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A Geographical Study of the Changing Population Trend in Baharaich District (U.P.)

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Abstract

Bahraich district in Uttar Pradesh, India, has a rich historical and geographical profile, significantly impacting its demographic trends. The district's proximity to the Ghaghra and Saryu rivers, along with a border with Nepal, has fostered a primarily rural, agriculturally driven economy. Over 90% of Bahraich's population resides in rural areas, with urban migration gradually increasing due to employment opportunities. However, urbanization has created economic and infrastructural pressures, while rural areas struggle with low literacy, particularly among women, and limited healthcare. Population density varies, with high densities in agriculturally fertile zones and sparse populations in areas vulnerable to natural disasters. Migration patterns also reveal socioeconomic divides; rural-urban migration intensifies urban densities while exacerbating rural challenges. Literacy rates in Bahraich, though improving, are lower than state and national averages, with a significant gender disparity favoring males. The district faces considerable public health challenges, particularly malnutrition among children and women, further hindering socio-economic progress. Government and non-governmental programs target education, healthcare, and infrastructure, but disparities persist. Sustainable development and equitable infrastructure improvements, particularly in education and healthcare access, remain crucial for the district's balanced development.

Keywords: Bahraich, population trends, rural-urban migration, demographic patterns, literacy disparity, population density, agriculture, urbanization, healthcare challenges, socioeconomic development, natural hazards, Uttar Pradesh

Introduction:

Geographical Context of Bahraich District Bahraich district is located in northern Uttar Pradesh, India, between the Ghaghra and Saryu rivers. It has a northern boundary with Nepal and encompasses an area of approximately 4,696.8 square kilometers. The district belongs to the Devipatan Division.

Cultural and Historical Importance Bahraich possesses a profound and varied history that spans several centuries.

- Antiquity and the Medieval Era: The region is mentioned in ancient Indian epics such as the Ramayana and the Mahabharata. Historically, it was a component of the Kosala kingdom and

was governed by several dynasties, including the Mauryas, Guptas, and Palas. In the medieval period, Bahraich was governed by the Delhi Sultanate and subsequently the Mughal Empire.

- British Rule and Independence: During the 18th century, the Nawabs of Awadh governed Bahraich. As the Mughal Empire declined, the British East India Company progressively asserted dominance over the area. Bahraich actively participated in India's struggle for independence, organizing numerous protests against British colonial control.

- Mythological Significance: In mythology, Bahraich is purported to have served as the capital of Lord Brahma, the creator of the cosmos. It was a section of the Gandharva forest, where Lord Brahma designated an area for sages to engage in meditation. Certain stories propose that Bahraich served as the capital of the Bhar Dynasty, which is thought to have bestowed its name upon the area.

- Contemporary Advancement: Following India's independence, Bahraich has had significant development in trade, commerce, and agriculture. It has evolved into a crucial economic center and hosts over 50 esteemed Hindu temples, facilitating its growth as a dynamic metropolitan locale **(K. et al., 2019).**

Socio-economic

Bahraich district, situated in Uttar Pradesh, exhibits a diverse socio-economic profile. According to the 2011 Census, the district's population is roughly 3.4 million, predominantly in rural areas, although it comprises both urban and rural inhabitants.

The literacy rate of Bahraich is approximately 58%, exhibiting a pronounced gender discrepancy, as male literacy substantially exceeds female literacy. This underscores the necessity for targeted educational initiatives, especially for women.

Agriculture is the primary economic activity in the district, with a significant portion of the people involved in farming. Furthermore, the neighborhood is experiencing expansion in small-scale enterprises, enhancing local job prospects.

Bahraich encounters difficulties in health and nutrition, notably elevated levels of undernutrition among children and women. Initiatives are underway to augment healthcare services and refine nutritional programs to address these challenges.

Bahraich has made advancements in infrastructure, particularly in road connection, energy supply, and availability to potable water. Nonetheless, there remains potential for enhancement, particularly in sanitation and housing.

The district is distinguished by its substantial population from minority communities, which has critical implications for inclusive social and economic development plans.

Numerous development initiatives, spearheaded by governmental and non-governmental groups, are in progress to enhance the socio-economic conditions of Bahraich. These initiatives concentrate on essential domains including education, healthcare, infrastructure, and livelihood improvement **(Studies., 2001) (Singh, N., Ph., M. Jangid, S.K. Singh, R. Sarwal, N. Bhatia, R. Johnston, W. Joe, 2022).**

Research Objectives:

1. Enhance Female Literacy and Education Access in Rural Areas.
2. Develop Sustainable Urbanization Strategies to Address Migration-Driven Challenges.

Methodology:

1. Data Sources: - Primary Data: Obtained via sample surveys conducted in fifteen villages of Bahraich district.

- Secondary Data: Mainly derived from census reports, government documents (both published and unpublished), and assorted departmental data, including those from the Directorate of Census Operations, Uttar Pradesh.
- Tertiary Data: Entails doing literature reviews and visiting various academic libraries to gather pertinent material.

2. Sources of Maps: - Employed several maps, including a base map of Uttar Pradesh from the 1991 Census of India and supplementary maps from the 1981 Census, owing to the limited availability of some toposheets.

- The author edited and constructed maps using various cartographic techniques, such as choropleths and isopleths.

3. Data Analysis: - Utilised methodical statistical methodologies for an equitable regional assessment of population increase and dispersion.

- Assessed and organised pertinent data, displaying it in statements, tables, and graphical representations.
- Employed several statistical methods to compute standard scores, standard deviations, location quotients, mean point position, population potential, and correlation coefficients.

Distributional Pattern

Bahraich is among the most populous districts in Uttar Pradesh, comprising approximately 1.39% of the state's total population, and ranks eighteenth in descending order based on the 1991 census. The central highland is densely populated, whilst the Ghaghara and Rapti basins are moderately populated, and the Tarai region has a sparse population. The population distribution in the district is irregular and closely linked to its physiographic regions.

Ghaghara Basin:

Approximately 27.61% of the entire population resides near the Ghaghara River, encompassing 26.57% of the district's total area, yielding a crude density of 418 individuals per square kilometer. The unpredictability of precipitation results in both floods and droughts occurring within the same year and in successive years. Deforestation, especially in the upper catchment area of the Ghaghara River, is a primary cause of flooding. The Ghagharabasin was sparsely populated prior to the 20th century, owing to the high population pressure in the central upland plain and push factors, coupled with the availability of relatively inexpensive land of moderate to high fertility that yielded abundant crops, particularly during the Rabi season, with minimal investment in labor and fertilizer. Consequently, there has been a significant influx of population in the 20th century. The majority of settlers belong to a low socioeconomic status. In this region, only 17.34% of individuals are literate.

Distribution of Rural Population

The population of Bahraich district is predominantly rural, comprising 92.15% (2,546,844 individuals) of the total population, encompassing 1,890 inhabited villages with an irregular spatial distribution as of 1991. The proportion of the rural population has declined from 94.06% in 1971 to 92.95% in 1981 and 92.15% in 1991. It has resulted in a minor growth in the proportion of the urban population in recent years, mostly due to the amalgamation of two towns as urban centers and the migration of the rural population towards the urban centers of Bahraich district, chiefly in pursuit of jobs. The distribution of urban centers throughout the district is uneven. Urban centers are typically more concentrated along riverbanks or adjacent to railroads.

Distribution of Inhabited Villages

There was a declining tendency in the number of inhabited villages from 1901 to 1911, which thereafter rebounded in 1921. The peak number of such communities was 1,979 in 1921, which decreased to 1,873 in 1931. The period from 1961 to 1991 witnessed a growth in the number of inhabited communities.

The factors influencing the fluctuation in population include the evolving definition of urban centers across decades **(Trewartha, 1953),** the transformation of certain uninhabited villages into inhabited ones during enumeration, alterations in district boundaries, the fluvial dynamics of the Ghaghara River, the classification of specific areas as distinct census villages despite not being recognized as revenue mauza, and the amalgamation of villages with neighboring towns.

Distribution of Urban Population

The distribution of the urban population across several classes of towns in Bahraich district has distinct characteristics. It represents 7.85% (216,906 individuals) of the overall population, encompassing six municipalities, compared to 19.80% in the State and 25.72%

nationally in 1991. The proportion of the urban population has risen from 3.95% in 1921 and 5.33% in 1951 to 7.85% in 1991, primarily due to in-migration from rural areas of other states and districts of U.P. Notably, only three towns—Bahraich, Nanpara, and Bhinga—have consistently been classified as urban centers from 1901 to 1991.

Distribution of Scheduled Castes Population

The examination of the scheduled castes population is significant, as they represent a substantial fraction of the total population, specifically 17.54%, 16.53%, and 16.46% in 1971, 1981, and 1991, respectively. The percentage of rural scheduled castes (17.36%) exceeds that of urban scheduled castes (5.85%). Approximately 97.21% of the scheduled castes population resides in rural areas. Their cultural, social, and educational status serves as obstacles, resulting in their minimal representation in metropolitan areas (2.79%).

Distribution of Scheduled Tribes Population

The ratio of scheduled tribes to the total population in the district is minimal (0.34%). Their primary concentration is in the rural regions of Mihinpurwa (2.90%), Sirsiya (2.53%), Balha (0.011%), Jamunha, and Nawabganj (0.003%) blocks. The geographical distribution of scheduled tribes indicates that their population is restricted to less fertile and forested areas of the district. Economically, they are significantly disadvantaged, with the bulk subsisting on a precarious basis. Notwithstanding institutional initiatives and governmental concern for their socio-economic advancement, considerable efforts are still required to elevate their socio-economic status in contemporary society.

Density of Population

Arithmetic Density

The basic ratio of total population to total land area, represented as humans per unit of area, is referred to as arithmetic or general density.

Arithmetic density is total people divided by total area.

Population density is crucial for analyzing the diversity of human dispersal in space. According to the 1991 census, the average population density of Bahraich district is more (402 persons/km²) than that of India (274) but lower than that of Uttar Pradesh (473). Consequently, the district accommodates 128 individuals per square kilometer more than the national average, and 71 individuals per square kilometer fewer than the state average. In 2001, the population density rose to 415 individuals per square kilometer.

Spatial Distribution of Arithmetic Density

In 1901, the arithmetic density of Bahraich district was 153 persons/km², which decreased to 152 persons/km² in 1911 due to the outbreak of epidemics and cholera. The population is

expanding swiftly while the land area has stayed relatively constant. Consequently, the density is augmenting. The arithmetic density was 155 in 1921, 165 in 1931, 218 in 1961, 251 in 1971, and 322 persons/km² in 1981. According to the 1991 census, the average arithmetic population density in Bahraich was 402 persons per square kilometer. Consequently, over the past 90 years, the arithmetic density has more than doubled. The most significant growth transpired between 1971-81 and 1981-91.

Table 1: Temporal Pattern (1901-1991) of Density of Population in India,Uttar Pradesh and Bahraich District.

Census Year	DENSITY				
		Arithmetic		Physiological	Agricultural
	India	U.P.	Bahraich	Bahraich	Bahraich
1901	77	165	153	241	----
1911	82	164	152	243	----
1921	81	159	155	263	103
1931	90	169	165	261	104
1941	103	192	180	262	111
1951	117	215	197	285	119
1961	142	251	218	307	125
1971	177	300	251	337	136
1981	221	377	322	360	142
1991	274	473	402	499	176

Source; Census of India 1991,Series-1 and D.C.H. of Bahraich 1951,1961,1971 & 1981.

The arithmetic density of the population is uneven across several blocks of the study region. In 1971, the highest population density was recorded in the Hariharpur Rani block with 343 individuals per square kilometer. According to the 1981 and 1991 censuses, Hazoorpur block has the highest density. The densities of these blocks were 393 and 490 persons/km², respectively, in the specified years. In 1971, 1981, and 1991, Sirsiya block exhibited the lowest population density, recorded at 205, 255, and 302 inhabitants per square

kilometer, respectively. Density can be classified into five categories based on absolute numerical values. A density of fewer than 300 individuals per square kilometer is classified as very low density. In 1971, there were twelve blocks, and in 1981, there were three blocks in this category. In 1991, there were no blocks with a density below 300 individuals per square kilometer. The low-density group encompasses 300 to 350 individuals per square kilometer. In 1971, there were seven blocks, and in 1981, there were five blocks in this category. In 1991, the Sirsiya block, with a population density of 302 inhabitants per square kilometer, constitutes this category. The moderate density category ranged from 350 to 400 individuals per square kilometer. In 1981, this group encompassed nine blocks. In 1991, five blocks were incorporated into this category. The population densities were as follows: Jamunha (391), Shivpur (389), Gilaula (385), Mahasi (373), and Mihinpurwa (361) persons/km² (Appendix 4.1). In 1971, no block was identified within the high-density group of 400 to 450 persons per square kilometer. Risia (412) and Visheswarganj (401) blocks were incorporated into this group in 1981.In 1991, only one Chitaura block was identified within the high-density group. A density exceeding 450 persons/km² is classified as a very high-density group. In 1971 and 1981, none fell within this category; however, in 1991, twelve blocks—Visheshwarganj (503), Risia (501), Hazoorpur (490), Kaisarganj (479), Jarwal (476), Tajwapur (466), BaHia (463), Nawabganj (462), Hariharpur Rani (462), Prayagpur (458), Ekona (452), and Phakharpur (451)—were included in this classification. The factors contributing to the high and very high density of certain blocks are: arable land, convenient access, and proximity to several industrial/urban hubs.

Agricultural Density

Agricultural density is the ratio of the agricultural population to the total farmed land. Consequently, agricultural density is defined as the ratio of the agricultural population to the farmed area. It has demonstrated utility as an index of the human-land interaction, particularly within an agrarian framework.

Agricultural Density = Agricultural population/ Total cultivated area

Spatial Pattern of Agricultural Density

The agricultural density in Bahraich district (176 persons/km² of net cultivated land in 1991) is approximately two and a half times greater than the national average. Agricultural density denotes the ratio of individuals involved in agriculture to the area of cultivated land at a specific moment.Wherever the population engaged in agriculture is greater, agricultural density is correspondingly high, and vice versa. The maximum agricultural density, measured at 165 persons/km², occurred in Jarwal block in 1981, and the lowest density of 117 persons/km² was observed in Sirsiya block. In 1991, Jarwal achieved the highest population density at 198 individuals, while Sirsiyablock recorded the lowest at 144. The agricultural density in 1981 was lower than that in 1991 across all blocks. In 1981, three blocks exhibited an agricultural density below 130 persons/km², but in 1991, no blocks were identified in this category due to a lesser increase in cultivated land compared to population growth. A low-

density group of 130 to 150 individuals per square kilometer consists of eleven blocks as of 1981.Sirsiya (144) was incorporated into this group in 1991 while alone. Medium density varies from 150 to 170 individuals per square kilometer. In 1981, five blocks constituted a moderate group. In 1991, five blocks—Shivpur (166), Mahasi (164), Mihinpura (161), Gilaula (159), and Jamunha (157)—were classified within the moderate density group (Fig. 4, 2A & B). The high-density group includes an agricultural density of 170 to 190 individuals per square kilometer. In 1981, there were no blocks within this category, however in 1991, twelve blocks were incorporated into the high-density group. The blocks included are Tajwapur (189), Phakharpur (188), Kaisarganj (187), Hazoorpur, Visheshwarganj (186), Prayagpur (183), Balha, Ekona (178), Risia (176), Hariharpur Rani (175), and Nawabganj & Chitaura (171). In extremely high-density groups, density exceeds 190 individuals per square kilometer. In 1991, only the Jarwal (198) block was classified in this group, but none were identified in this category in 198.

Table 2: Variation in Population Density in Bahraich District (1901-1991)

Census Year	Population Density				
	Arithmetic	Agricultural	Physiological	Rural	Urban
1901	153	---	241	147	2,853
1911	152	---	243	146	2,812
1921	155	103	263	149	2,733
1931	165	104	261	158	3,314
1941	180	111	262	172	3,792
1951	197	119	285	187	4,475
1961	218	125	307	206	4,974
1971	251	136	337	237	6,405
1981	322	142	360	301	6,974
1991	402	176	499	372	6,699

Source: D.Q.H. 1961,1971 &1981. Unpublished District Primary Census Abstract 1991

Physiological Density

Physiological density is a ratio between total population and total cultivable land. It is expressed in terms ofpersons/km2 of cultivable land. The correct picture of the human pressure on land is derived by physiological density. Thus, when comparedwith arithmetic density, physiological density is defined amethod ofcalculating man-land ratio:

Physiological Density= Total population/ Total cultivable land

Rural Density

Rural densityis aratio between rural population and rural area. Itis expressed in terms ofrural persons / km2 ofrural area:

Rural Density= Total rural Population/ Total Rural Area

The average rural density of Bahraich district was 147 persons/km2 in 1901, which after 1911, always maintained increasing trend due to rapid growth in population and decrease in rural area. The rural density was 301 persons / km2 in 1981 and 372 persons / km2 in 1991

Urban Density

Urban density is defined as the number of urban individuals per square kilometer of urban area. The district's average urban density in 1991 is 6,699 individuals per square kilometer (Table 2) The spatial distribution of urban density has been categorized into three classifications. Ekona T.A. has the highest urban density, with 13,908 individuals, followed by Bahraich M.B. at 10,180 individuals. Bhinga N.A. (9,665) and Nanpara M.B. (8,135) exhibit a density deviation ranging from 7,500 to 10,000 persons/km², categorizing them as having moderate density. Two urban centers exhibiting lower density relative to the average are Jarwal T.A. (2,411) and Raisal Bazar T.A. (1,167). The most notable finding of this study is that metropolitan centers predominantly inhabited by Muslims exhibit higher population density due to elevated growth rates and significant participation in tertiary activities and household industries.

Population Density

Approximately 7.84% (216,906 individuals) of the total population resides in urban areas, which constitute 0.47% (32.38 km²) of the district's total area. Urban centers also exhibit disparities in population concentrations. Over 67.04% of the urban population, with a density exceeding 10,000 individuals per km², resides in two urban centers, Bahraich M.B. and Ekona T.A., which account for 43.92% of the total urban area. Conversely, more than 56.08% of the total urban area, encompassing over 32.96% of the urban population, is occupied by four towns: Bhinga N.A., Nanpara M.B., Jarwal T.A., and Raisal Bazar T.A. Approximately 92.16% (25,46,844 individuals) of the total population resides in rural regions, which encompass 99.53% (6,844.62 km²) of the district's total area. Population agglomeration inequalities also exist in rural regions. The Mihirpurwa block exhibits the largest population concentration at 7.55%, while the Nawabganj block has the lowest

concentration at 4.05%. The Mihinpurwa block exhibits the lowest area concentration at 3.53%. The cumulative graph indicates a higher degree of clustering in the urban population compared to the total population in the district **(Col & J.P. and king, 1968).**

From 1881 to 1991, the population increase of the district may be classified into five distinct phases:

1. Normal Population Growth (1881-1891): The population rose by 13.99%, from 878,048 to 1,000,432, attributed to swift recovery following a crisis.

2. Incipient Decline (1891-1911): Despite early expansion, the population diminished from 1,049,710 to 1,045,775 by 1911, primarily due to epidemics (fever, smallpox, cholera, plague) and emigration.

3. Incipient Growth (1911-1931): A gradual growth rate of 1.67% (1911-21) and 6.66% (1921-31), surpassing the population trends of U.P. and India.

4. Rapid Growth (1931-1961): A swift expansion of 9.17% to 11.63% each decade attributed to advancements in trade, transportation, healthcare, and the implementation of the U.P. Tenancy Act.

5. Sustained Growth (1961-1991): Comparable tendencies persisted throughout this era, bolstered by rural development and governmental reforms.

Rural-Urban Differential in Population Growth

The population increase in Bahraich district has exhibited a significant rural-urban discrepancy. Although the total population has consistently risen since 1921, rural expansion has been more gradual in contrast to the swift urban growth, particularly following India's independence. The timeframe from 1901 to 1991 can be categorized as pre- and post-independence stages, with a notable increase in urban population during the latter period. From 1981 to 1991, the rural population increased by 23.63%, whereas urban growth surpassed 38%. The increase in urban migration has resulted in unemployment challenges. Diversifying and expanding non-agricultural sectors is crucial to mitigate rural out-migration.

Movements of Population

Migration

Migration, while not as universal as births and deaths, significantly influences the ethnic, linguistic, and national makeup of people. **(Trewartha, 1969)** observes that migration is selective; not all individuals migrate, and it entails substantial alterations in spatial and social dynamics. **(Gosal, 1961)** and **(Ghosh, n.d.)** assert that migration transcends a simple change of residence; it transforms population dynamics and modifies spatial content and spatial relationships within regions. Migration serves as a mechanism for cultural

dissemination and the relocation of populations, influencing both the regions of origin and destination. The migration flow is frequently sex-selective, with varying impacts based on whether males or females predominate**(Peterson, 1961).**

Migration is assessed using many methodologies, including:

1. Crude Migration Rate (CMR): The quantity of migrants per 1,000 individuals in a specific region **(Singh, 1997).**

2. Age-Specific Migration Rate (ASMR): Migration rates determined for certain age cohorts, as migration frequently exhibits age selectivity.

3. In-Migration/Immigration Rate (Mi): The movement of individuals within a country (in-migration) or from abroad (immigration).

4. Out-Migration/Emigration Rate (Mo): The departure of individuals from a region or country (emigration) **(Singh, 1997).**

Migration data is collected by direct means (e.g., census, passport records) and indirect methods (e.g., place of birth data). Migration is categorized as international (transnational) or internal, which may occur as rural-to-rural, rural-to-urban, urban-to-urban, or urban-to-rural. Internal migration holds greater significance for demographic studies due to less constraints in comparison to international migration **(Davis, 1974).**

The factors influencing migration encompass:

- Social factors: Matrimony, cultural transformation, aspiration for a novel social structure.

- Demographic factors: Population density, unemployment rates, and increase of the rural populace.

- Physical factors: Climate and natural catastrophes

- Economic factors: Employment prospects, economic conditions, and land accessibility

- Transportation and Communication: Enhanced infrastructure promotes migration

Migration is affected by push factors (such as unemployment and substandard living circumstances) and pull factors (including improved job opportunities and elevated wages) that concurrently function within the same region **(Ghosh, n.d.).**

COMPOSITION OF POPULATION

Population composition refers to measurable aspects such as age, sex, marital status, family size, economic activities, nationality, language, and religion, typically gathered from censuses **(Clarke, 1972).** It includes biological (e.g., race, ethnicity, fertility, mortality, sex

ratio), cultural (e.g., education, religion, language), and economic (e.g., working vs. non-working population, unemployment) dimensions **(Ghosh, n.d.)**.

Sex composition is often expressed through the sex ratio, which can be measured as:

(a) Number of males per 1,000 females,

(b) Percentage of males or females in the total population,

(c) Male/female proportion as a decimal **(Chandana, 1986) (Clarke, 1972).**

It is calculated as under:

$$\frac{P_f}{P_m} \times 1000$$

Where, Pf= Population of Females, Pm= Population of Males

The sex ratio is a vital socio-economic metric, often denoting the number of girls per 1,000 males in India. It can be categorized into three types: primary (at conception), secondary (at birth), and tertiary (at enumeration). Factors include birth and death sex ratios, migration, natural calamities, and socio-cultural norms affect the sex ratio **(Mehta, 1967).** The sex ratio in India has varied over time. Between 1901 and 1991, Bahraich district predominantly shown adverse trends in sex ratio, with the exception of 1981, which recorded a positive increase. National trends shown marginal enhancements in 1951 and 1981 **(Chandana, 1967).**

Bahraich district documented a peak sex ratio of 931 females per 1,000 males in 1901, which progressively diminished to a nadir of 841 in 1971 and 1991. The decline from 1901 to 1931 was attributable to male in-migration, diseases, and famine. The decline persisted throughout the mid-20th century as a result of selective male in-migration from various districts and states. An ephemeral rise in 1981 was propelled by enhanced socio-economic and medical circumstances, alongside male out-migration for career opportunities. Notwithstanding these variations, Bahraich generally exhibited a lower sex ratio compared to both state and national averages **(Ghosh, n.d.).**

The sex ratio in Bahraich district exhibits notable disparities between rural and urban areas. In 1991, rural regions exhibited a ratio of 838 females per 1,000 males, whilst urban areas recorded an even lower female count, mirroring patterns observed in Uttar Pradesh and India. This disparity arises from male-dominated migration from rural to urban regions, influenced by economic pressures and the elevated cost of living in cities, which deters men from relocating their families. Rural regions typically have a higher sex ratio compared to metropolitan areas, with exceptions noted in specific decades such as 1971, 1981, and 1991.

In 1971, fourteen blocks had a sex ratio exceeding the district's average of 841, with Jarwal recording the highest at 870 and Hariharpur Rani the lowest at 813. In 1991, the district's total sex ratio was 841, which was lower than the state average of 879 and the national average of 929. Nine blocks exhibited sex ratios beneath the district average, with Hazoorpur recording the highest at 855 and Hariharpur Rani the lowest at 812.

In Bahraich, Scheduled Castes and Scheduled Tribes demonstrated elevated sex ratios compared to the general population, with SCs recording 823 in 1991 and STs 933. Nonetheless, metropolitan regions exhibited persistently decreased sex ratios across all decades attributable to male migration **(Ghosh, n.d.) (Chandana, 1986).**

In 1991, the sex ratio among Scheduled Castes (SCs) in Bahraich district varied from 798 in Gilaula to 848 in Mihinpurwa, with eleven of the nineteen blocks exhibiting ratios exceeding the district average of 823. Only Gilaula possessed a ratio inferior to 800. Scheduled Tribes (STs) had an elevated sex ratio, varying from 600 in Balha to 3,000 in Nawabganj, with male outmigration influencing the elevated ratios in certain blocks.

In 1991, the district's overall sex ratio was 841 females per 1,000 males, with the highest ratio of 928 in the 0-9 age group and the lowest of 691 in the 10-19 age group, attributed to child marriage and elevated female mortality rates. Urban regions exhibited a superior sex ratio in older demographics, notably within the 70+ age category (1,024) in contrast to rural regions.

The age structure profoundly affects social, economic, and political dynamics, shaping aspects such as birth and marriage rates, economic activity, and mobility **(Trewartha, 1969).**

The age structure, frequently disregarded by geographers, is essential for comprehending population dynamics as it influences economic, social, and political activities. The age structure is influenced by mortality, fertility, and migration. Geographers examine age composition using age pyramids, age groups, and age indices, each providing insights into demographic trends **(Clarke, 1972) (Mishra, 1980).**

In Bahraich, the populace was categorized into three age cohorts:

1. Youth (0-19 years): This economically dependent demographic constituted 39.37% of the population in 1991, exhibiting a significant male-female difference.

2. Adults (15-59 years): This demographic is economically active and constituted 52.92% of the population in 1991.

3. Elderly (60+ years): This non-contributory demographic, predominantly female, constituted 7.13% of the population in 1991, hence exacerbating the economic strain on the adult cohort.

The dependence ratio (children and elderly vs adults) in Bahraich rose from 70.10 in 1971 to 90.65 in 1981, then declined to 87.65 in 1991, with higher values observed in rural regions.

Disparities in population composition between rural and urban areas were especially evident in the younger and older demographics, attributable to migration and family planning influences.

SOCIO CULTURAL CHARACTERISTICS OF POPULATION

The population is a fundamental component of social, economic, and cultural systems, and demographic events profoundly influence both individuals and society. The relationship between demographic and socio-cultural elements is intricate, as socio-economic situations shape cultural values, which subsequently impact fertility patterns**(Yadav, 1991).** Demographic alterations both mirror and instigate transformations in societal elements **(Kinsley, 1959).**

Literacy

Literacy is essential for socio-economic advancement, as it alleviates poverty, enhances international ties, and facilitates demographic processes. It is characterized as the capacity to read and write with comprehension in any language **(Chandana, R. C. and Sidhu, 1980).** The Indian Census employs this definition, acknowledging the impact of literacy on fertility, mortality, migration, and economic advancement.

Urban people generally exhibit superior literacy rates compared to rural areas, attributable to enhanced access to education, economic prospects, and social consciousness. This disparity, however, is diminishing as developments in transportation, communication, and technology enhance educational access in rural regions. A positive association exists between literacy and development throughout various geographies.

Growth of Literacy

The literacy rate in Bahraich district has exhibited a consistent increase. In 1961, literacy stood at 8.42%, increased to 13.92% in 1971, and attained 19.54% in 1991. Notwithstanding this advancement, literacy rates in Bahraich have persistently lagged below those of Uttar Pradesh and India, mostly attributable to economic, social, and cultural underdevelopment. In 1991, Bahraich's literacy rate was 19.54%, while Uttar Pradesh and India had rates of 41.71% and 51.21%, respectively.

Blockwise Spatial Distribution of Literacy: In 1971, some blocks in Bahraich exhibited exceedingly low literacy rates (below 10%). By 1991, there were no blocks in the very low category, and six blocks exhibited literacy rates over 19%. Prayagpur had a literacy rate of 26.28%, succeeded by Mahasi, Visheshwarganj, and more regions.

Rural-Urban Literacy: In Bahraich district, rural literacy has persistently fallen short of urban literacy owing to insufficient educational resources, restricted socio-economic incentives, and migration from rural to urban areas for employment opportunities. Rural literacy rates were

12.55%, 13.75%, and 17.63% in 1971, 1981, and 1991, respectively, although urban literacy rates were markedly higher at 35.72%, 39.56%, and 42.00% during the same years.

In 1971, 19.54% of the literate people in Bahraich lacked formal education. The figure declined throughout the years, falling to 41.18% in 1981 and 31.27% in 1991. Primary-level education was the second most prevalent, with 47.10%, 30.79%, and 30.34% of the population possessing only a primary education in 1971, 1981, and 1991, respectively. In 1971, male literacy without formal education exceeded female literacy; yet, at the primary level, female literacy outperformed male literacy. The urban population exhibited a reduced percentage of illiterates lacking a standardized educational level in contrast to rural regions, indicative of the elevated educational prerequisites for skilled employment in metropolitan environments.

Urban Occupational Structure: The 1991 census indicated that Bahraich's urban population comprised 26.72% primary workers, 72.23% non-workers, and 1.05% marginal workers. Among the primary workforce, 12.09% were cultivators, 9.83% were agricultural laborers, 3.04% were involved in domestic industries, and 75.04% were engaged in other activities.

Discussion

The demographic trends in Bahraich district, situated in Uttar Pradesh, India, reveal diverse patterns influenced by historical and geographical variables. Bahraich has historically experienced the influence of several reigning dynasties, including the Mauryas and Guptas, which have shaped its socio-cultural fabric. This heritage persists in influencing the district's demographic distribution and expansion. The geographical proximity to the Ghaghra and Saryu rivers, together with its border with Nepal, has influenced its agricultural economy and migration trends.

The district is primarily rural, with more than 90% of the inhabitants living in rural regions; nevertheless, urbanization has progressively intensified, especially following India's independence. The migration from rural areas to urban centers has been propelled by employment possibilities and the appeal of enhanced economic prospects, resulting in swift urban population expansion. Urban migration has exacerbated gaps in economic development and intensified pressure on urban infrastructure.

Although literacy rates in Bahraich have improved over time, they nevertheless remain below state and national levels. A significant gender disparity in literacy is apparent, with male literacy substantially exceeding female literacy. The disparity is especially alarming in rural regions, where women's educational possibilities are restricted, hence exacerbating socio-economic difficulties. The district encounters substantial issues in healthcare and nutrition, especially affecting women and children, hence intensifying the cycle of poverty and underdevelopment.

The population distribution of Bahraich is irregular, shaped by natural and socio-economic causes. The presence of fertile agricultural land adjacent to rivers and resource availability has resulted in higher population densities in specific locations, whereas regions susceptible

to natural disasters, like floods and droughts, exhibit lower population densities. The population density has risen throughout the decades due to fast growth, without a corresponding increase in land area.

Conclusion

The evolving demographic patterns in Bahraich district illustrate a complex interaction among topography, migration, and socio-economic advancement. Although urbanization has presented benefits, rural regions continue to confront enduring obstacles, including low literacy rates, particularly among women, and insufficient healthcare services. Initiatives to augment infrastructure, elevate education, and rectify gender inequalities are essential for promoting equitable and sustainable development in both rural and urban areas of Bahraich. A sustained emphasis on inclusive development will be essential for tackling these difficulties and guaranteeing equitable growth throughout the district.

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