

Changing Status of Women and Spatial Inequality in Birbhum District, West Bengal: A Geographical Perspective

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Abstract:

Women's status is a dynamic and spatially differentiated outcome of demographic, socio-economic and cultural processes. This paper examines the changing status of women and the spatial pattern of gender-based inequality in Birbhum district, West Bengal, using a geographical framework that links demographic indicators to their sub-district (community development block) distribution. Secondary data drawn from the Census of India (2001 and 2011) and district-level statistical handbooks were analysed through descriptive and cartographic-statistical techniques, including deviation-from-mean classification of blocks. The results indicate a measurable, though uneven, improvement in women's demographic status between 2001 and 2011: the overall sex ratio rose from 950 to 956 females per 1000 males, and female literacy increased by nearly 12.6 percentage points, narrowing the gender literacy gap. However, considerable intra-district disparity persists; blocks in the eastern and central parts of the district, notably Ilambazar, Rampurhat I and Suri II, register comparatively favourable indicators, while western and southwestern blocks such as Mohammad Bazar and Rajnagar lag behind the district mean. The paper argues that this spatial inequality is rooted in the interaction of physiography, accessibility, tribal and minority concentration, and uneven diffusion of educational and health infrastructure. The findings underscore the need for block-specific, rather than uniform district-level, policy interventions to accelerate gender-equitable development in Birbhum.

Keywords: Status of Women; Spatial Inequality; Gender Geography; Birbhum District; Sex Ratio; Female Literacy; West Bengal.

1. Introduction

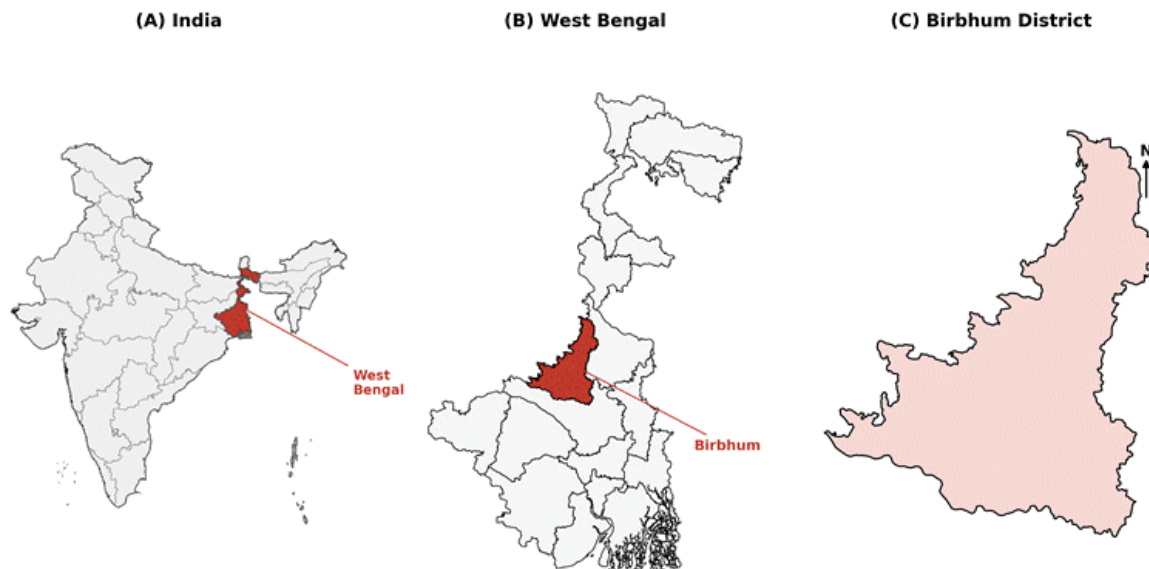
The status of women, understood as the relative position of women vis-à-vis men in demographic, economic, social and political spheres, is one of the most sensitive indicators of regional development [1]. In the Indian context, women's status has historically varied not only across states but also within districts, reflecting the layered influence of kinship systems, agrarian structure, religious composition and the differential reach of state-sponsored development programmes [2]. Geographers have long argued that gender relations are not merely social facts but are actively produced through, and reproduced in, space; place shapes opportunity, mobility and autonomy in ways that generate measurable spatial inequality [3].

Birbhum, an agrarian and comparatively less urbanised district of West Bengal, was identified by the Ministry of Panchayati Raj [4] as one of the country's most backward districts, a classification that continues to shape its development discourse. Within this broader backwardness, the situation of women deserves particular geographical attention because indicators such as sex ratio, literacy, age at marriage and workforce participation are known to vary sharply across the district's nineteen community development (CD) blocks, which differ in physiography, accessibility, and social composition, including relatively higher concentrations of Scheduled Tribe and minority populations in the western and northern blocks [5].

Much of the existing literature on gender and development in West Bengal treats the district as a single statistical unit, thereby masking significant intra-district variation. A geographical perspective, by contrast, insists on disaggregating district-level averages to the block or village level in order to identify pockets of relative deprivation and relative advantage [6]. This paper adopts such a perspective. It first traces the temporal change in the demographic status of women in Birbhum between the 2001 and 2011 Census rounds, and then examines the spatial pattern of this status across CD blocks, using literacy rate, a well-established proxy for women's autonomy and capability [7], as an entry point for a wider discussion of the socio-cultural and infrastructural determinants of spatial inequality.

Study Area

Birbhum district lies in the western part of West Bengal, between approximately 23°32' N and 24°35' N latitude and 87°05' E and 88°01' E longitude, and forms part of the undulating Rarh plain, transitional between the Chota Nagpur plateau fringe in the west and the alluvial plains of the Ajay, Mayurakshi, Bakreshwar and Brahmani rivers in the east [8]. The district covers an area of 4,545 sq. km, is administratively divided into three subdivisions, Suri Sadar, Bolpur and Rampurhat, comprising nineteen community development blocks, and had a population of 35,02,404 persons as per the 2011 Census, of which 17,11,484 (48.9%) were women. The economy remains predominantly agrarian, with agricultural labourers forming the largest single occupational category among workers in the district, and forest cover restricted to about 3.5 per cent of the geographical area. This combination of agrarian dependence, lateritic western uplands with lower fertility, and a comparatively low level of urbanisation (12.83% urban population) provides the physical and economic backdrop against which the geography of women's status must be understood.



Source: Prepared by author based on Census of India (2011) district boundaries; DataMeet India Maps.

Figure 1. Location of Birbhum district in West Bengal and India. Source: Prepared by the author from Census of India (2011) district boundaries (DataMeet India Maps).

Objectives

The specific objectives of the study are: (i) to examine the temporal change in key demographic indicators of women's status in Birbhum district between 2001 and 2011; (ii) to analyse the spatial (block-wise) pattern of women's status within the district; and (iii) to identify the probable geographical, socio-cultural and infrastructural factors underlying the observed spatial inequality, with a view to suggesting area-specific policy directions.

2. Database and Methodology

The study is based entirely on secondary data. District- and block-level demographic data for 2001 and 2011 were compiled from the Census of India (Primary Census Abstract and District Census Handbook, Birbhum), supplemented by information from the West Bengal District Human Development Report and the National Family Health Survey [9] for contextual, state-level comparison. Indicators used include total population, sex ratio, child sex ratio, male and female literacy rates, and female work participation rate.

At the district scale, temporal change between 2001 and 2011 was assessed through simple difference and percentage-change measures. At the sub-district scale, a deviation-from-mean technique was applied to block-wise female-relevant literacy data: each block's literacy rate was compared with the district mean (70.68%), and blocks were grouped into four categories, high, moderate-high, moderate-low and low, to visualise the spatial pattern of relative advantage and disadvantage. This technique, though simple, is a standard and transparent method in regional and gender geography for converting a continuous indicator into a comparable spatial classification. Descriptive statistical outputs were mapped and charted using Python's Matplotlib library to ensure reproducibility and clarity of visual presentation. It should be noted that literacy is used here as a widely accepted, readily comparable proxy for women's status; a fully multidimensional index incorporating health, work-participation and decision-making indicators at the block level would strengthen future research but was constrained by the limited availability of gender-disaggregated data below the district level in the public domain.

3. Results and Discussion

3.1 Temporal Change in the Demographic Status of Women, 2001–2011

Table 1 summarises the change in key gender indicators for Birbhum district between the 2001 and 2011 Census rounds, alongside the corresponding 2011 figures for West Bengal state. The overall sex ratio improved modestly from 950 to 956 females per 1000 males, placing the district marginally above the state figure of 950 in 2011. This improvement, however, was accompanied by a decline in the child sex ratio (0–6 years) from 964 to 959, a trend that mirrors a wider concern across many Indian states regarding the survival and enumeration of the girl child in the youngest age cohort even where adult sex ratios are improving.

The most substantial positive change is visible in female literacy, which rose from 51.55 per cent in 2001 to 64.14 per cent in 2011, a gain of nearly 12.6 percentage points, compared with a 6.0-point gain for males over the same period. Consequently, the gender literacy gap in the district narrowed from 19.34 to 12.78 percentage points. This narrowing, illustrated in Figure 2, suggests that the spread of female education in the district accelerated markedly during the decade, plausibly reflecting the combined effect of state-sponsored school-enrolment drives, mid-day meal programmes and incentive schemes for girls' education implemented across rural West Bengal. Female work participation also rose, though it remained well below male participation, indicating that gains in education have not yet translated proportionately into gains in economic autonomy.

Table 1. Temporal Change in Key Demographic Indicators of Women's Status, Birbhum District (2001–2011)

Indicator		2001	2011	Change	West Bengal 2011
Total Population (female)		14,68,789	17,11,484	+16.53%	4,46,77,088
Overall Sex Ratio (females/1000 males)		950	956	+6 points	950
Child Sex Ratio, 0–6 yrs (females/1000 males)		964	959	–5 points	956
Female Literacy Rate (%)		51.55	64.14	+12.59 pts	70.54
Male Literacy Rate (%)		70.89	76.92	+6.03 pts	81.69
Gender Literacy Gap (percentage points)		19.34	12.78	–6.56 pts	11.15

Female Participation (%)*	Work Rate	17.6	22.7	+5.1 pts	18.1
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Source: Compiled by the author from Census of India [10], District Census Handbook, Birbhum.
 *Female Work Participation Rate for 2011 estimated from Census workforce data; 2001 figure derived for comparative purposes.

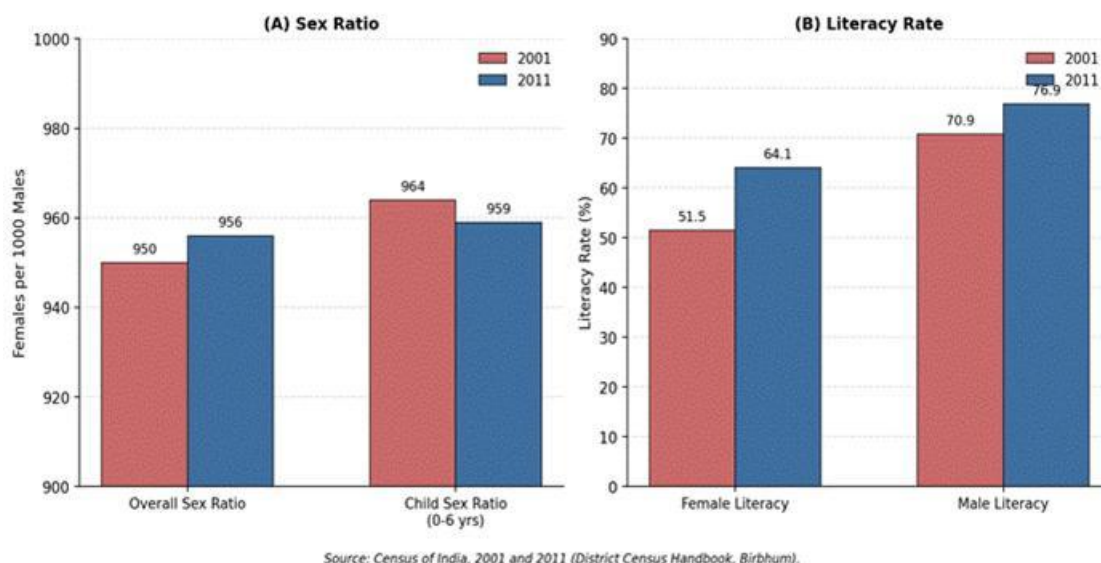


Figure 2. Temporal change in sex ratio and literacy rate, Birbhum district (2001–2011). Source: Census of India, 2001 and 2011.

3.2 Spatial Pattern of Women's Status across Community Development Blocks

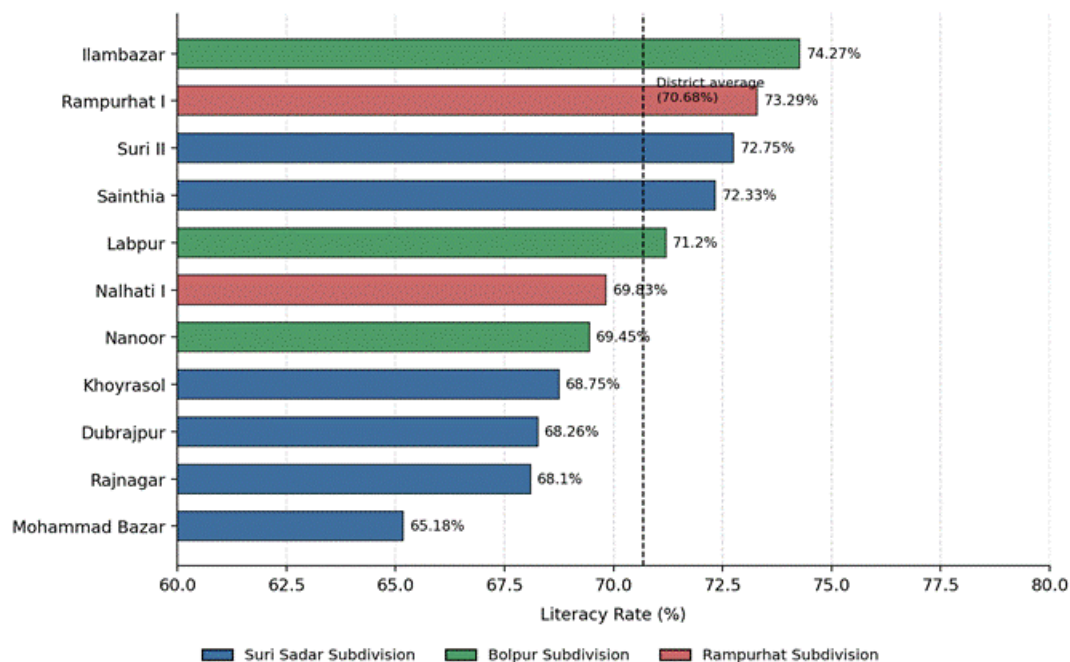
While the district-level averages point to steady improvement, they conceal sharp intra-district variation. Table 2 and Figure 3 present block-wise literacy rates for eleven representative CD blocks distributed across the district's three subdivisions, classified by their deviation from the district mean of 70.68 per cent. Ilambazar (74.27%), located in Bolpur subdivision along the eastern, better-irrigated part of the district, records the highest literacy rate, followed by Rampurhat I (73.29%) and Suri II (72.75%). These blocks benefit from proximity to urban and semi-urban centres, better road connectivity, and, in the case of the Bolpur–Santiniketan tract, historical exposure to educational institutions with a long-standing regional reputation[11].

At the other end of the spectrum, Mohammad Bazar (65.18%), Rajnagar (68.10%) and Dubrajpur (68.26%), all located in the western and southwestern parts of Suri Sadar subdivision, on the lateritic fringe of the Chota Nagpur plateau, fall below the district mean. This western tract is characterised by relatively poor soil fertility, dispersed settlement, higher proportions of Scheduled Tribe population, and comparatively weaker penetration of transport and educational infrastructure. The pattern that emerges is therefore not random but broadly concentric-cum-linear: literacy advantage clusters along the eastern alluvial and urban-influenced corridor, while disadvantage is concentrated in the western upland periphery, a pattern consistent with the general core-periphery structure of development commonly observed in agrarian districts of eastern India[12].

Table 2. Block-wise Literacy Rate and Deviation from District Mean, Birbhum District (2011)

CD Block	Subdivision	Literacy Rate (%)	Deviation from District Mean	Category
Ilambazar	Bolpur	74.27	+3.59	High (Above +1.3 pts)
Rampurhat I	Rampurhat	73.29	+2.61	High (Above +1.3 pts)
Suri II	Suri Sadar	72.75	+2.07	High (Above +1.3 pts)
Sainthia	Suri Sadar	72.33	+1.65	High (Above +1.3 pts)
Labpur	Bolpur	71.20	+0.52	Moderate-High
Nalhati I	Rampurhat	69.83	-0.85	Moderate-Low
Nanoor	Bolpur	69.45	-1.23	Moderate-Low
Khoyrasol	Suri Sadar	68.75	-1.93	Moderate-Low
Dubrajpur	Suri Sadar	68.26	-2.42	Moderate-Low
Rajnagar	Suri Sadar	68.10	-2.58	Moderate-Low
Mohammad Bazar	Suri Sadar	65.18	-5.50	Low (Below district mean)

Source: Compiled by the author from Census of India (2011), block-level Primary Census Abstract data. Deviation computed against the district mean of 70.68 per cent.



Source: Census of India, 2011 (Block-level Primary Census Abstract data).

Figure 3. Spatial variation in literacy rate across selected CD blocks, Birbhum district (2011). Source: Census of India, 2011.

3.3 Determinants of Spatial Inequality in Women's Status

Several interacting factors help explain the observed spatial inequality. First, physiography and accessibility play a foundational role: the eastern alluvial tract, watered by the Ajay, Mayurakshi and Bakreshwar rivers, supports more intensive and diversified agriculture and denser settlement, which in turn sustains a higher density of schools, health sub-centres and market towns, whereas the western lateritic upland remains comparatively remote and infrastructure-poor. Second, social composition matters: blocks with higher proportions of Scheduled Tribe population and blocks with significant minority (Muslim) concentration in the northeast, such as Murarai I, Murarai II and Nalhati II, tend to show distinct literacy and work-participation profiles, reflecting differences in customary practices around female schooling, age at marriage and mobility[13].

Third, the historical presence of premier educational institutions in the Bolpur–Santiniketan area has had a demonstrable diffusion effect on female literacy in adjoining blocks, illustrating how the geography of institutional investment, once established, becomes self-reinforcing through agglomeration effects. Fourth, workforce structure is important: districts and blocks dominated by cultivation and agricultural labour, where Birbhum has the highest proportion of agricultural labourers among all West Bengal districts, tend to draw girls into unpaid or low-paid family labour at an earlier age, indirectly constraining school retention despite rising enrolment. Finally, the marginal decline in child sex ratio across the district, despite overall improvement in the adult sex ratio, suggests that entrenched son-preference norms have not been eliminated even in blocks that otherwise perform well on literacy, indicating that women's status is genuinely multidimensional and cannot be captured by a single indicator[14].

Taken together, these findings support Massey's contention that gender inequality is not simply reproduced in space but is actively constituted by it: the same state policy, implemented uniformly across a district, produces uneven outcomes because it is filtered through pre-existing spatial structures of accessibility, land quality, social composition and institutional legacy.

3.4 Policy Implications

The spatial disaggregation undertaken in this study suggests that uniform, district-wide interventions are likely to be less effective than block-targeted strategies. Priority attention is warranted for the low-performing western blocks, Mohammad Bazar, Rajnagar and Dubrajpur, through expansion of secondary-school access within walking or short-commute distance, strengthening of girls' hostels and transport support, and targeted skill-development and micro-enterprise programmes to raise female work participation beyond agricultural labour. In parallel, the persistent decline in child sex ratio calls for sustained enforcement of the Pre-Conception and Pre-Natal Diagnostic Techniques (PCPNDT) Act and community-level awareness campaigns, even in blocks that otherwise show favourable literacy trends, since the two indicators clearly do not move in tandem. Finally, periodic block-level, gender-disaggregated data collection, going beyond the decadal Census, would considerably strengthen the evidence base for such spatially sensitive policy design[15].

4. Conclusion

This paper has examined the changing status of women in Birbhum district, West Bengal, from an explicitly geographical perspective that links temporal demographic change to its spatial expression across community development blocks. Between 2001 and 2011, the district recorded genuine, measurable improvement in women's status, most notably in female literacy and, to a lesser extent, in the overall sex ratio, even as the child sex ratio declined. These district-level averages, however, obscure a pronounced core-periphery pattern of spatial inequality, with eastern and centrally located blocks such as Ilambazar, Rampurhat I and Suri II performing considerably better than western upland blocks such as Mohammad Bazar and Rajnagar. This inequality is best understood as the outcome of interacting physiographic, infrastructural, social and institutional factors rather than any single cause. The study reaffirms that gender and development planning in agrarian districts like Birbhum must move beyond district averages toward block- and village-level targeting, and that women's status must continue to be assessed through multiple, mutually corroborating indicators rather than any one measure alone. Future research incorporating more recent, gender-disaggregated block-level data, including health, decision-making autonomy and asset-ownership indicators, would further refine the spatial understanding developed here.

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