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Trends of Education and Health Gaps in the Barak Valley Region of Assam – An Assessment

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Abstract :

Education and health play a very important role in the overall socio-economic development in a region as they build highly skilled and productive workforce to enable the country to achieve higher income level , reduce poverty level and improve overall wellbeing of the economy as well as society as a whole . Education serves the foundation of economic growth , higher productivity , innovation and technological advancement , improve labour market outcome along with social mobility . Like education, health is also a catalyst for socio-economic development . A healthy workforce is the key of development . Access to quality health care ensures reduction in health care cost , increase life expectancy and also reduce health disparities and promote social equity . In this study, we have tried to highlight the development gap in education and health sector in the Barak Valley region of Assam .

Key Words : Social mobility , Health care disparity , Productive work force socio-economic development .

Introduction:

Education and health are the fundamental factors of socio-economic development. No region can achieve sustainable socio-economic development without significant investment in human capital . A better education and health system develops good human resources These improved human resources bring about prosperity and equity and transform the society by utilizing the potential of skilled manpower . The purpose of this research paper is to examine the development gaps in between Assam and Barak valley relating to educational and health parameters based on secondary data. The findings from the secondary data are used to show the development gaps in Assam with special reference to Barak Valley.

India has been grappling with regional socio-economic disparities since independence, with plans to reduce these in every five-year plan. This study analyzes the disparity in Assam, a North Eastern state, using secondary data from the Census 2011 survey. It reveals inter-district disparities, with upper Assam districts experiencing better socio-economic status compared to lower Assam districts. (Hazarika Manashi Hazarika Padmalochan 2019).

Objectives:

1. To find out the extent of development gaps in education between Assam and Barak valley.

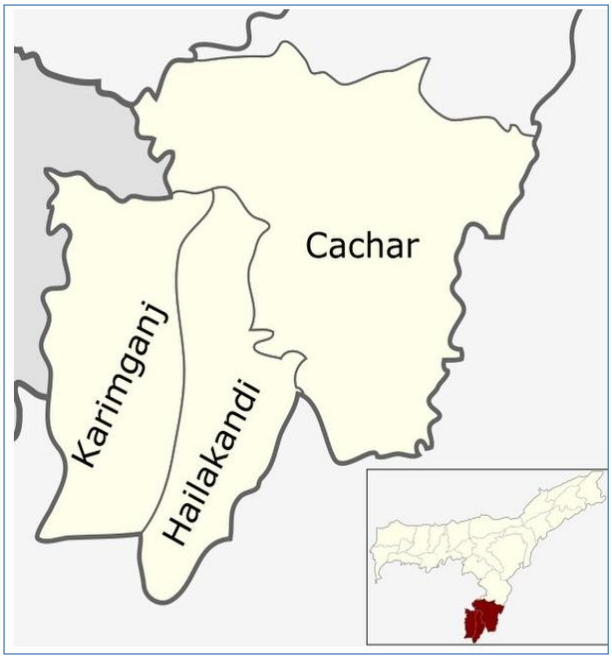
2. To find out the extent of development gaps in health aspects between Assam and Barak Valley .
3. To assess the importance of education and health for the socio-economic development of any region .

Research Questions :

1. Whether Barak Valley region is lagging behind in respect of educational aspects in comparison to the Assam as a whole?
2. Whether Barak Valley is lagging behind in health issues compared to Assam as a whole?
3. Whether state initiatives are sufficient for the socio-economic development of Barak Valley region?

Profile of the study area :

The Barak Valley, named after the Barak river, is situated in Assam's southern region and comprises three administrative districts: Cachar, Karimganj, and Hailakandi. The capital city is Silchar. Earlier North Cachar Hills was a part of the valley but in 1951 erstwhile subdivision was made a separate district and eventually curved out of Cachar District . On July 1, 1983, Karimganj district was separated from the Cachar Valley subdivision. In 1989, the same process was repeated with the establishment of Hailakandi district.



Barak valley

Barak Valley, spanning 6922 sq. km, is 8.9% of Assam's total area and is surrounded by Manipur, Tripura, Bangladesh, Mizoram, and Cachar Hills. It consists of three districts: Cachar, Karimganj, and Hailakandi. The population has grown significantly, with a 20.94% increase between 1961 and 1971, 30.1% till 1991, and 16.66% in 2001 and 31.1% in 2011. The economy is primarily agrarian, with 80% dependent on paddy. Viable industries include cane, bamboo, pineapple, and other agro-based industries.

Education and health are crucial for civilization and modernization, influencing individual, society, and national development. They determine economic prosperity, welfare, and security, and plays a significant role in a region's economic stability and quality of life. Higher education, after secondary education, is a crucial factor for survival. National policy on education emphasizes this importance.

Education is crucial for human development and contributes to national growth through the dissemination of specialized knowledge and skills. The development of higher education in India is largely influenced by government policies and commissions. However, regional imbalances and factors like regional imbalances pose challenges in achieving a comprehensive educational scenario. The growth pattern of higher education varies across states, with some districts being more developed than others.

Health is a significant contributor towards economic development since it is the backbone of building the human capital of a nation. As also propounded by Grossman in his theory of demand for health care, expenditure on health is not only a consumption expenditure but also an investment in human capital formation. It is widely accepted that healthy, educated and skilled workforce is the most important productive asset of a nation.

Literature review:

Theodore W. Schultz (1961) and Gary S. Becker (1962) advocated for human capital as a determinant of economic growth, focusing on five main investments: health, migration, job opportunities, on-the-job training, formal education, and adult study programs. However, most empirical studies within endogenous growth theory focus on its educational component, particularly in agricultural productivity in developing countries (Jamison, Lau, and Lockheed1982; T.P. Schultz, 2005; Koffio-Tessio et.al.2005). Studies show that completing the first four years of formal schooling can increase agricultural productivity by 7.4%.

Education and health play crucial roles in human development, as demonstrated by East Asian tigers' impressive social and economic performance (Asian Development Bank , 1997 ; World Bank , 1993). Strong education and health systems are essential for economic growth and prosperity. Both can improve an individual's quality of life and their impact on others (Sen., 1999). Educational indicators, such as enrollment rates and teacher ratios, are monitored by UNESCO (Bloom ,2006) . Education is a fundamental human right that enhances work and life skills, promoting economic growth, productivity, and governance, thus enhancing overall welfare (Hannum andBuchmann, 2006). Good health can boost population growth and development, particularly for vulnerable children. Advances in medicine and nutrition increase child survival, reducing fertility and reducing the need for parents to bear fewer children (Stark and Rosenzweig, 2006).

Maternal education in Mexico is linked to improved child health and reduced fertility, according to a study by Robert A. LeVine. The study found that educated mothers were more likely to seek medical attention and had lower fertility rates, even after considering socioeconomic factors (LeVine 1987).

Policymakers must prioritize improving averages and incorporating equity to ensure greater welfare, but in India, particularly Assam, equity has been ignored, leading to significant socio-economic and regional disparities in health and healthcare utilization. (Mohanty and Pathak 2009; Pathak and Mohanty 2010; Pathak et al. 2010; Kumar andMohanty 2011). Policymakers must comprehend inter-district variations in health and healthcare-related socio-economic inequalities to efficiently identify and target districts with inequality, thereby enhancing resource utilization.

Education in Barak Valley :

The development of higher education in Barak valley began with Murari Chand College in 1892, catering to Assam's needs until the establishment of Cotton College in 1901. Guru Charan College in Silchar was established in 1935, initially with an intermediate level arts faculty. Karimganj College was established in 1946, catering to the needs of the people of Barak valley until independence. These colleges played a crucial role in the region's higher education development.

The Barak valley of Assam experienced significant development in higher education since independence, starting with the establishment of S.S. College in 1950. Between 1951 and 1960, three colleges failed to meet the growing population's demand, leading to the need for more institutions. From 1960 to 1963, six new colleges were established, including Teachers Training College.

The Barak valley in India has seen significant growth in higher education since the 1960s, with the establishment of Teachers Training College, A.K. Chanda Law College, Silchar Polytechnic, Cachar College, Rabindra Sadan Girls College, Karimganj, and Women's College, Silchar. However, after 1963, there was a rapid growth in rural areas, with four new colleges established between 1964-1965. This led to a total of 13 colleges in the valley, with 9 in urban areas and 4 in rural areas.

Between 1966-1972, Barak valley experienced significant development in higher education, with the establishment of five colleges, including Engineering and Medical Colleges. The Regional Engineering College, Silchar, was upgraded to the National Institute of Technology, Silchar, which has the largest Digital Library in Asia. In 1968, Silchar Medical College & Hospital was established, accelerating general education. However, no higher education institution was established between 1973-1983.

Between 1984 and 1993, eight more colleges were established in the Barak valley, totaling 26 colleges up to 1993. The establishment of Assam University, Silchar in 1994 significantly increased the number of colleges, with 21 new ones even in remote areas.

The valley has seen significant development in higher education since independence, but institutions, particularly general and professional colleges, face challenges such as inadequate infrastructural facilities, inadequate staff, and financial assistance from the UGC and state government.

The Barak Valley has experienced significant development in higher education, but much needs to be done for overall development. The revolution in information technology and globalization has impacted higher education institutions, requiring them to reform and revitalise objectives. To achieve these objectives, they should undertake periodic self-assessments, identify strengths and weaknesses, and analyze them for practical means to achieve a standard of quality in higher education. This will help them adapt to the needs of the hour and meet the requirements of the changing education landscape.

Methodology:

The study is based on the secondary data. Here data is collected from Govt. Statistical Departments and Statistical Handbooks. Here data is normalized and then aggregated using linear weighted average where the weights are determined using Principal Component Analysis .

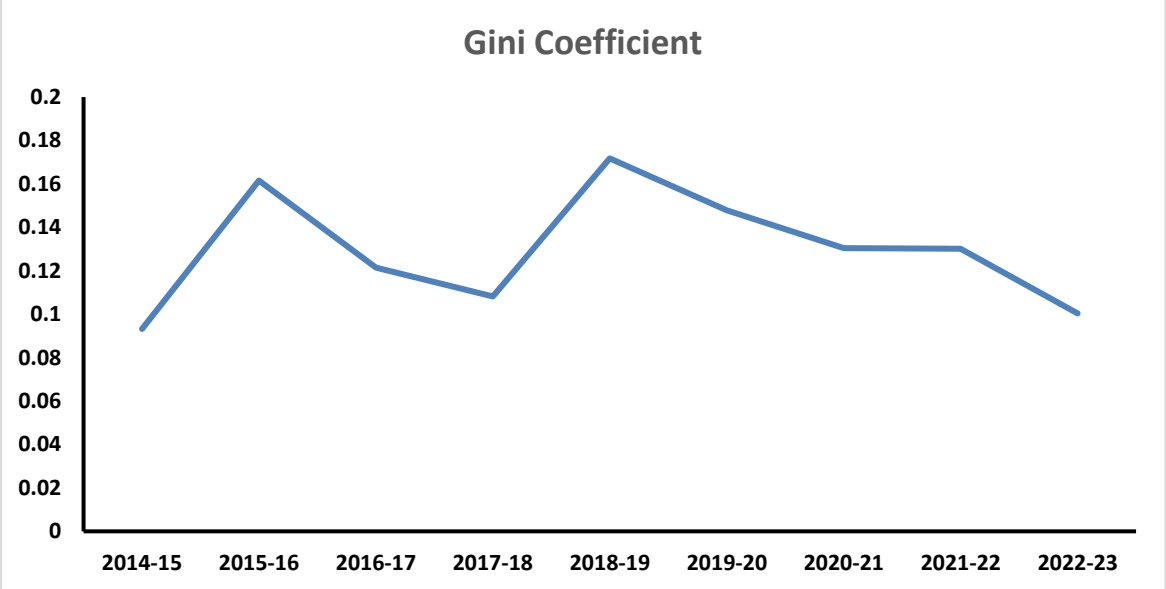
The secondary data on educational attainment level is taken for the following parameters to calculate gini coefficient of educational attainment level for different districts of Assam and to find out the composite index to show the development gaps of education in between Assam and Barak Valley.

Education:

1. Pupil - teacher ratio
2. Dropout rate
3. Transition rate from lower primary to upper primary
4. Total no. of lower primary schools
5. No. of enrolment
6. No. of teachers
7. Total no. of UP, HS/HSS
8. No. of enrolment
9. No. of teachers
10. Average student classroom ratio
11. Average no. of classroom in primary schools
12. No. of primary schools having drinking water
13. No. of primary schools having boys toilet
14. No. of primary schools having girls toilet
15. No. of upper primary schools
16. No. of upper primary schools having drinking water
17. No. of upper primary schools having boys toilet
18. No. of upper primary schools having girls toilet
19. Average no. of classroom in upper primary school

Calculation of Gini Coffecient for educational attainment for different districts of Assam for the period 2014-15 to 2022-23 :

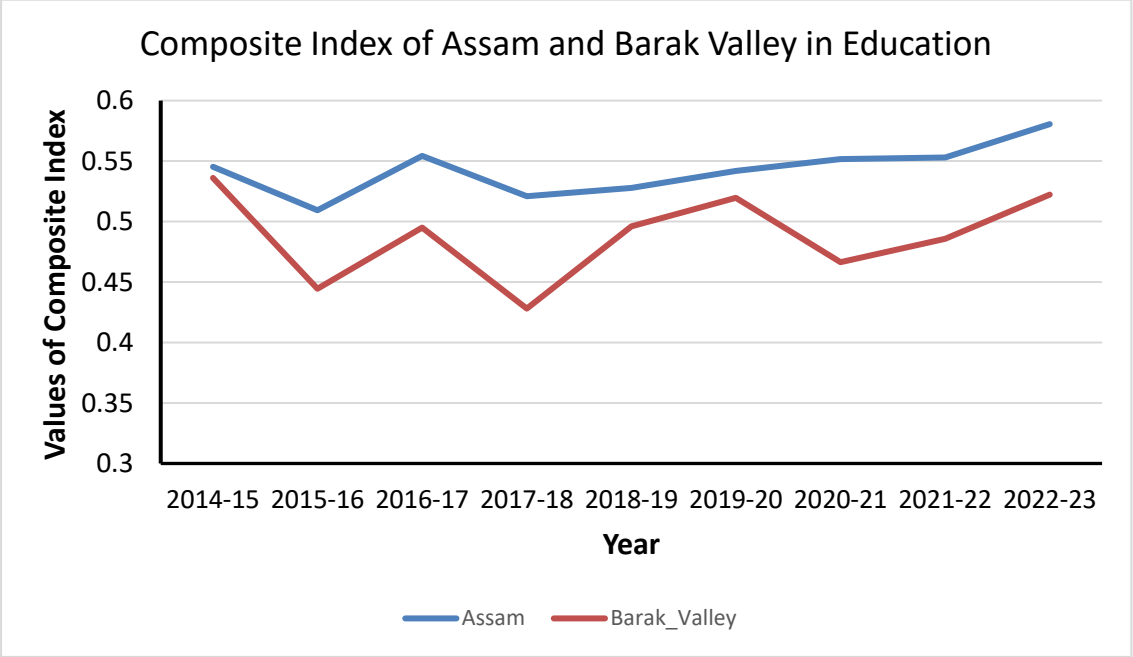
Year	Gini
2014-15	0.0932
2015-16	0.1615
2016-17	0.1215
2017-18	0.10822
2018-19	0.17174
2019-20	0.14778
2020-21	0.13046
2021-22	0.13009
2022-23	0.10032



Values of Composite Index of Educational Development Level between Assam and Barak Valley :

	Assam	**Barak_Valley**
2014-15	0.5452	0.536060938
2015-	0.509329	0.444464638

16		
2016-17	0.55429	0.494876634
2017-18	0.520928	0.428045155
2018-19	0.527774	0.496136325
2019-20	0.541809	0.519695554
2020-21	0.551507	0.466472419
2021-22	0.55301	0.48584421
2022-23	0.58052	0.52226889



Reasons of Education Gap in Barak Valley :

Quality: Higher education's quality is crucial, but it is evident that it is deteriorating daily while the quantity is increasing.

Lack of Research: Higher education should be research-oriented, addressing new societal problems and providing solutions, but the current system appears to be more bookish, focusing less on research activities.

Infrastructure: Rural colleges lack adequate infrastructure, including physical facilities like stadiums and computerized libraries, limiting student engagement and unable to meet their needs.

Teaching Method: Despite the technological advancements, many institutions still adhere to traditional methods, primarily through chalk and talk teaching, with new technologies yet to be introduced.

Lack of skill based education: Education should foster the development of diverse skills in students, enabling them to adapt to various life situations.

Lack of proper planning: Studies reveal a lack of proper planning in the higher education system, leading to students arriving each year without proper placement opportunities, leaving them uncertain about their future post-graduation.

Open and distance learning: Open and distance learning is suitable for changing times, catering to those unable to complete education, but poor administration can increase quantity but decrease quality.

Value Education: Value, encompassing worth and desirability, is declining due to egocentricity and selfishness, leading to increased corruption, indiscipline, violence, and exploitation, while external human values decrease.

Privatization: education is increasingly privatized, with commercial, profit-oriented institutions costing high. Elite students can't access these institutions, raising questions about equal education for all.

Suggestions to overcome the problems of education:

- Implementing innovative teaching methods in higher education institutions, such as using power point presentations with LCD projectors, is recommended over traditional chalk and talk methods.
- Course curriculam should have relevance to the practical aspects of life .
- Infrastructure of the educational institutions should be developed for a healthy environment .
- Distance and open learning education system should be implemented .
- Skill based and value education should be emphasized .

Health:

Health is crucial for economic development as it builds a nation's human capital, and expenditure on health is an investment in human capital formation, as a healthy, educated workforce is the nation's most productive asset.

In developing countries like India, healthcare expenditure is limited due to limited income. However, the government partially covers health expenditure through public healthcare provision. A study in the United States found a relationship between medical care and better

health, with age-adjusted mortality measuring improved health. Environmental variables also play a significant role in health outcomes. Health and education are crucial investments in human capital, leading to improved health and increased productivity.

Health expenditures are crucial for improving health status and are positively related to individual lifestyle patterns. Lower mortality rates and increased per capita health expenditure are also linked. Financing healthcare through public and private channels is essential for equitable and efficient health care systems. India's public health service delivery system is large, but over 60% is spent on staff salaries, leading to resource constraints and increasing healthcare demands.

The study suggests increasing public expenditure on healthcare services in developing countries, as illness burdens the poor. Decisions regarding public healthcare provisioning and expenditure are crucial, especially in developing countries with limited resources. Healthcare services vary based on gender, age, region, and physiological characteristics. Assam, India's health management structure is similar to other states, with financial allocation determined by the central government through uniform programs.

Assam's Health and Family Welfare department is under the Ministry of Health and Family Welfare, with two departments under the Secretary. The Department A includes the General Directorate of Health Services and DHS of Family Welfare, while the Department B includes the Directorate of Medical Education. The National Rural Health Mission (NRHM) supports these departments through incentive-led schemes.

In 2006, Cachar was ranked as one of India's most backward districts. The Assam Human Development Report reveals that Cachar ranks eighth in the state with a Human Development Index of 0.402, with nearly 30% of the population in poverty. The district's Gender Related Development Index is 0.409, lower than the state average. Karimganj, another backward district, ranks 19th in income, education, and health, and 18th in gender related development. Hailakandi ranks 11th in basic human capabilities, with a low HDI value of 0.363. It ranks 9th in income and 14th in education and health. The district has a 27% poverty rate and ranks 6th in the Gender Related Development Index. The Assam Human Development Report reveals that women in this district, despite having a higher GDI value than men, still experience lower achievement.

India's rural population, largely residing in economically backward areas, has seen significant improvement in the rural healthcare sector since the National Rural Health Mission's inception in 2005. However, increasing public investment on health is a major issue in developing countries like India. The study found a positive relationship between public health expenditure and maternal health, suggesting that a decrease in maternal health expenditure could negatively impact healthcare. Public health investment shifts and expenditure on maternal healthcare facilities decreases, affecting health outcomes and care provisioning. Public healthcare provisioning needs constant financial support. Government schemes like Mamoni, Ante-Natal Care, and TT injection administration provide financial assistance. The government has introduced various schemes in rural areas to support pregnant women,

including TT injections, Janani Suraksha Yojana, Mamata, Morom, Majoni, and Adoroni. These schemes have received positive responses but are not reaching the needy 100%. Initiatives should be taken to increase beneficiaries and prevent system leakages. Education and awareness among rural people, particularly mothers, are crucial for reducing morbidity and mortality. Government policies should be implemented to make the public healthcare system self-sustaining and maintain high standards of healthcare indicators, even without financial schemes and incentives. This would release a significant financial burden on the state exchequer.

The secondary data is taken for the following parameters to calculate gini coefficient of educational attainment level for different districts of Assam and to find out the composite index of Assam and Barak Valley to show the development gaps in between Barak Valley and Assam as a whole .

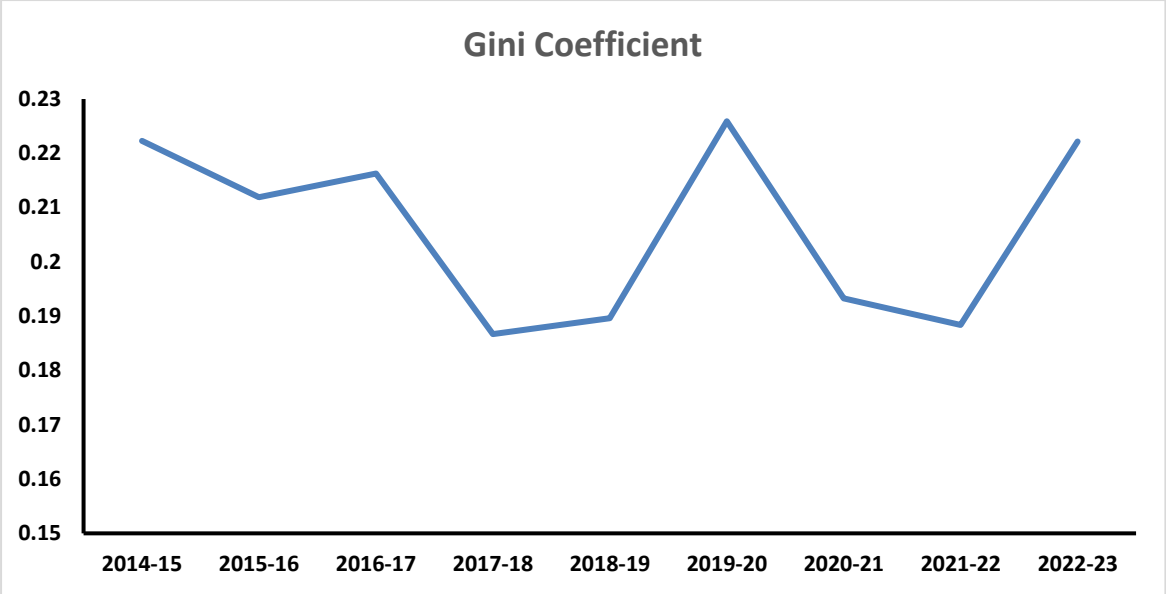
Health:

1. No. of doctors (Rural – Urban)
2. No. of pharmacist (Rural – Urban)
3. No. of Nurse (Rural – Urban)
4. No. of Mid-Wives (Rural Urban)
5. No. of Nursing Home
6. No. of Diagnostic Centre
7. No. of Beds
8. No. of Civil Hospitals
9. No. of Primary Health Centre
10. No. of Community Health Centre
11. No. of Sub-Centers
12. Registered birth
13. Registered death
14. Total no. of rural household
15. Household with functional tap connection

Calculation of Gini Coefficient of Health Care Facilities for different districts of Assam for the period 2014-15 to 2022-23 :

Year	Gini
2014-15	0.2223
2015-16	0.2119
2016-17	0.2163
2017-18	0.1867
2018-	0.1896

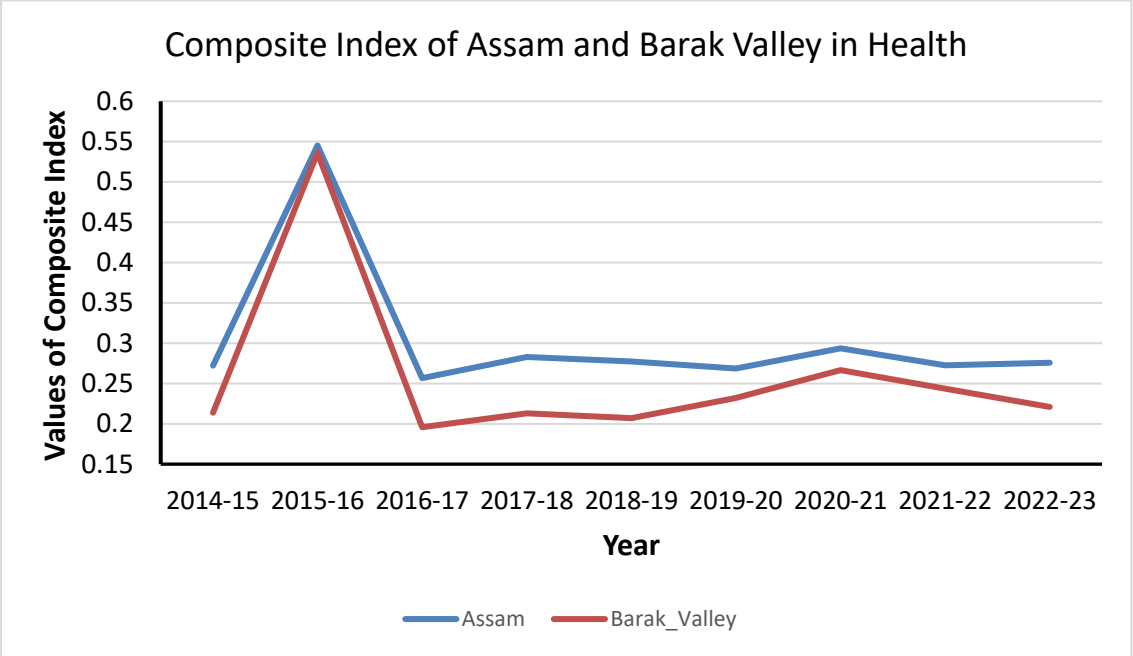
19	
2019-20	0.2259
2020-21	0.1933
2021-22	0.1884
2022-23	0.2222



Values of Composite Index of Health Facilities between Assam and Barak Valley :

	Assam	**Barak_Valley**
2014-15	0.2721	0.2137
2015-16	0.5452	0.536
2016-17	0.2567	0.1958
2017-18	0.2828	0.2131
2018-19	0.2774	0.2072
2019-20	0.2686	0.2322
2020-21	0.2936	0.2666

2021-22	0.2727	0.2436
2022-23	0.2757	0.2209



Reasons of Health Gap in Barak Valley:

1. The health infrastructure gap is significant, with no facility compliant with Indian Public Health Standards (IPHS) as of last year.
2. The Valley faces challenges in healthcare quality due to a shortage of skilled providers, with only one medical college offering postgraduate courses, and a high patient load due to the reliance on public hospitals by the rural population.

Education and Health are crucial for building a dynamic, vibrant nation, particularly higher education, which provides knowledge, skills, capacity, and confidence for future generations.The relationship between education and health can promote positive development, with good health boosting school attendance and learning. Good education, especially for mothers, can improve child health and last into adulthood. Policies should capitalize on these interactions, but avoid potential pitfalls. Policy-makers need more research, including randomized studies, retrospective quantitative studies, and qualitative studies, to develop effective policies. A robust mix of studies can advance our understanding faster than any single research strategy.

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