

A Spatial Perspective on Gender Gap in Literacy in Border Districts of India

Utpal Kumar¹ and Deepika Sankhyan²

¹ Department of Geography, Ch. Bansi Lal University,
Bhiwani, Haryana, India

² Department of Geography, Ch. Bansi Lal University,
Bhiwani, Haryana, India

Abstract

Present paper tries to assess the levels of female literacy and makes an effort to understand its spatial pattern in border districts of India. The study also makes an analysis of gap in literacy rate of male and female population to understand the gender differences in the area. The study is based on secondary data. Study reveals that most of the border districts of the country are lagging far behind in development process in spite of the special initiative taken by the government of India to induce balanced socio-economic development in these areas. In terms of female literacy, data reveals that out of 96 border districts of the country there are only 38 districts where female literacy rate is above the national average. Data on gender gap in literacy rate reveals that there are 54 border districts that are performing better than the country's performance.

Keywords: Literacy rate, female literacy, gender gap in literacy, border districts, development.

1. Introduction

Border areas of the country are sensitive. Its sensitivity can play both roles, like it can hamper the development process as it discourages investment especially from private sector. On the other hand sensitivity of area can seek more attention of the authority and that can lead towards better development. Its peripheral location also plays a major role in backwardness of such areas. Till recently these areas were neglected areas (Planning Commission, 2007). Most of the border districts of the country are lacking in terms of infrastructural development (Kumar and Mohan, 2015). Border area reflects a clear division of east and west in terms of social development (Kumar, 2018).

Development of border areas has been a matter of concern for the country (Planning Commission, 2007). To ensure balanced socio-economic development in border areas of the country the government of India had initiated a special area development programme named as Border Area Development Programme (BADP) during Seventh Five Year Plan.

Since independence, the government of India has been inclined to work towards social development (Dev, 2006). Level of literacy and educational attainment are vital indicators of development in a society. They are considered to be key variables affecting demographic indicators like fertility, mortality (especially infant mortality) rate and migration. It greatly contributes in improving quality of life, particularly with regard to life expectancy, infant mortality, learning levels and nutritional levels of children (Census of India, 2011).

Education is the key to the process of human-centered development. Evidence is emerging which assigns a pivotal role to women's education. Maternal education is now known to have a strong impact on infant and child mortality and this in turn has a causal link with fertility. Increased levels of female education are associated with improved hygiene, nutrition and health of the family. So it can be said that there are many links between female education and the process of development (Browne and Barrett, 1991). World Bank studies have shown that economic returns from education are higher than for most other kinds of investment (UNICEF, 1990). But a necessary pre-condition for education is literacy (Kant, 1998). In this backdrop present study tries to measure the levels of female literacy and gender gap in literacy in border districts of India.

2. Objectives

At global level, attainment of universal primary education is one of the Millennium Development Goals of the United Nations (UNDP, 2000) while at national level it was also targeted by the Planning Commission of India in eleventh Five Year Plan to increase literacy rate and reduce the gender gap in literacy (Planning Commission, 2008). Keeping these aims of world leaders and national planners in mind present study has framed following objectives:

- To measure the levels of female literacy in the border districts of India.
- To understand the comparative regional deprivation in the border districts in comparison to the national average as well as the respective parent state.
- To understand the spatial pattern of female literacy rate and gender gap in literacy rate in the study area.

3. Study Area

India has 15106.7 kilometers long international land border (Ministry of Home Affairs, 2014) and it shares its international land boundary with seven neighbouring countries including Afghanistan. Considering the LoC (Line of Control) with Pakistan, it can be said that the India shares its international land boundary with six neighbouring countries namely Pakistan, China, Nepal, Bhutan, Bangladesh and Myanmar. International land border of the country matters directly for seventeen Indian states that are situated along international land border. In terms of districts, which are spatial unit for this study, there are 96 districts from these seventeen border states which can be termed as border districts as they are situated along international land border of the country. Present study includes all these 96 border districts of seventeen Indian border states.

These 96 border districts all together comprise almost seventeen percent of total geographical area of India and it serves almost eleven percent population of the country. The study area is highly diverse in terms of physical as well as socio-cultural attributes. Geographically, border area of India stretches through very hostile geo-climatic regions with glaciers, snow-clad peaks, sand dunes and marshes (Planning Commission, 2007). Population living in

these districts is of multiple religions, socio-cultural background and ethnicity. Their location on border gives these diverse areas a similar identity.

4. Data and Methodology

The study is based on secondary data. The district wise data on male and female population aged seven and above; male and female literate population has been collected from the primary census abstract (PCA), census of India 2011. Literacy rate in percentage and gender gap in literacy rate in percentage points have been calculated.

For the purposes of Census, a person aged seven and above, who can both read and write with understanding in any language, is treated as literate (Census of India, 2011). Firstly effective literacy rate (in percentage) for male and female population separately, has been calculated by using Eq. (1).

Equation (1)

$$\text{Literacy rate} = \frac{\text{Literate persons aged 7 and above}}{\text{Population aged 7 and above}} \times 100$$

Gender gap (in percent points) in literacy has been calculated by using Eq. (2).

Equation (2)

$$\text{Literacy gap} = \text{Male literacy rate} - \text{Female literacy rate}$$

Maps have been prepared with the help of advanced cartographic techniques to show the spatial pattern more meaningfully.

5. Results and Discussion

As per census 2011, literacy rate is reaching to almost three fourth in India and it has registered an increase of almost eight percent points compared to the last census (2001). But female literacy is lagging behind by almost sixteen percent points compared to male literacy. Though the country has registered an increase of almost eleven percent points in case of female literacy in last decade (census 2001 to 2011), while in case of male literacy the increase is only five percent points (Table 1)

Table 1 India: Literacy by Border Districts, Border States and National Average, 2001 & 2011

Variables	Census 2001			Census 2011		
	BD	BS	India	BD	BS	India
Total Literacy	57.77	60.31	64.84	68.02	70.12	72.99
Male Literacy	67.33	71.47	75.26	75.27	78.63	80.89
Female Literacy	47.35	48.10	53.67	60.24	60.94	64.64
Gender Gap in Literacy	19.98	23.37	21.59	15.03	17.69	16.25

Source: Census of India Primary Census Abstract 2001 & 2011

Note: Figures except of gender gap in literacy are in percent, gender gap in literacy is in percentage points; BD stands for Border Districts as a region & BS stands for Border States as a region

Almost 65 percent of female population in India is literate. Among border states Bihar recorded minimum female literacy (51 percent) and Mizoram maximum (89 percent). There are five border states (Bihar, Rajasthan, Jammu & Kashmir, Uttar Pradesh, and Arunachal Pradesh) where female literacy rate is below the national average. In case of gender gap in literacy it was found that Meghalaya recorded lowest while Rajasthan recorded highest.

Regional average of female literacy for all border states was almost 61 percent which was below the national average. Regional average of gender gap in literacy comes to almost eighteen percent points which is above the national average. All border states as a region recorded an increase of nearly twelve percent points in female literacy in 2011 compared to 2001. In terms of gender gap in literacy, the region has improved itself nearly by five percent points (Table 1).

All 96 border districts as a region has almost sixty percent literate female population and recorded an increase of almost thirteen percent points in last decade (2001-2011). The region has improved itself by almost five percent points in terms of gender gap in literacy, as in 2011 it was almost fifteen percent points while in 2001 it was almost twenty percent points (Table 1).

District wise data shows that female literacy rate ranges between minimum nearly 35 percent in Shrawasti (Uttar Pradesh) to maximum 98 percent in Serchhip (Mizoram). Only sixteen border districts

recorded female literacy more than 75 percent; out of which maximum five districts were from Mizoram, four districts from Tripura, two districts each from Meghalaya and Manipur, and one district each from West Bengal, Sikkim, and Jammu & Kashmir. Twenty border districts recorded female literacy less than sixty percent. Such districts were from Bihar (7 districts), Uttar Pradesh (5), Arunachal Pradesh (5), Rajasthan (2), and Jammu & Kashmir (1) (Fig. 1).

It is clear from map that the border districts of small north eastern states are performing very well. Data reveals that 38 border districts mainly from Mizoram, Tripura, Meghalaya, Uttarakhand, Himachal Pradesh, West Bengal, Sikkim, Manipur, Nagaland, Punjab, and Jammu & Kashmir recorded female literacy rate above the national average. Compared to regional average of border states, it was found that 51 border districts recorded female literacy above the regional average.

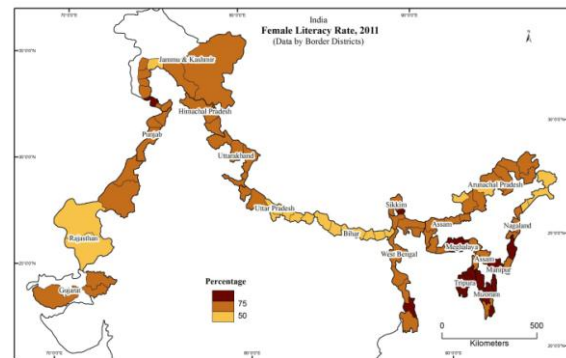


Fig. 1

Tripura is the only border state whose all border districts recorded female literacy above 75 percent, followed by Mizoram, Manipur, Meghalaya, Sikkim, Jammu & Kashmir, and West Bengal. Ten border states do not have any border district having female literacy rate more than 75 percent (Table 2).

In terms of gender gap in literacy, border districts of eastern part of the country were performing well (Fig. 2). Gender gap in border districts ranges from less than one percent point to more than thirty percent point. Jaintia Hills (Meghalaya) is the only district which recorded female literacy nearly seven percent points higher than male literacy but level of literacy – total, male and female, was not up to that mark (total literacy nearly 62 percent, male literacy 58 percent, and female literacy 65 percent).

Table 2 India: Border State-wise Levels of Female Literacy, 2011

State	Percentage of Border Districts with Levels of Literacy		
	High (> 75 %)	Moderate (61-75 %)	Low (60 % and Less)
Gujarat	0.00	100.00	0.00
Rajasthan	0.00	50.00	50.00
Punjab	0.00	100.00	0.00
Jammu & Kashmir	10.00	80.00	10.00
Himachal Pradesh	0.00	100.00	0.00
Uttarakhand	0.00	100.00	0.00
Uttar Pradesh	0.00	28.57	71.43
Bihar	0.00	0.00	100.00
West Bengal	10.00	90.00	0.00
Sikkim	33.33	66.67	0.00
Assam	0.00	100.00	0.00
Arunachal Pradesh	0.00	58.33	41.67
Nagaland	0.00	100.00	0.00
Manipur	66.67	33.33	0.00
Mizoram	83.33	16.67	0.00
Tripura	100.00	0.00	0.00
Meghalaya	40.00	60.00	0.00

Two districts (East Khasi Hills of Meghalaya and Serchhip of Mizoram) recorded gender gap in literacy less than one percent point. Twenty four border districts (excluding district having higher female literacy rate than male literacy rate) recorded gender gap less than ten percent points. While 27 districts recorded gap more than twenty percent points. Two districts (Jaisalmer and Barmer, both from Rajasthan) recorded literacy gap more than thirty percent points (Fig. 2).

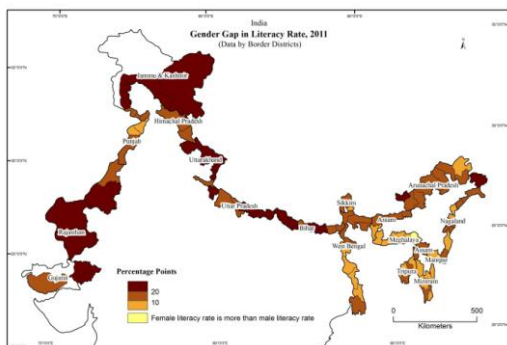


Fig. 2

Fifty four border districts mainly from Meghalaya, Mizoram, Nagaland, West Bengal, Tripura, Manipur, Punjab, Arunachal Pradesh, and Assam recorded literacy gap below the national average. While 59 districts recorded gap less than regional average. Most of the border districts of Uttarakhand, Rajasthan, Uttar Pradesh, Jammu & Kashmir, Gujarat, and Bihar recorded higher gender gap in literacy. While all border districts of Meghalaya; and most of the border districts of Mizoram, Manipur, Punjab, Nagaland, and Tripura have low literacy gap (Table 3).

All border districts of Bihar together recorded minimum female literacy (about 45 percent) while border districts of Mizoram together recorded maximum (almost 83 percent) (Table 4). In this context three states fall in low category (less than fifty percent); While Mizoram, Tripura and Sikkim fall in high category (more than 75 percent). Rest eleven states fall in moderate category (50 to 75 percent) (Fig. 3).

Table 3 India: Border State-wise Gender Gap in Literacy, 2011

State	Percentage of Border Districts with Gender Gap in Literacy		
	High (More than 20 % Points)	Moderate (11-20 % Points)	Low (10 % Points and Less)
Gujarat	66.67	33.33	0.00
Rajasthan	75.00	25.00	0.00
Punjab	0.00	50.00	50.00
Jammu & Kashmir	70.00	30.00	0.00
Himachal Pradesh	0.00	100.00	0.00
Uttarakhand	80.00	20.00	0.00
Uttar Pradesh	71.43	28.57	0.00
Bihar	57.14	42.86	0.00
West Bengal	0.00	60.00	40.00
Sikkim	0.00	66.67	33.33
Assam	0.00	85.71	14.29
Arunachal Pradesh	16.67	75.00	8.33
Nagaland	0.00	50.00	50.00
Manipur	0.00	33.33	66.67
Mizoram	0.00	16.67	83.33
Tripura	0.00	50.00	50.00
Meghalaya	0.00	0.00	100.00

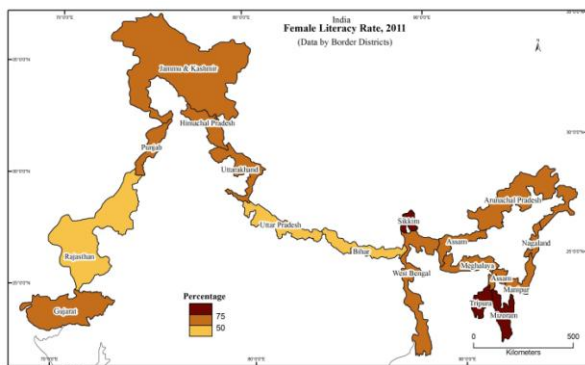


Fig. 3

Compared to parent state, it was observed that border districts/region of three states (Jammu Kashmir, Manipur, and Meghalaya) recorded female literacy higher than parent state. While thirteen states have higher female literacy compared to their border districts as a unit (Table 4).

Table 4 India: Border Districts and Border States-wise Female Literacy Rate and Gender Gap in Literacy

State	Average Female Literacy Rate (Per cent)		Average Gender Gap in Literacy (Percentage Points)	
	Border District	State	Border District	State
Gujarat	56.58	69.68	22.97	16.07
Rajasthan	49.65	52.12	24.94	27.07
Punjab	68.78	70.73	10.50	9.71
Jammu Kashmir	61.39	56.43	19.40	20.32
Himachal Pradesh	69.79	75.93	17.07	13.61
Uttarakhand	66.84	70.01	19.17	17.40
Uttar Pradesh	45.26	57.18	21.59	20.10
Bihar	44.81	51.50	20.73	19.70
West Bengal	69.10	70.54	9.72	11.15
Sikkim	75.55	75.61	11.02	10.94
Assam	62.81	66.27	12.26	11.58
Arunachal Pradesh	51.80	57.70	16.15	14.85
Nagaland	63.43	76.11	8.68	6.64
Manipur	74.54	72.37	9.73	13.69
Mizoram	82.94	89.27	7.09	4.08
Tripura	82.73	82.73	8.80	8.80
Meghalaya	73.10	72.89	2.53	3.07
National Average	60.24	64.64	15.03	16.25

Border districts/region of nine states (Mizoram, Tripura, Sikkim, Manipur, Meghalaya, Himachal Pradesh, West Bengal, Punjab, and Uttarakhand) recorded female literacy above the national average (Table 4).

Border districts of Rajasthan recorded highest gap (25 percent points) while Meghalaya lowest (three percent points) (Table 4). Six border states (Meghalaya, Mizoram, Nagaland, Tripura, Manipur and West Bengal) fall in low category (less than ten percent points), four border states (Rajasthan, Gujarat, Uttar Pradesh, and Bihar) fall in high category (more than twenty percent), and seven border states fall in moderate category (ten to twenty percent points) (Fig. 4).

Border districts of ten states (Meghalaya, Mizoram, Nagaland, Tripura, West Bengal, Manipur, Punjab, Sikkim, Assam and Arunachal Pradesh) recorded gender gap in literacy below the national average (Table 4). Border districts/region of five states (Rajasthan, Jammu & Kashmir, West Bengal, Manipur, and Meghalaya) recorded less literacy gap compared to parent state while eleven border states have opposite situation.

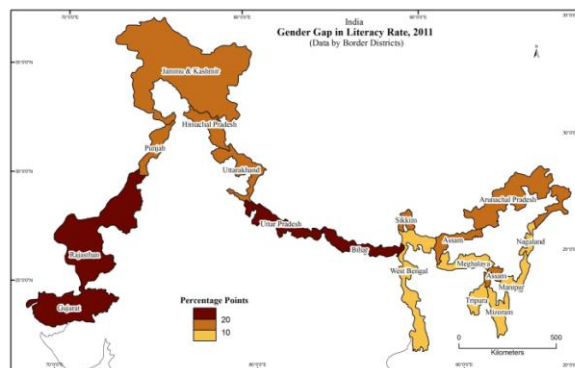


Fig. 4

Border districts of Himachal Pradesh and Uttarakhand were performing better compared to the national average in case of female literacy but worse in case of gender gap in literacy. While on the other hand, Assam, Arunachal Pradesh, and Nagaland were performing worse in case of female literacy but better in case of gender gap compared to the national average.

6. Conclusions

It is not so easy to make a generalized conclusion for such a huge diverse area. Study reveals that border area comprises the district most deprived to one of the most developed district in the country. Border

districts of Mizoram, Tripura, Meghalaya, Sikkim, Manipur, Nagaland, Assam, West Bengal, Uttarakhand, Himachal Pradesh, and Punjab were comparatively in better position; while, border districts of Gujarat, Rajasthan, Uttar Pradesh, Bihar, Arunachal Pradesh, and Jammu & Kashmir were lagging behind.

Though there are some good signs from some pockets of the Indian border districts but performance of most parts of it is disappointing. To promote overall development in an area literacy and educational attainment is one of the most desired requirements therefore governments and policy makers must focus on this issue very seriously.

References

- [1] Census of India (2011). State of Literacy, Provisional Population Totals-India, Government of India. Retrieved from http://censusindia.gov.in/2011-prov_results/data_files/india/Final_PPT_2011_chapter6
- [2] Dev, S. M. Review: social development in India. *Economic and Political Weekly*, Vol 41 (Issue 37): 3955-3958, (2006).
- [3] Kant, S. Human development in the Indian hill state of Himachal Pradesh. *Population Geography*, Vol 20 (Issue 1 and 2): 57-86, (1998).
- [4] Kumar U. Development in border areas of India, Research India Press, New Delhi, (2018).
- [5] Kumar, U. and Mohan, K. Levels of infrastructural development in border districts of India: a regional perspective. In *Borders in South Asia Interlinkages & Challenges*, eds., Bhardwaj, V. K., Sawant, N. N. and Saini, M. K., G. B. Books, New Delhi: 261-272, (2015).
- [6] Ministry of Home Affairs. Border management. In *Annual Report 2013-14*. Department of Internal Security, States, Home, Jammu & Kashmir Affairs and Border Management. Government of India, New Delhi: 41-63, (2014).
- [7] Mohan, K. Area development programmes in the Himalayan region: an evaluation. In *Quality of Life in the Himalayan Region*, ed., Sharma, L. R., Indus Publishing Company, New Delhi: 119-120, (2005).
- [8] Planning Commission. Border Area Development Programme Report of the Task Force. Government of India, New Delhi, (2007).
- [9] Planning Commission, Government of India. *Eleventh Five Year Plan (2007-2012)*, Vol II. Oxford University Press, New Delhi, (2008).
- [10] United Nations Children's Fund (UNICEF). *The State of the World's Children 1990*. Oxford University Press, Oxford: 45, (1990).
- [11] United Nations Development Programme (UNDP). (2000). *The Millennium Development Goals*. Retrieved from https://www.undp.org/content/undp/en/home/sdgoverview/mdg_goals.html