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# DISPARITIES IN HEALTHCARE DELIVERY: A QUANTITATIVE ANALYSIS OF INEQUALITIES IN HEALTHCARE FACILITIES, WORKFORCE AND SERVICES IN DAKSHIN DINAJPUR DISTRICT, WEST BENGAL, INDIA

**Arup Kr Saha**

Assistant Professor, Dept of Geography, Chandrapur College, Purba Bardhaman, W.B.

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## ABSTRACT

Despite significant advancements in healthcare, disparities in access to quality healthcare services persist in rural India. This study undertakes a quantitative assessment of regional disparities in healthcare facilities across Dakshin Dinajpur district, West Bengal. Using a multidimensional Health Index constructed from 13 key indicators, we analyze the spatial patterns of healthcare inequities across eight blocks in the district. Our results reveal pronounced disparities in healthcare infrastructure, human resources, and service utilization, with significant implications for health outcomes. We identify priority areas for intervention and propose targeted policy recommendations to mitigate these disparities and promote equitable access to quality healthcare services. This study contributes to the evidence base on healthcare inequities in rural India and informs strategies for achieving universal health coverage.



## INTRODUCTION

The World Health Organization (WHO) defines health as a state of complete physical, mental, and social well-being (WHO, 1948). Achieving this state is crucial for economic and social growth, as well as improved quality of life. The Alma Ata Declaration (1978) emphasized the importance of primary healthcare, while the United Nations' Millennium Development Goals highlighted health as a key indicator of human development. India's healthcare system has undergone significant improvements since Independence, with the Constitution mandating states to prioritize nutrition, standard of living, and public health.[1] Consequently, health standards have improved considerably, with increased life expectancy, reduced mortality and morbidity rates, and enhanced healthcare facilities. The Planning Commission of India allocated funds for healthcare infrastructure development, education, research, and services. India has made significant progress in healthcare since Independence, with initiatives such as the Bhore Committee (1943), National Health Policy (1983), and National Rural Health Mission (NRHM). The first five-year plan (1951-1956) established primary health centers at block headquarters, while the 1983 health policy reoriented the health delivery system.[2] The 2002 health policy further emphasized private sector involvement and equitable access to healthcare services. However, despite these efforts, India's healthcare system faces challenges, including inadequate infrastructure, scarcity of healthcare professionals, and uneven distribution of healthcare services. India's healthcare facilities remain inadequate compared to global standards. Disparities exist between states, with some enjoying advanced healthcare facilities while others struggle with inadequate resources. The National Health Policy, 2017, aims to address these gaps by increasing investment in primary healthcare, promoting universal health coverage, and delivering quality healthcare services at reasonable costs. However, these facilities often face challenges, including insufficient infrastructure, inadequate staffing, and high patient loads. This study focuses on the block-level disparity of healthcare facilities in Dakshin Dinajpur, West Bengal, comprising eight blocks with predominantly agricultural economies.

**Objectives**

i) Identify and analyze various indicators of health infrastructure

ii) Develop a Health Index to quantify disparities in healthcare facilities

iii) Analyze the spatial pattern of disparities across different blocks in Dakshin Dinajpur district

*Corresponding author: **Arup Kr Saha**

Assistant Professor, Dept of Geography, Chandrapur College, Purba Bardhaman, W.B.

iv) Offer suggestions to mitigate disparities in healthcare facilities and improve overall healthcare infrastructure in the district

## METHODOLOGY

This research employs a quantitative methodology, leveraging secondary data from the CMOH office (2022) and District Statistical Handbook of Dakshin Dinajpur (2016 & 2017). A Health Index is constructed using 13 health-related parameters to analyze spatial variations in healthcare facilities at the block level. The health care indicators used to determine regional variations are as follows-

X1= Health Sub-Centre and Population Ratio SPR (No. of Sub Centre/5000 population)

X2= Primary Health Centre (PHC) and Population Ratio PHCPR (No. of PHC/ 30000 population)

X3= Community Health Centre (CHC) Population Ratio CHCPR (No. of CHC/ 120000 population)

X4= Doctor Population Ratio DPR (No. of Doctors/1000 population)

X5= Bed Population Ratio BPR (No. of Beds /1000 population)

X6= Staff Nurse Population Ratio SNPR (No. of Staff Nurse/1000 population)

X7= Para Medical Population Ratio PMSPR (No. of Paramedical staff/30000 pop)

X8= ANM Population Ratio APR (No. of ANM/5000 population)

X9=CHO Population Ratio COPR (No. of CHO/5000 population)

X10=ASHA Population Ratio ASPR (No. of ASHA/ 1000 population)

X11= Group D Staff Population Ratio GDPR (No. of GDA/30000 population)

X12=AWC population Ratio AWCPR (No. of AWC/1000 population)

X13= Ambulance Population Ratio AMPR (No. of Ambulance/30000 population)

Regional disparities have been calculated with the help i) Dimension Index, and ii) Health Index (Ghatak & Das, 2012). Dimension Index is used to determine the disparities of each individual parameter. The formula of Dimension Index is adopted from Human Development Report published on 2002,

$$Dimension\ Index = (Actual\ Value - Minimum\ Value\ /Maximum\ Value - Minimum\ Value) \quad \text{Formula (i)}$$

In determining the Composite Health Index (CHI), the simple average of the dimension indices of all individual parameters has been calculated. In this case the formula is

$$CHI = 1/13\ (X1, X2, X3 \ldots\ldots\ldots\ldots X13) \quad \text{Formula (ii)}$$

## DISCUSSION

Healthcare accessibility is a fundamental necessity, and ensuring its availability to the entire population is crucial (Singh, A.K. 2017). In rural areas, the availability and accessibility of healthcare services significantly impact the overall health status of the population (ND Rani, E. 2018). Insufficient health infrastructure hinders not only good health but also societal productivity and development (Askari, H. 2019). To evaluate healthcare availability in a region, key health indicators are essential. This study utilizes 13 vital health-related indicators to illustrate regional disparities among different blocks in Dakshin Dinajpur District.

**X1 Health Sub centre and Population Ratio (SPR):**As per Rural Health Statistics 2020, a subcentre in plain areas caters to a minimum population of 5,000. However, the average population served by a subcentre in India is 5,729, indicating a slight increase from 2019. This study examines the status of subcentres in different blocks of Dakshin Dinajpur. Analysis of Table 1 and the Dimension Index map reveals that Balurghat and Kumarganj blocks have the highest subcentre-to-population ratios (DI 1 and 0.91, respectively). In contrast, Hili and Tapan blocks exhibit moderate ratios (DI 0.45 and 0.56), while the remaining four blocks (Gangarampur, Kushmandi, Harirampur, and Banshihari) demonstrate poor ratios, indicating inadequate subcentre coverage.

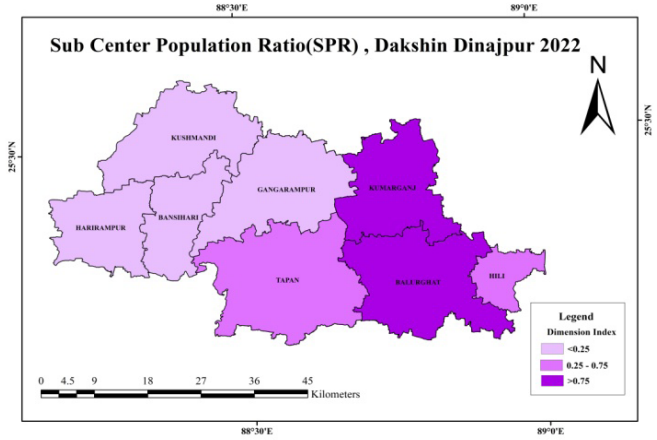
**X2 Primary Health Centre (PHC) and Population Ratio (PHCPR)**:According to India's Ministry of Health and Family Welfare, a PHC in plain areas should cater to at least 30,000 people. The national average stood at 35,730 persons/ PHC in March 2020. This study examines the distribution of PHCs in Dakshin Dinajpur's blocks. The analysis reveals disparities among blocks, with Hili and Balurghat exhibiting good conditions (DI 1 and 0.80, respectively). Kumarganj, Harirampur, and Tapan blocks show moderate conditions (DI 0.69, 0.53, and 0.39), while Kushmandi, Banshihari, and Gangarampur blocks demonstrate poor conditions regarding PHC availability.

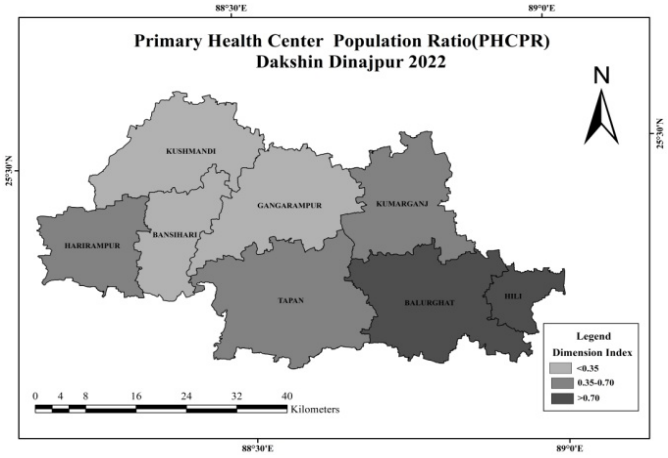
**X3 Community Health Centre (CHC) Population Ratio (CHCPR):** Community Health Centres (CHCs) comprise Rural hospitals and Block Primary Health Centres (BPHCs), serving as crucial healthcare facilities. As per national norms, Rural CHCs in plain areas should cater to a population of 120,000. However, Rural Health Statistics reveal that the average population served by a CHC in India was 171,779 in March 2020, exceeding the recommended norm. This study examines the CHC-to-population ratio in Dakshin Dinajpur's blocks, where each block has one CHC. The analysis, illustrated in Figure 3, reveals that the CHC-to-population ratio is unsatisfactory in several blocks, including Tapan, Balurghat, Gangarampur, and Kushmandi. These blocks exhibit high population pressure on CHCs, surpassing both national norms and averages. Moderate conditions prevail in Kushmandi, Banshihari, and Harirampur blocks, although population pressure remains higher than the national norm. Notably, the Hili block demonstrates the best condition, with the lowest population pressure on its CHC.

**X4 Doctor Population Ratio (DPR):** According to the World Health Organization (WHO), the ideal doctor-to-population ratio is 1:1000. India has surpassed this benchmark, with an average of 1 doctor per 834 people, as stated by the Minister of State for Health and Family Welfare on April 5, 2022. However, an analysis of Dakshin Dinajpur's doctor-population ratio reveals a disparity. Using 2022 data and allocating 50%

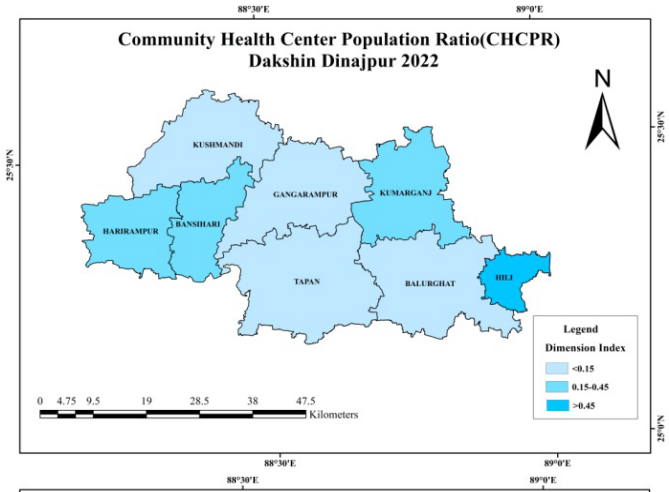
of sub-divisional and district hospital doctors to each block, the study finds that Dakshin Dinajpur lags behind the national average. The Dimension Index and Figure 4. show that only Hili (DI 1) meets the desired standard. Kumarganj, Banshihari, and Harirampur fall into the moderate category, while Gangarampur, Kushmandi, Tapan, and Balurghat trail behind, with unsatisfactory conditions.

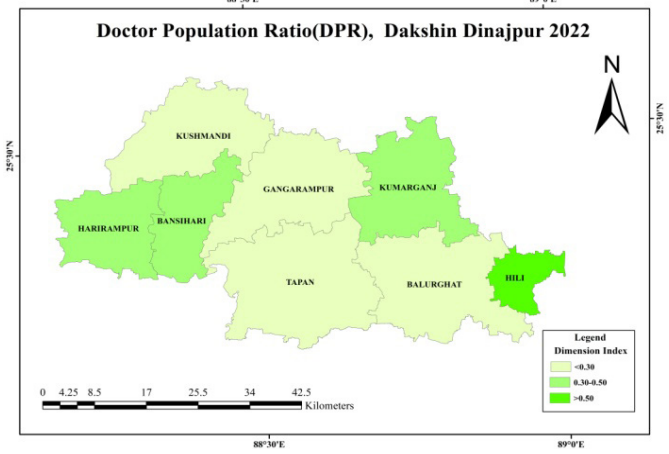
**X5 Bed Population Ratio (BPR):** Hospital beds are a crucial component of healthcare infrastructure. According to WHO standards, a country should have at least 3 hospital beds per 1,000 people. However, India falls short, with only 0.5 beds per 1,000 population. This study assesses the bed-population ratio in Dakshin Dinajpur, allocating 50% of sub-divisional and district hospital beds to each block. The results show that most blocks in Dakshin Dinajpur surpass the national average. Hili (DI 1) exhibits the best condition, while Kumarganj, Harirampur, and Banshihari fall into the moderate category. In contrast, Gangarampur, Kushmandi, Tapan, and Balurghat trail behind, with relatively low Dimension Index values.




**X6 Staff Nurse population Ratio (SNPR)**: Staff nurses play a vital role in rural healthcare, particularly in areas with doctor shortages. According to WHO norms, there should be 3 nurses per 1,000 population, but India's average is 1.7 nurses per 1,000 population. An analysis of Dakshin Dinajpur's blocks reveals that all blocks fall short of India's average. However, Hili block (DI 1) stands out as the best performer in this regard. Harirampur, Kumarganj, and Banshihari blocks exhibit average conditions, while Balurghat, Kushmandi, Tapan, and Gangarampur blocks lag behind, indicating significant shortages of nursing staff.

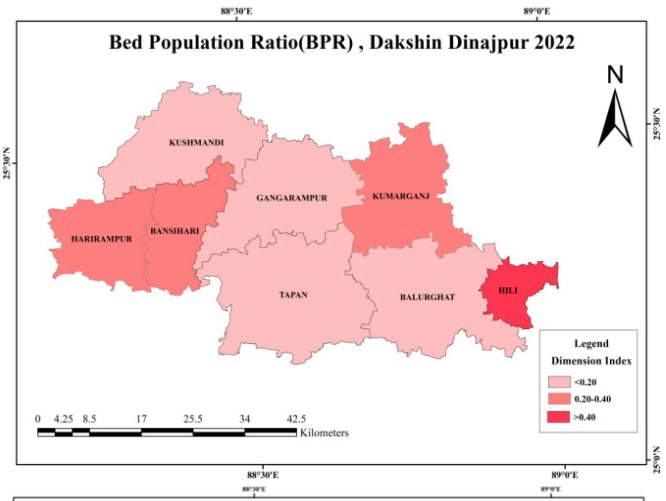


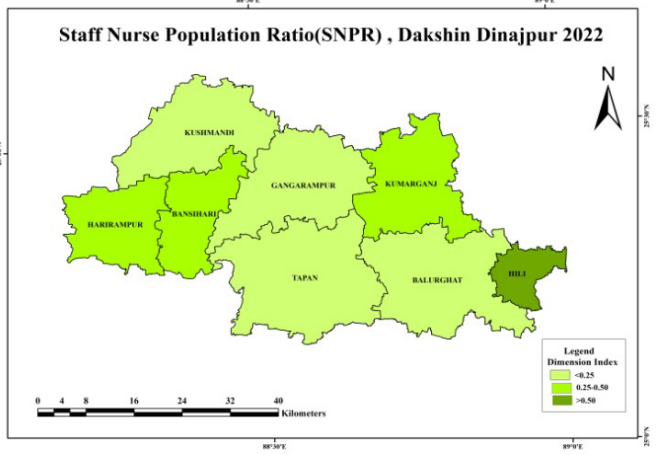



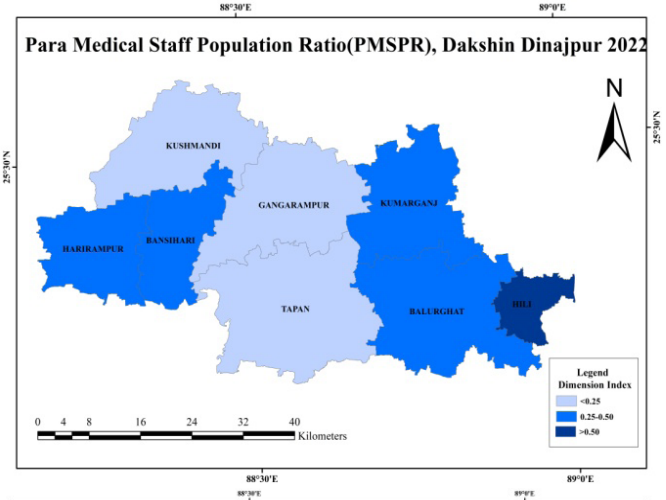

**X7 Para Medical population ratio (PMSPR):** In addition to doctors and nurses, pharmacists, lab technicians, and ophthalmic assistants are crucial in providing healthcare services. Figure 7 reveals that Dakshin Dinajpur's blocks can be categorized into three groups based on the dimension index value. Hili (DI 1) stands out as the top performer in terms of availability of these medical staff. Harirampur, Kumarganj, Balurghat, and Banshihari blocks exhibit moderate conditions, with slightly lower dimension index values. In contrast, Kushmandi, Tapan, and Gangarampur blocks lag significantly behind, indicating a severe shortage of these essential medical staff.

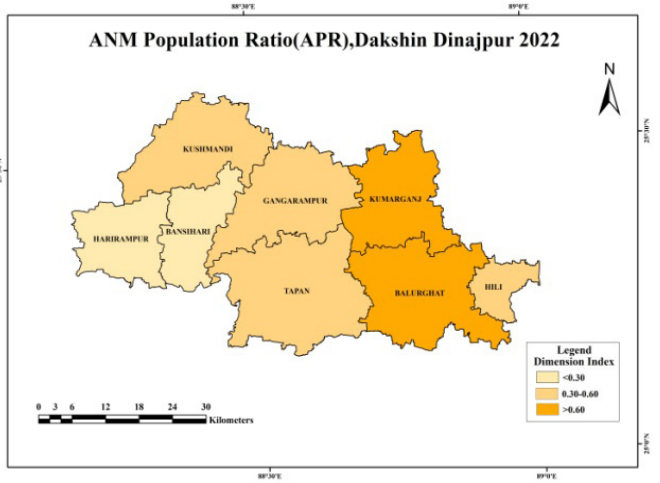
**X8 ANM Population ratio (APR):** Auxiliary Nurse Midwives (ANMs) play a vital role in providing medical services at sub-centres. Ideally, each sub-centre should have two ANMs, catering to 5,000 people. However, this norm is not always met. Figure 8 reveals that Balurghat (DI 1) and Kumarganj (DI 0.67) excel in ANM availability. Tapan, Hili, Gangarampur, and Kushmandi blocks exhibit moderate conditions, while Harirampur and Banshihari lag behind, indicating a shortage of ANMs in these areas.

**X9 CHO Population ratio (COPR)**: Community Health Officers (CHOs) play a vital role in rural healthcare, particularly in Health and Wellness Centres (HWCs). Their primary focus is on treating non-communicable diseases (NCDs) at the sub-centre level. Ideally, there should be one CHO for every 5,000 population in rural areas.[1]According to Figure 9, Balurghat and Kumarganj blocks excel in CHO availability, with dimension index values of 1 and 0.76, respectively. Tapan block falls into the moderate category with a dimension index value of



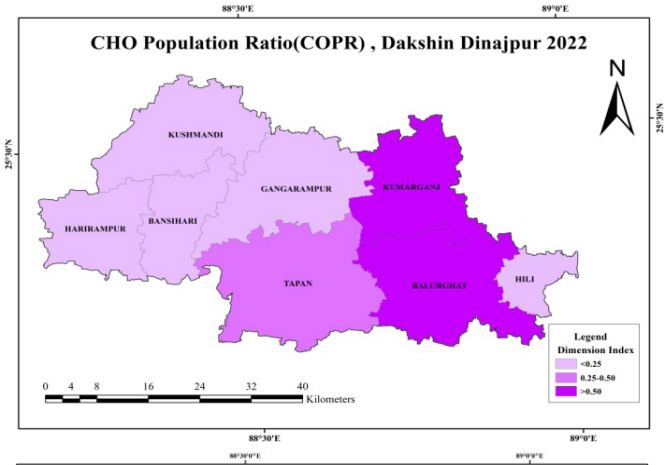



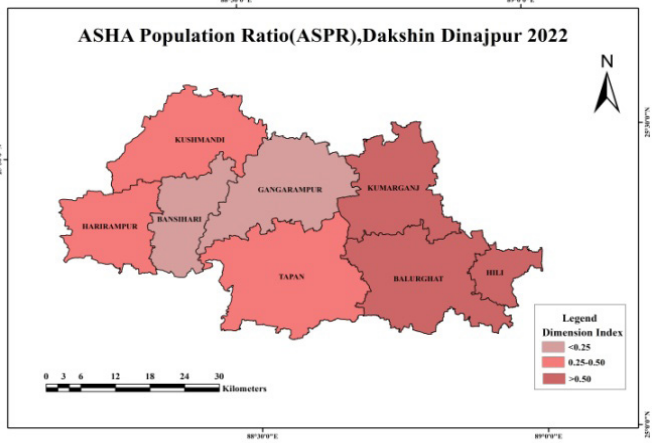




0.60. Unfortunately, Banshihari, Gangarampur, Harirampur, Hili, and Kushmandi blocks lag behind, occupying the third category with the poorest condition.

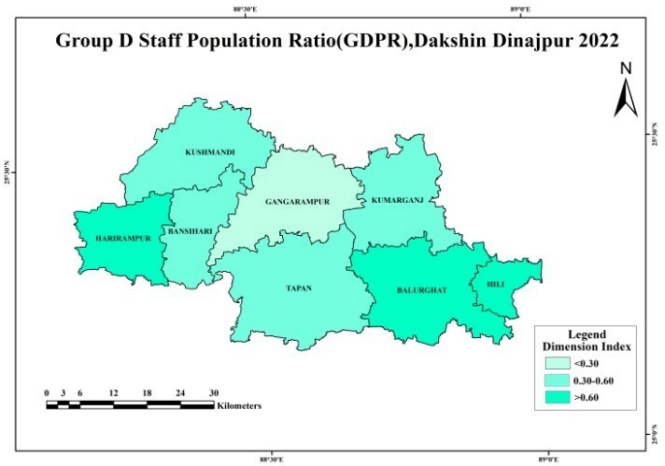
**X10 ASHA Population Ratio (ASPR):** Accredited Social Health Activists (ASHA) workers serve as crucial links between sub-centres and rural communities, particularly women. Their responsibilities include registering expectant mothers, promoting immunization, and encouraging family planning. Ideally, there should be one ASHA worker per 1,000 people. Figure 10 reveals that Hili, Kumarganj, and Balurghat blocks excel in ASHA worker availability, with dimension index values of 1, 0.66, and 0.65, respectively. Tapan, Kushmandi, and Harirampur blocks exhibit moderate conditions, while Banshihari and Gangarampur lag behind, indicating a severe shortage of ASHA workers.

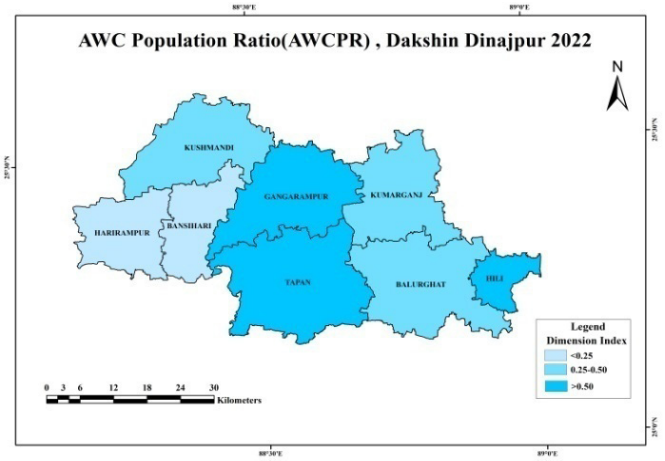
**X11 Group D Staff Population Ratio (GDPR):** Group-D (GDA) employees play a vital support role in healthcare services, handling tasks such as patient data management, immunization records, and program implementation. Figure 11 assesses the availability of GDA staff per 30,000 population across blocks. Hili (DI 1) and Harirampur (DI 0.69) emerge as top performers, while Kumarganj, Banshihari, Kushmandi, and Tapan blocks exhibit moderate conditions. In contrast, Balurghat and Gangarampur blocks lag behind, with the lowest dimension index values, indicating a shortage of GDA staff.



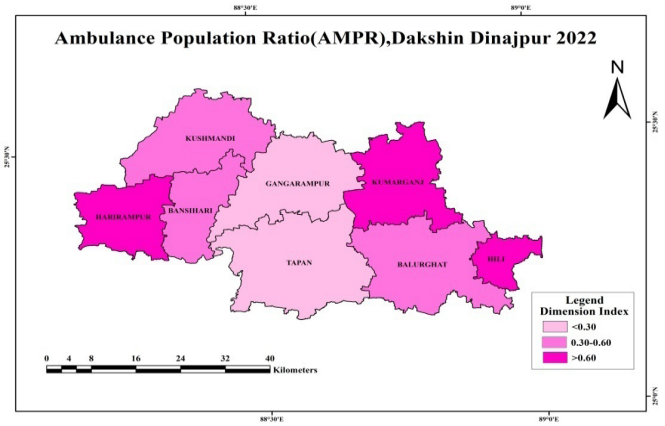




**X 12 AWC Population Ratio (AWCPR)**: Anganwadi Centres (AWCs) in rural areas collaborate with the health system, hosting programs like Village Health and Nutrition Day (VHND). Figure 12 assesses the availability of AWCs per 1,000 population. Hili, Tapan, and Gangarampur blocks exhibit high dimension index values, indicating good conditions.



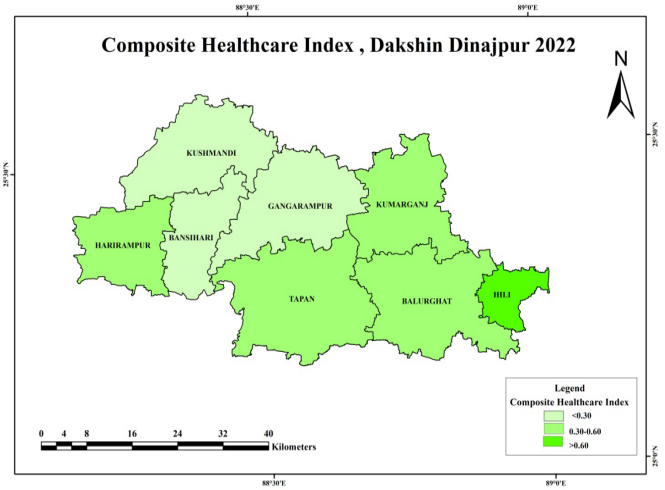




Kumarganj, Balurghat, and Kushmandi blocks show moderate conditions, while Banshihari and Harirampur lag behind, falling into the third category with the lowest dimension index values.




**X 13 Ambulance Population Ratio (AMPR):** Ambulance services are a critical component of healthcare, providing vital transportation for pregnant women, dementia patients, and others requiring emergency medical attention. Figure 13 categorizes the district's blocks into three tiers based on the indicator of ambulance availability per 30,000 population. Hili, Harirampur, and Kumarganj blocks excel, securing top spots in the first category with dimension index values of 1, 0.71, and 0.69, respectively. Banshihari, Kushmandi, and Balurghat blocks comprise the second category, showing a slight decline in ambulance availability. Conversely, Tapan and Gangarampur blocks lag significantly, ranking lowest in the third category due to their limited ambulance services.

**The Composite Index of Health Infrastructure (CHI)** is a holistic measure calculated by averaging the dimension index of 13 indicators. Figure 14, derived from Table 4.10, illustrates the regional disparities in health infrastructure across the district's blocks. Notably, Hili block (CHI value: 0.85) surpasses others, boasting exceptional healthcare infrastructure. In contrast, Kumarganj (0.56), Balurghat (0.49), Harirampur (0.38), and Tapan (0.32) blocks exhibit moderate conditions, with balanced health indicators relative to their population. Conversely, Kushmandi (0.27), Banshihari (0.23), and Gangarampur (0.15) blocks lag behind, struggling with inconsistent health infrastructure. Interestingly, Hili block's remote location and border proximity did not impede its healthcare development. Banshihari block's favorable location, however, did not translate to better health infrastructure. The presence of a centrally located SD hospital in Gangarampur town was not factored into the CHI calculation, which may have contributed to the block's poor ranking.




## Major Findings

- Disparities in healthcare infrastructure: Significant disparities exist in healthcare infrastructure across blocks in Dakshin Dinajpur District.
- Hili block excels: Hili block consistently ranks highest in various health indicators, including doctor-population ratio, bed-population ratio, and ASHA worker availability.
- Moderate performers: Kumarganj, Balurghat, Hariram-pur, and Tapan blocks exhibit moderate conditions in various health indicators.
- Laggard blocks: Kushmandi, Banshihari, and Ganga-rampur blocks struggle with inadequate healthcare infrastructure.
- Subcentre-population ratio disparities: Balurghat and Kumarganj blocks have the highest subcentre-population ratios, while Hili and Tapan blocks exhibit moderate ratios.
- Doctor-population ratio disparities: Hili block meets the desired standard, while others lag behind, with Dakshin Dinajpur falling short of the national average.
- Bed-population ratio disparities: Most blocks surpass the national average, with Hili block exhibiting the best condition.
- ASHA worker availability disparities: Hili, Kumarganj,

and Balurghat blocks excel in ASHA worker availability, while Banshihari and Gangarampur lag behind.

- Ambulance availability disparities: Hili, Harirampur, and Kumarganj blocks excel in ambulance availability, while Tapan and Gangarampur blocks lag significantly.
- Regional disparities in health infrastructure: The Composite Index of Health Infrastructure (CHI) reveals regional disparities in health infrastructure across the district's blocks.
- Hili block's exceptional healthcare infrastructure: Hili block boasts exceptional healthcare infrastructure, with a CHI value of 0.85.
- Moderate conditions in some blocks: Kumarganj, Balurghat, Harirampur, and Tapan blocks exhibit moderate conditions, with balanced health indicators relative to their population.
- Inconsistent health infrastructure in some blocks: Kushmandi, Banshihari, and Gangarampur blocks lag behind, struggling with inconsistent health infrastructure.
- Impact of location on healthcare development: Hili block's remote location did not impede its healthcare development, while Banshihari block's favorable location did not translate to better health infrastructure.

**Suggestions**

- Rationalize healthcare workforce: Reallocate healthcare personnel, especially doctors and nurses, to address shortages in underserved blocks.
- Augment infrastructure: Upgrade existing healthcare facilities, particularly in blocks with poor infrastructure, to improve service delivery.
- Enhance ambulance services: Increase the number of ambulances in blocks with limited services to ensure timely emergency care.
- Strengthen community health initiatives: Intensify community health programs, leveraging ASHA workers, ANMs, and CHOs to improve health awareness and service utilization.
- Establish new healthcare facilities: Construct additional subcentres, PHCs, and CHCs in underserved blocks to reduce healthcare disparities.
- Implement telemedicine services: Introduce telemedicine platforms to connect patients in remote blocks with specialist doctors, enhancing access to specialized care.
- Capacity building and training: Provide regular training and capacity-building programs for healthcare personnel to improve service quality and address skill gaps.
- Promote public-private partnerships: Foster collaborations between public and private healthcare providers to augment service delivery and increase access to specialized care.
- Develop a comprehensive healthcare plan: Formulate a district-level healthcare plan, incorporating community needs and participatory approaches to address disparities and improve health outcomes.
- Invest in health infrastructure development: Allocate sufficient funds for healthcare infrastructure development, prioritizing underserved blocks and ensuring equitable distribution of resources.
- Foster community participation and ownership: Encourage community participation in healthcare decision-making and planning, promoting ownership and accountability among local stakeholders.
- Monitor and evaluate healthcare services: Establish a robust monitoring and evaluation system to track healthcare service delivery, identify gaps, and inform policy decisions.

## CONCLUSION

This study highlights significant regional disparities in healthcare infrastructure across blocks in Dakshin Dinajpur District. Hili block excels in various health indicators, while Kushmandi, Banshihari, and Gangarampur blocks struggle with inadequate healthcare infrastructure. The Composite Index of Health Infrastructure (CHI) reveals a wide gap in healthcare development across blocks. To bridge this gap, rationalizing the healthcare workforce, augmenting infrastructure, and enhancing community health initiatives are crucial. Investing in health infrastructure development, fostering community participation, and monitoring healthcare services can ensure equitable access to healthcare services. Addressing these disparities is essential for improving health outcomes and achieving universal health coverage in the district.

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**Table 1.** Calculation Table for Dimension Index of Different Parameters

| Name of the block | Population 2011 | No. of Sub Center | **SPR** (No. of SC/5000 Pop) | Dimension Index | No. of PHC | **PHCPR** (No. of PHC/30000) | Dimension Index | No. of CHC | **CHCPR** No. of CHC/120000 Pop | Dimension Index | No. of Doctors | **DPR** No. of Doctors/1000 Pop | Dimension Index | No. of Beds | **BPR** No. of Beds/1000 Pop | Dimension Index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kushmandi | 198752 | 30 | 0.755 | 0.23 | 2 | 0.302 | 0.3 | 1 | 0.604 | 0.13 | 13 | 0.065 | 0.26 | 105 | 0.528 | 0.1 |
| Banshihari | 141286 | 19 | 0.672 | 0 | 1 | 0.212 | 0.15 | 1 | 0.849 | 0.39 | 11 | 0.078 | 0.36 | 105 | 0.743 | 0.3 |
| Harirampur | 136853 | 19 | 0.694 | 0.06 | 2 | 0.438 | 0.53 | 1 | 0.877 | 0.42 | 10 | 0.073 | 0.32 | 105 | 0.767 | 0.3 |
| Gangaram-pur | 237628 | 36 | 0.757 | 0.23 | 1 | 0.126 | 0 | 1 | 0.505 | 0.03 | 7 | 0.029 | 0 | 85 | 0.358 | 0 |
| Kumarganj | 169102 | 34 | 1.005 | 0.91 | 3 | 0.532 | 0.69 | 1 | 0.71 | 0.24 | 15 | 0.089 | 0.43 | 146 | 0.863 | 0.4 |
| Tapan | 250504 | 44 | 0.878 | 0.56 | 3 | 0.359 | 0.39 | 1 | 0.479 | 0 | 17 | 0.068 | 0.28 | 146 | 0.582 | 0.2 |
| Balurghat | 250764 | 52 | 1.037 | 1 | 5 | 0.598 | 0.8 | 1 | 0.478 | 0.001 | 17 | 0.068 | 0.28 | 146 | 0.582 | 0.2 |
| Hili | 83754 | 14 | 0.836 | 0.45 | 2 | 0.716 | 1 | 1 | 1.433 | 1 | 14 | 0.167 | 1 | 146 | 1.743 | 1 |

Source: Compiled by Researcher from CHOM office data

**Table 2.** Calculation Table for Dimension Index of Different Parameters

| Name of the block | Population 2011 | No. of Staff Nurse | **SNPR** No. of Staff Nurse/1000 Pop | Dimension Index | No. of othere Medical Staff | **PMSPR** No. of Para Medical Staff/30000 Pop | Dimension Index | No. of ANM | **APR** No. of ANM/5000 Pop | Dimension Index | No. Of CHO | **COPR** No. Of CHO/5000 pop | Dimension Index | No. of ASHA | **ASPR** No. of ASHA/1000 Pop | Dimension Index |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kushmandi | 198752 | 37 | 0.186 | 0.16 | 6 | 0.906 | 0.21 | 48 | 1.21 | 0.35 | 20 | 0.5 | 0.21 | 180 | 0.91 | 0.39 |
| Banshihari | 141286 | 36 | 0.255 | 0.36 | 6 | 1.274 | 0.36 | 26 | 0.92 | 0 | 12 | 0.42 | 0 | 95 | 0.67 | 0 |
| Harirampur | 136853 | 40 | 0.292 | 0.47 | 7 | 1.534 | 0.46 | 30 | 1.1 | 0.22 | 13 | 0.47 | 0.13 | 125 | 0.91 | 0.39 |
| Gangarampur | 237628 | 31 | 0.13 | 0 | 3 | 0.379 | 0 | 58 | 1.22 | 0.36 | 22 | 0.46 | 0.11 | 247 | 1.04 | 0.6 |
| Kumarganj | 169102 | 47 | 0.278 | 0.43 | 8 | 1.419 | 0.42 | 50 | 1.48 | 0.67 | 24 | 0.71 | 0.76 | 182 | 1.08 | 0.66 |
| Tapan | 250504 | 38 | 0.152 | 0.06 | 6 | 0.719 | 0.14 | 68 | 1.36 | 0.53 | 30 | 0.6 | 0.47 | 228 | 0.91 | 0.39 |
| Balurghat | 151416 | 52 | 0.207 | 0.22 | 11 | 1.316 | 0.38 | 88 | 1.75 | 1 | 40 | 0.8 | 1 | 268 | 1.07 | 0.65 |
| Hili | 83754 | 40 | 0.478 | 1 | 8 | 2.866 | 1 | 21 | 1.25 | 0.4 | 8 | 0.48 | 0.16 | 108 | 1.29 | 1 |

Source: Compiled by Researcher from CHOM office data

**Table 3.** Calculation Table for Dimension Index of Different Parameters

| Name of the block | Population 2011 | No. of Group D | **GDPR** No. of Group D/30000 Pop | Dimension Index | No. of AWC | **AWCPR** No. of AWC/1000 Pop | Dimension Index | No. of Ambulance | **AMPR** No. of Ambulance/30000 Pop | Dimension Index |
|---|---|---|---|---|---|---|---|---|---|---|
| Kushmandi | 198752 | 25 | 3.774 | 0.35 | 288 | 1.449 | 0.4 | 5 | 0.755 | 0.43 |
| Banshihari | 141286 | 23 | 4.883 | 0.53 | 155 | 1.097 | 0 | 4 | 0.849 | 0.51 |
| Harirampur | 136853 | 27 | 5.919 | 0.69 | 177 | 1.293 | 0.22 | 5 | 1.096 | 0.71 |
| Gangarampur | 237628 | 12 | 1.515 | 0 | 386 | 1.624 | 0.6 | 2 | 0.252 | 0 |
| Kumarganj | 169102 | 30 | 5.322 | 0.6 | 252 | 1.49 | 0.45 | 6 | 1.064 | 0.69 |

| | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Tapan | 250504 | 31 | 3.713 | 0.35 | 492 | 1.964 | 0.99 | 5 | 0.599 | 0.29 |
| Balurghat | 250764 | 22 | 2.632 | 0.18 | 350 | 1.396 | 0.34 | 6 | 0.718 | 0.39 |
| Hili | 83754 | 22 | 7.88 | 1 | 165 | 1.97 | 1 | 4 | 1.433 | 1 |

Source: Compiled by Researcher from CHOM office data

**Table 4.** Composite Health Index (CHI) of Dakshin Dinajpur

| Name of the block | X1 **SPR** | X2 **PHCPR** | X3 CHCPR | X4 DPR | X5 BPR | X6 SNPR | X7 PMSPR | X8 APR | X9 CDPR | X10 ASPR | X11 GDPR | X12 ACPR | X13 AMPR | CHI |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Kushmandi | 0.23 | 0.3 | 0.13 | 0.26 | 0.12 | 0.16 | 0.21 | 0.35 | 0.21 | 0.39 | 0.35 | 0.4 | 0.43 | 0.27 |
| Banshihari | 0 | 0.15 | 0.39 | 0.36 | 0.28 | 0.36 | 0.36 | 0 | 0 | 0 | 0.53 | 0 | 0.51 | 0.23 |
| Harirampur | 0.06 | 0.53 | 0.42 | 0.32 | 0.3 | 0.47 | 0.46 | 0.22 | 0.13 | 0.39 | 0.69 | 0.22 | 0.71 | 0.38 |
| Gangarampur | 0.23 | 0 | 0.03 | 0 | 0 | 0 | 0 | 0.36 | 0.11 | 0.6 | 0 | 0.6 | 0 | 0.15 |
| Kumarganj | 0.91 | 0.69 | 0.24 | 0.43 | 0.36 | 0.43 | 0.42 | 0.67 | 0.76 | 0.66 | 0.6 | 0.45 | 0.69 | 0.56 |
| Tapan | 0.06 | 0.39 | 0 | 0.28 | 0.16 | 0.06 | 0.14 | 0.53 | 0.47 | 0.39 | 0.35 | 0.99 | 0.29 | 0.32 |
| Balurghat | 1 | 0.8 | 0.001 | 0.28 | 0.16 | 0.22 | 0.38 | 1 | 1 | 0.65 | 0.18 | 0.34 | 0.39 | 0.49 |
| Hili | 0.45 | 1 | 1 | 1 | 1 | 1 | 1 | 0.4 | 0.16 | 1 | 1 | 1 | 1 | 0.85 |

Source: Compiled by Researcher

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