency of government healthcare facilities at all levels, including Sub-Centers (SCs), Primary Health Centers (PHCs), and Community Health Centers (CHCs).

Insufficient numbers of doctors, especially specialists, and a lack of staff nurses can impede the provision of services in government hospitals.

Although there is minimal data on the use rates of government facilities, the overall statistics for public health services indicate that there may be difficulties in receiving sophisticated medical care, particularly in remote regions.

Anticipating the future:

The government of Jharkhand should give priority to:
Expanding financial resources to address the deficiency in government healthcare infrastructure.
Methods to allure and maintain physicians, specifically specialists, in public institutions.
Enhancing the adequacy of personnel and providing comprehensive training for nurses and other healthcare practitioners.
Efforts to enhance the accessibility of government healthcare services, particularly in rural regions.
To overcome these obstacles, the Jharkhand government can strive towards enhancing the resilience and availability of its healthcare system for the benefit of its residents.

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Personnel

Jharkhand is experiencing a deficiency of medical workers, which is impeding the efficiency of its healthcare system. Below is a comprehensive analysis supported by facts and references:

Medical professionals:

Lack of specialists: The 2020 report from the Kailash Satyarthi Children's Foundation reveals a deficit of 505 specialized doctors at Community Health Centers (CHCs) compared to the previous year [1]. This scarcity is likely to affect other government facilities as well.

Variations in accessibility: Primary Health Centers (PHCs) face variations in the availability of doctors, which affects the accessibility of healthcare services, especially in rural areas [1, 2].

Limitations of the data: There is a scarcity of recent data regarding the ratio of doctors to the

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population in Jharkhand. Nevertheless, statistics regarding public healthcare providers provide a glimpse:

Healthcare providers that are funded and operated by the government for the benefit of the general public. According to the 2021 statistics from the National Health Systems Resource Centre (NHSRC), Jharkhand has a ratio of 3 public healthcare providers per 10,000 inhabitants [2]. The doctor to staff nurse ratio of 1:1.5 indicates a possible deficit of doctors in relation to other healthcare staff.

Additional healthcare professionals:

Auxiliary Nurse Midwives (ANMs): Although there is limited recent data available, a 2018 study from the Jharkhand CSO Forum revealed a decline in the number of Auxiliary Nurse Midwives (ANMs) in Sub-Centers (SCs) and Primary Health Centers (PHCs). This has raised concerns regarding the adequacy of staffing levels for providing basic services [16].

Effectiveness

Despite making progress, Jharkhand's healthcare system still encounters obstacles. Here is a comprehensive evaluation of its efficacy, taking into account both quantitative data and qualitative factors:

Difficulties:

There is a notable deficiency in government healthcare facilities at all levels (Sub-Centers, Primary Health Centers, Community Health Centers), which greatly hinders the availability of essential medical care, particularly in rural areas [1].

Human resource shortfall in the medical field, specifically the scarcity of specialized doctors, inconsistent availability of doctors, and potential deficits in other medical staff such as ANMs, pose obstacles to the provision of healthcare services [1, 2, 17].

Accessibility issues arise in obtaining healthcare due to limited infrastructure and transportation restrictions, especially for individuals residing in distant locations [18].

There are concerns over the quality of care offered at certain facilities, as there have been reports of insufficient equipment, shortages of medication, and cleanliness problems [18].

Advancements with a favourable impact:

The state government has demonstrated its dedication to healthcare by augmenting budget allocations [19].

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Utilization Rates: Public health services see a satisfactory utilization rate for outpatient department (OPD) services, suggesting a certain degree of accessibility [2].

The emphasis is on improving maternal health through measures such as providing free institutional deliveries and offering subsidized healthcare for mothers and children, which indicate positive advancements [17].

Efficiency: Despite advancements, the overall efficiency of the healthcare system in Jharkhand remains restricted. The data indicates the extent to which services are being used, but there are concerns about the quality and availability of care. The system's capacity to effectively meet the population's demands is limited due to deficiencies in infrastructure and shortages of human resources.

Government Expenditure on Health

An examination of Jharkhand budgets in recent years reveals that the Government does not accord priority to the health sector. This is seen in the unfavorable health indicators. Although the per capita expenditure on Maternal, Newborn, and Child Health (MNCH) interventions is higher than in many states, the maternal health indicators, such as the Maternal Mortality Rate (MMR), exceed the national average.

Important Health Indicators - Comparison with the National Average

	Jharkhand	**India**
MMR (per 100,000 live births)	165	130
IMR (per 1000 live births)	29	34
Under-5 Mortality (per 1000 live births)	33	39
TFR (2.5 births per woman)	2.6	2.3

Jharkhand exhibits subpar performance specifically in regards to its infant mortality rate (MMR) and total fertility rate (TFR). The State is exhibiting a modest enhancement in measures such as Infant Mortality Rate (IMR) and Under-5 mortality. The significance of increasing public funding in healthcare

Given the notable deficiencies in health indicators in Jharkhand, it is crucial for the Government to intensify its endeavours in the realm of health in order to attain enhanced health outcomes.
The state's total budget stands at 800,200 crore, with a meagre allocation of only 3,812 crore for healthcare. Due to fiscal restrictions, the provision for health constitutes 4.8 percent of the entire budget.

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Year	Health Budget as % of Total State Budget	NHM as % of State's Health Budget
2013-14	3.7	
2014-15	3.9	55
2015-16	4.0	44
2016-17	4.5	32
2017-18	4.1	33
2018-19	4.8	39

There has been an increase in the health budget, however. In 2018-19, the National Health Mission (NHM), which is the main initiative of the Central government, makes up 39 percent of the entire State Health Budget. However, this percentage has decreased since 2014-15.

Expenditure on Some Components under NHM (RCH + Immunisa_on + ASHA) - Per Capita Spending over three years (in Rs)	
2014-15	153
2015-16	178
2016-17	155
2017-18	120

Per capita spending on specific components, specifically NHM (RCH + Immunization + ASHA), has experienced a notable decrease over a three-year period in terms of cost (in Rs). Jharkhand has a higher per capita expenditure on the total sum of three components (RCH, Immunization, ASHA) that are used to assess the health of mothers and children. However, during the past three years, the annual per capita spending on these three components has declined.

Number of Beneficiaries under Janani Suraksha Yojana (JSY)				
2012-13	**2013-14**	**2014-15**	**2015-16**	**2016-17**
2,82,169	**2,83,562**	**2,49,455**	**2,45,639**	**33714**

The number of recipients under the Janani Suraksha Yojana (JSY) in Jharkhand has experienced a decline of approximately 13 percent between the years 2012-13 and 2015-16. This may indicate issues with the acceptance of institutional deliveries, potentially caused by various factors such as the distance between medical facilities and homes, inadequate infrastructure and human resources at health facilities, negative experiences with healthcare staff, or a general preference for home deliveries.

Several variables that measure deficiencies in human resources and facilities, which impede the efficient provision of maternal healthcare services:

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Status of Infrastructure – Select Indicators in Percent

	Sub Centres				Primary Health Centres I				
	With ANM living in	Without regular water	Without regular electricity	Without All-weather	With Labour Room	With Operation Theatre	Without regular electricity	Without regular water	Without All-weather
Jharkhand	**78.4**	**53.2**	**66.5**	**25.2**	**75.5**	**28.5**	**43.3**	**45.3**	**10.1**
All India	**59.3**	**16.6**	**24.7**	**9.9**	**67.6**	**36.9**	**3.2**	**5.1**	**8.9**

Source: Rural Health Sta□s□cs (RHS, 2018).

As compared to the all-India average, the select infrastructure indicators show that Jharkhand has more
severe shortages.

Status of Human Resources -Select Indicators						
	Obstetricians & Gynaecologists at CHCs Shortfall %	**Doctors at PHCs Shortfall %**	**Scs Without Both HW (M & F) (%)**	**Scs Without HW (F)/ ANM (%)**	**Nursing staff at PHCs & CHCs Shortfall %**	**Total specialists CHCs (Surgeons, OB&GY, Physicians, Paediatricia Shortfall %**
Jharkhand	**83**	**Surplus**	**2**	**2**	**21**	**86**
All India	**75**	**14**	**3**	**5**	**13**	**82**

Source: Rural Health Sta□s□cs (RHS, 2018).

As per world bank report (11), since 2003/04 with the public health budget (plan plus non-plan) increasing from Rs.377 crore to Rs.666 crore in 2004/05 and projected to increase further. As a result of these increases,). This indicates the high budgetary priority being accorded to health. Much of the increased spending went on paying salaries of the newly contracted 1,500 doctors (80 percent) and on drugs (5 percent). However, lack of institutional capacity impedes implementation. The shortfall in "realized" as against the "budgeted" amount is an important indicator of the governance capacity of the state Much of the increase in health budget allocations are "on paper" with little implications for explaining the outcomes. In the preceding year, the Jharkhand health department could spend only 68 percent of the funds allotted. This was due largely to delays caused by an over centralized financial system, lack of willingness to take responsibility for spending and issuance of utilization certificates, and finally, inability of the health system to take on new activities. Unless these constraints are addressed and there is an improvement in the capacity to access and utilize budgeted funds in a timely manner, the full benefits of the recent increase in the health budget will not be realized. Moreover, increased allocation of budgetary resources for health is only one precondition for improved health outcomes. One of the most important factors underlying the recent improvements in priority health

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service indicators is related to the adoption of a campaign style approach, termed "the catch-up round". Initiated in December 2004 onword and still going on , this approach was quite effective in rapidly improving immunization and nutritional outcomes.

Conclusion

Expansion of health care in India has been mostly urban-oriented and the major part of the population lives in rural or semi-urban locations. rapidly increasing private hospitals in India have been in the urban areas and are profit-oriented. Public health care systems are ruined by the day. Health Care Systems are more focused on curative health care and hardly consider the impact of environmental pollutants on human health from the preventive angle. The social and preventive medicinal approach is almost absent. The reason is that environmental pollution is viewed more as an environmental issue rather than a health issue. Proper waste management is essential to neutralize adverse effects of environmental pollutants, including biological pollutants. There is hardly any focused attention to the growing menace of waste which is directly proportionate to the growing population. The polluter pays principle is self-defeating in the sense that polluters can pollute and get away with it by paying appears accepted philosophy. The principle should be 'repair and replenish' rather than 'polluter pays'. Trying to copy Western models in its entirety has resulted in a fragmented approach and confused results. Developing countries should adopt scientific advancement, no doubt but must modify to suit local conditions, level of awareness, and habits & practices.

Promoting the preservation, development, and use of effective traditional medicine knowledge and practices, where appropriate, in combination with modern medicine, recognizing indigenous and local communities as custodians of traditional knowledge and practices needs to be researched into.

Poor health services fail any poverty eradication program and do not create human capital in the long run. It diminishes the productivity of the young working force and high population growth further aggravates the problem. Thus, making it difficult to reach a Sustainable Development Status. The Government intervention improved the status of health how it is still lagging behind the national average The development of Jharkhand should give utmost importance to the health and well-being of its population. By embracing a sustainable development strategy that harmonizes economic expansion with the preservation of the environment, Jharkhand has the potential to cultivate a more robust and prosperous future for its population.

Additional investigation is warranted in some specific domains, as elucidated by this work.

An analysis of the enduring health effects caused by particular pollutants on the people of Jharkhand.

The efficacy of various sustainable development approaches in enhancing health outcomes.

Methods for fostering community engagement in activities focused on environmental conservation and the promotion of public health.

Through the pursuit of more research and the implementation of efficient sustainability measures, Jharkhand has the potential to establish a future in which growth and public health are mutually supportive

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