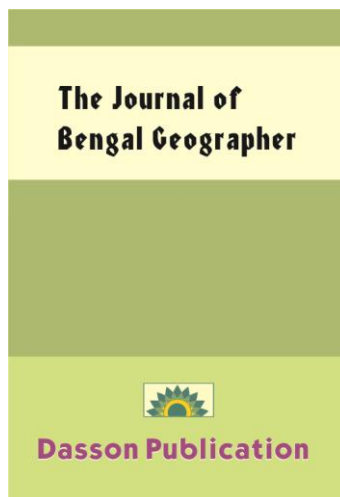


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Gender disparity in level of literacy in Himachal Pradesh, 2011: a spatial perspective

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Abstract

Although, male and female constitutes the important segment of our population. Since from the inception of human life, the female got second preference than male in all activities. Education is not exceptional one. In present study, an attempt has been made to examine the gender disparity in overall literacy along with rural-urban areas of Himachal Pradesh at district level. The study is based on secondary sources of data. The data pertaining to all twelve districts of the state have been obtained from directorate of Census Operations, Shimla. The district constitutes the basic unit of observation. The Sopher disparity index (1974) modified by Kundu and Rao (1980) has been used to find out the gender disparity in overall literacy along with rural and urban areas. The spatial variations in literacy at district level have been shown by maps and tables. It is evident from the study that significant improvement has been observed in male-female literacy and the gender gap has decreased from 22.96 per cent in 1971 to 13.06 per cent in 2011. As per 2011 Census, the gender disparity in literacy was lower (0.12) in study area as compare to national average of 0.15. However, there were notable spatial variations at district level. The gender disparity in literacy is two-fold higher in Chamba (0.20) which ranked at top place while Una district with 0.10 placed at bottom rank among all twelve districts. Furthermore, the variations of literacy among the male and female in the state become further clear when it is considered separately for rural and urban areas. It is evident from the study that the gender disparity in literacy is more marked in rural areas as compares to urban one. In rural areas, the Chamba district with 0.21 has highest gender disparity followed by Lahual-Spiti (0.17) and Kullu (0.16). On contrary, Una district has low gender disparity (0.10) closely followed by Kangra and Hamirpur district. With regard to gender disparity in urban areas, Chamba and Kullu district have recorded disparity above 0.06 whereas the Shimla district with 0.03 index value closely followed by Solan and Mandi districts have witnessed least disparity in male and female literacy. It is evident from the study that the gender disparity in rural areas (0.21) seven times more than urban areas (0.03) of the state.

Key words: 1.Literacy Rate, 2.Male-Female Literacy Rate, 3.Gender Gap, 4.Gender Disparity Index, 5.Rural-Urban Gender Disparity, 6.Sopher Index.

Introduction

The most important determinant of a country's competitiveness is its human talent. The skills, education and productivity of its workforce and women accounts for half of the potential talent base throughout the world (Hausmann *et al.*, 2012). Literacy is an important indicator of socio-economic and cultural development. It is regarded as both a means and end of development (Azim 2005). There is much to praise in India's effort to tackle high female illiteracy. The national average of female literacy has increased steadily from 7.9 per cent in 1951 to 64.64 per cent in 2011. The Gap in literacy

attainment between men and women is slowly narrowing from 22.01 percentage point difference in 1981 to 20.6 per cent points in 1991 (Modugall, 2000). As for provision of budget, Economic Survey shows that if considering both the revenue as well as the capital account, the total budget estimates for education for 2010-2011 of the education departments (State as well as the Centre) works out to Rs. 229425.84 cores, which is 10.13 per cent of the total budget estimates (Economic Survey, 2012-13).

Gender Gap and disparity in literacy indicates the status accorded to women in a society. If there is higher rate of disparity between men and women in literacy it shows that women in that region are severely neglected. Education of women has a major impact on the overall development of a society. Jawaharlal Nehru said “if our nation is to rise, how can it do so if the half of the nation of our mankind lag behind and remain ignorant and uneducated” (Azim, 2005).

In the modern context, it is by the position of women in society that we judge the progress of a community toward socio-economic development. But a review of female literacy in India reveals appalling apathy toward female education. In 1901, while 9.83 per cent of the male were literate the corresponding proportion for the female was as negligible as 0.69 per cent. In recent decades however, the impediments against female literacy have been gradually disappearing, though much remains to be desired. With female literacy increasing faster than that among the males. The male-female differentials has been consistently narrowing down. (Gosal, 1979). As per 2011 Census, the male literacy was 80.89% and female literacy was 64.64% and registered 10.97 percentage point increase in female literacy as compare to male literacy (5.63 per cent) respectively.

Bhardwaj (1999) concluded that as in many parts of the country literacy in Himachal Pradesh is also marked by a notable disparity in male-female rates. The reasons for this disparity are rooted largely in the socio-economic factors. Until recently, there was a strong prejudice against female employment and out of home female mobility. Female education was considered a matter of little functional and socio value. Thakur (2009) observed that gender gap in literacy has declined during 1971-2001 although the impact of the process of social transformation has not been equal on the two sexes. The overall and female literacy rate has also increased significantly and resulting in narrowing down in the literacy gap between male and female. The detailed investigation of previous studies on literacy and citation of few relevant studies in forgoing introductory part shows that there is no study conducted so far regarding the gender disparity in literacy with respect to latest scenario in state. Against this backdrop and to fill up the knowledge gap that existing in current scenario, the present study has been conducted to analyze the gender disparity in overall literacy along with rural and urban areas as per 2011 Census.

Objectives of the study

The present study has been conducted with the following objectives:

1. To study the gender disparity in literacy at district level in Himachal Pradesh.
2. To examine the extent and magnitude of gender disparity in rural and urban areas of the study area.

Data base and Research methodology

The present study is based on secondary data obtained from Directorate of Census Operations, Shimla. The district constitutes the basic unit of the observation. Thus, the relevant data is collected for entirely 12 districts of Himachal Pradesh (As per 2011 Census). The following formulas have been used to calculate the overall literacy including male-female literacy.

$$\text{Total Literacy Rate} = \frac{\text{Total Literate Persons 7+age Group}}{\text{Total Population}} \times 100$$

$$\text{Male Literacy Rate} = \frac{\text{Total Male Literate Persons 7+age Group}}{\text{Total Male Population}} \times 100$$

$$\text{Female Literacy Rate} = \frac{\text{Total Female Literate Persons 7+age Group}}{\text{Total Female Population}} \times 100$$

$$\text{Gender Gap} = \text{Male Literacy} - \text{Female Literacy}$$

Further, to find out the gender disparity in overall literacy as well as in rural and urban areas of the study the **Sopher's Disparity index (1974), modified by Kundu and Rao (1985)** as given below has been used.

Computation of Gender Disparity Index

$$DS = \text{Log} (X2 \setminus X1) + \text{Log} (200 - X1 \setminus 200 - X2)$$

Where:

Ds= Ds is Gender Disparity index.

X1 is percentage of Literate Females to Total Female Population.

X2 is percentage of Literate Males to Total Male Population.

200 is constant (Kundu and Rao).

Thus, by using above formulas the spatial variation in overall literacy, gender disparity in literacy among the rural and urban areas of the state has been analyzed. For understanding the pattern of literacy in different parts of study area maps and tables have been used to portrait the variations in total, male-female literacy and gender disparity in rural-urban area of study area.

Study area: Himachal Pradesh

Himachal Pradesh is a hilly and mountainous state with an area of 55,673 sq km which is 1.69% of total area of India and has 0.57 % of the total population (As per Census 2011). Geographically, Himachal Pradesh is located between 30° 22' 44" N to 33° 12' 44" N latitude and 75° 45' 44" E to 79° 04' 20" E longitude. Presently the study area comprises of 12 districts namely Bilaspur, Chamba, Hamirpur, Kangra, Kinnaur, Kullu, Mandi, Lahaul-Spiti, Shimla, Sirmaur, Solan and Una (Fig. 1). The mainstay of the people of the Himachal Pradesh is agriculture on which 67.71% of the population depends for livelihood.

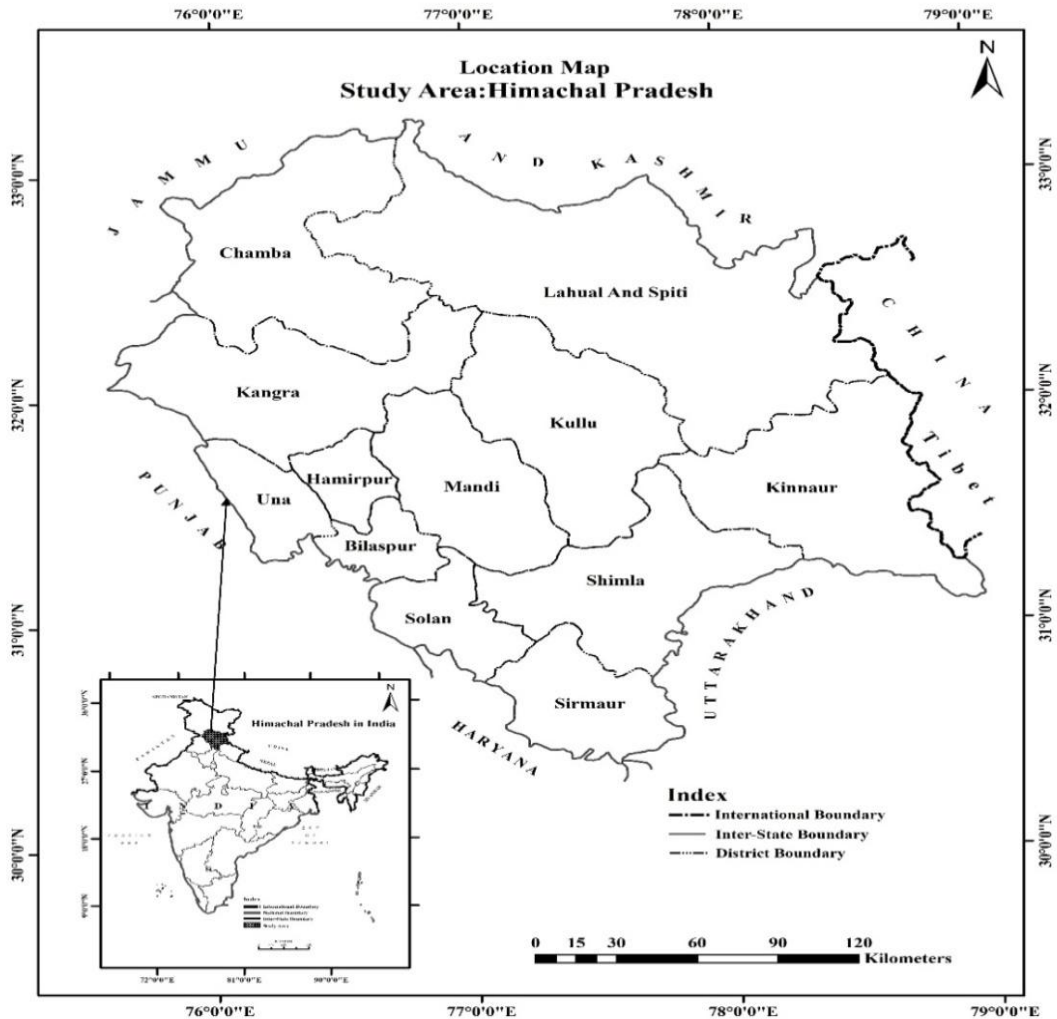


Fig: 1

Source: Administrative atlas of india, H.P. Administrative division, 2011, Map-5, P.15

Himachal Pradesh has acquired the status of a highly literate state in the recent year. According to 2011 Census, Himachal Pradesh with 83.8 per cent literacy rate observed 5th rank in term of literacy in India after Kerala (93.9 per cent), Mizoram (91.6 per cent) Tripura (87.8 per cent) and Goa (87.4 per cent).

Results and Discussions

Table 1 shows the comparative improvement in literacy rate and gender gap in India and Himachal Pradesh since from 1971, when Himachal Pradesh got statehood. In 1971, the gender gap in literacy rate was 20.75 percentage point at national level while in Himachal Pradesh it was marginally higher than national average and observed 22.96 percentage point. Thereafter, at national level and study area have registered decline in gender gap (excluding 1981 & 2001 in case of India and 1991 Himachal Pradesh). It is evident from table 1 that significant improvement has been observed in male-female literacy rate during last 40 years. As per 2011 Census, the gender gap in literacy rate is 16.25 percentage point whereas in Himachal Pradesh it is 13.60 percentage point.

Table- 1
Gender gap in literacy, India and Himachal pradesh: 1971-2011

Year	Himachal pradesh				India			
	Total	Male	Female	Gender Gap	Total	Male	Female	Gender Gap
1971	31.96	43.19	20.23	22.96	29.46	39.45	18.70	20.75
1981	42.48	53.19	31.46	21.73	36.23	46.89	24.82	22.07
1991	63.86	75.36	52.13	23.23	42.84	52.74	32.17	20.57
2001	76.48	85.35	67.42	17.93	64.83	75.26	53.67	21.59
2011	82.8	89.53	75.93	13.6	74.04	80.89	64.64	16.25

Source: Bhardwaj, 1999: 32

Computed by authors from census of india data, 2011.
Census of india, 2011, Himachal pradesh, Statement 6.1.

Spatial pattern of literacy in himachal pradesh, 2011

It is evident from the fig 2 that national literacy rate stood 74.04 per cent while in study area it is 82.80 per cent which is 8.76 percentage points more than national average. Fig 2 also shows that there was remarkable variations in literacy rate at district level in study area. Three districts namely Hamirpur (88.15 per cent), Una (86.53 per cent) and Kangra (85.67 per cent) have literacy rate more than 85.00 per cent, while five districts sprawling over eastern and central parts of study area observed literacy between 80.01 to 85.0 per cent. The remaining four districts i.e. Lahual & Spiti (76.18 per cent), Sirmaur (78.80 per cent), Kullu (79.40 per cent) and Chamba (72.17 per cent) registered <80.0 per cent literacy rate in 2011. These districts have been observed in northern and western part of study area except Sirmaur in southern part.

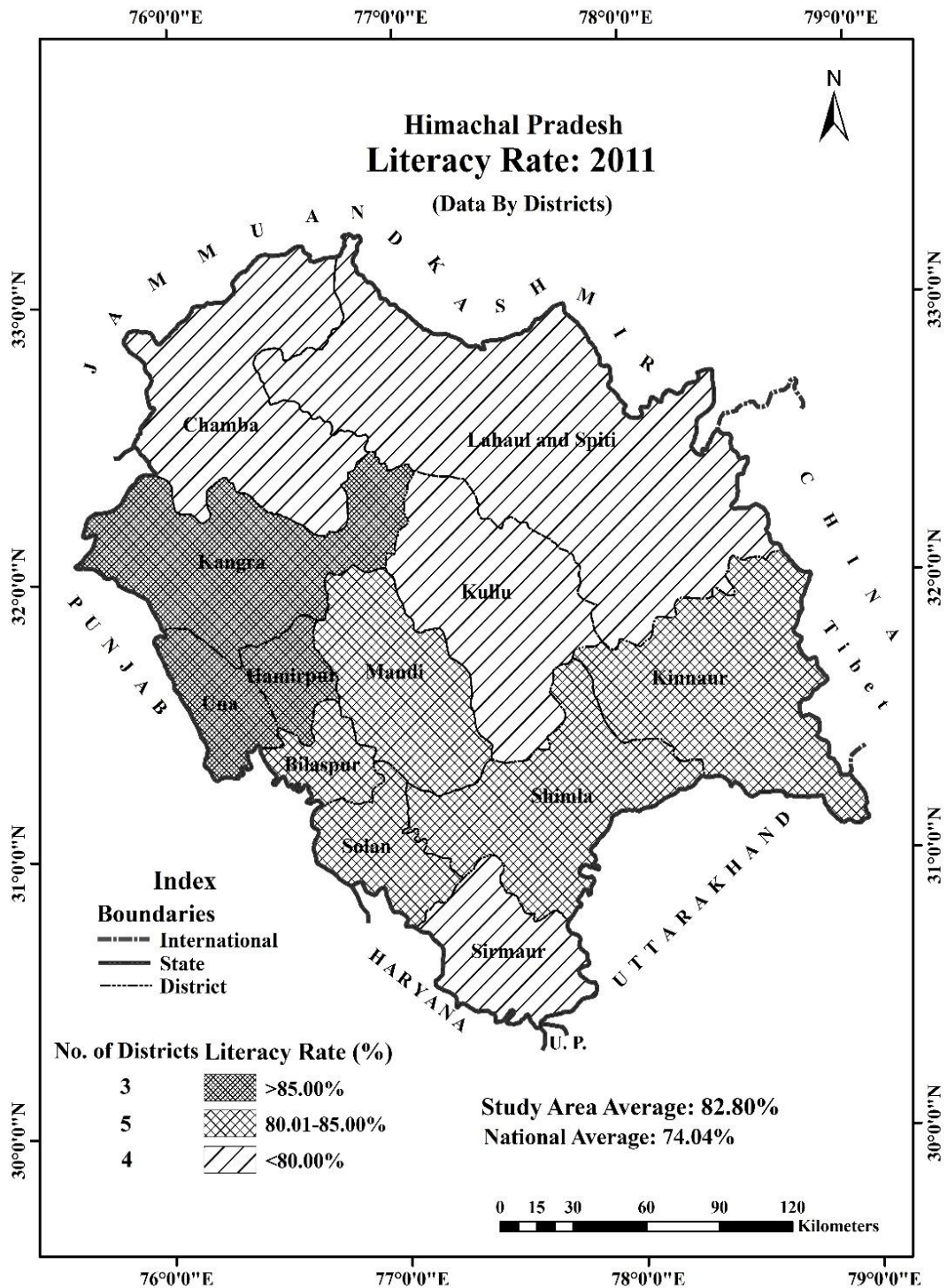


Fig: 2

Source: Prepared by authors, Census of india data, 2011, HP State

Spatial pattern of male literacy in himachal pradesh, 2011

As per 2011 Census, male literacy rate at the national level was 80.89 per cent. Himachal Pradesh with 89.53 per cent witnessed 8.64 percentage point more literacy than national average.

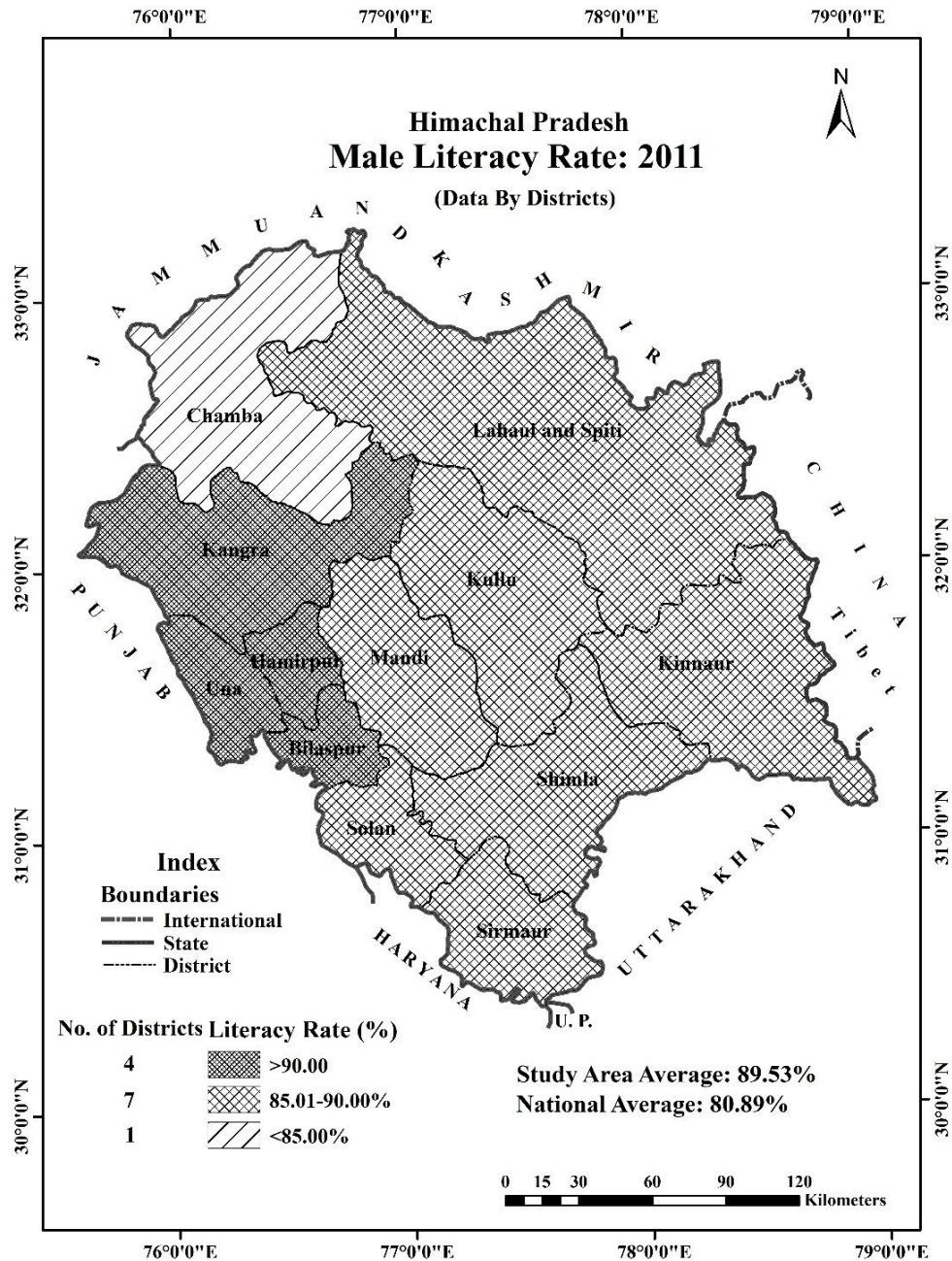


Fig: 3

Source: Prepared by authors, Census of india data, 2011, HP State

The fig 3 shows that four districts out of total twelve districts have male literacy rate more than 90.0 per cent. The seven districts namely Lahul & Spiti, Kullu, Kinnaur, Shimla, Mandi Solan and Sirmaur have male literacy rate between 85.01-90.0 per cent. A contiguous belt of districts with literacy rate of 85.0-90.0 was observed in almost entire Himachal Pradesh except western part. The Chamba districts with 82.59 per cent male literacy has occupied bottom place during study period.

Spatial pattern of female literacy in himachal pradesh, 2011

Female literacy, an important social attribute, contribute significantly towards socio-cultural and economic progress of any society (Das and Sharma, 2011: 125). Table 1 & 2 shows that although, there has been remarkable improvement in female literacy rate since from 1971, but it has been observed that it is still low in comparison to male literacy rate. Fig 4 shows that national level the female literacy rate is 64.64 per cent while in study area female literacy rate is 75.93 per cent which is 11.29 percentage point more than national average. It is also evident from the fig 4 that there has been considerable variations in female literacy at district level. At the district level highest female literacy 82.62 per cent observed in Hamirpur district followed by Una (81.11 per cent) and Kangra 80.02 per cent, whereas on the other hand, Chamba district recorded lowest female literacy (61.67 per cent) followed by Lahul & Spiti (66.84 per cent), Kullu (70.90 per cent) Sirmaur (71.36 per cent) and Mandi districts (73.66 per cent). The remaining three districts namely Shimla Bilaspur and Solan have witnessed female literacy rate 75.0-80.0 per cent in 2011 (Fig. 4).

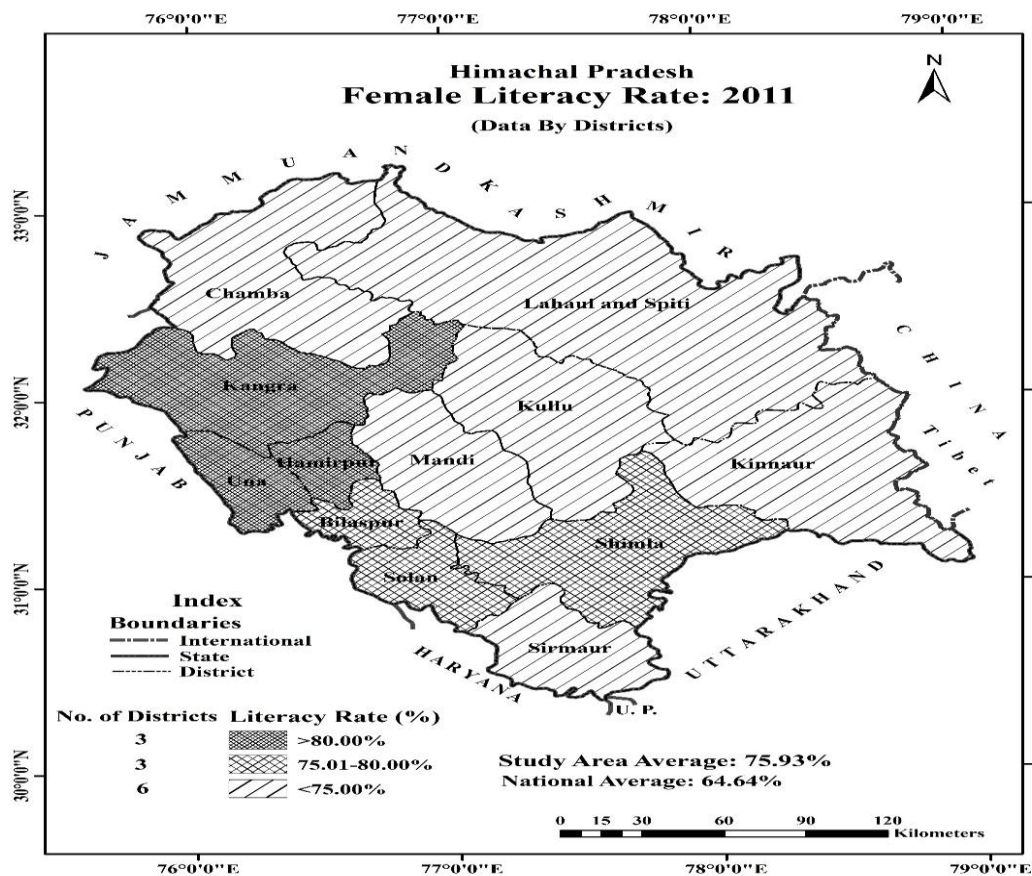


Fig: 4

Source: Prepared by authors, Census of india data, 2011, HP State

Himachal Pradesh: spatial pattern of gender disparity in literacy, 2011

When Himachal Pradesh got the status of full-fledged statehood the gender gap in literacy was 22.96 per cent. Thereafter, significant improvement has been observed in overall as well as male and female literacy rate in study area.

Table-2
Himachal Pradesh: gender disparity in literacy, 2011

(Data by districts)

Districts	Total	Male	Female	Gender Gap	Gender Disparity Index
Chamba	72.17	82.59	61.67	20.92	0.20
Lahul & Spiti	76.81	85.69	66.84	18.85	0.17
Kullu	79.40	87.39	70.91	16.47	0.15
Kinnaur	80.00	87.27	70.96	16.31	0.15
Mandi	81.53	89.56	73.66	15.90	0.14
Sirmaur	78.80	85.61	71.36	14.25	0.13
Bilaspur	84.59	91.16	77.97	13.19	0.12
Solan	83.68	89.56	76.97	12.58	0.11
Shimla	83.64	89.59	77.13	12.46	0.11
Hamirpur	88.15	94.36	82.62	11.74	0.10
Kangra	85.67	91.49	80.02	11.48	0.10
Una	86.53	91.89	81.11	10.78	0.10

Source: Computed by authors from census of India data 2011, H.P. State

It is evident from table 2 that there has been notable variations in gender gap in study area. It varies with lowest 10.78 percent in Una district to highest 20.92 per cent in Chamba district. The four districts out of total twelve districts in 2011, namely Chamba (20.92 per cent), Lahul & Spiti (18.85 per cent), Kullu (16.47 per cent), Kinnaur (16.31 per cent), have gender gap >16.01 percentage point. On contrary, Kangra, Hamirpur, Bilaspur, Shimla, Solan and Sirmaur districts have witnessed gender gap between 10.01-15.00 percentage points. Notably, Una district has lowest gender gap i.e. 10.78 percentage point during study period.

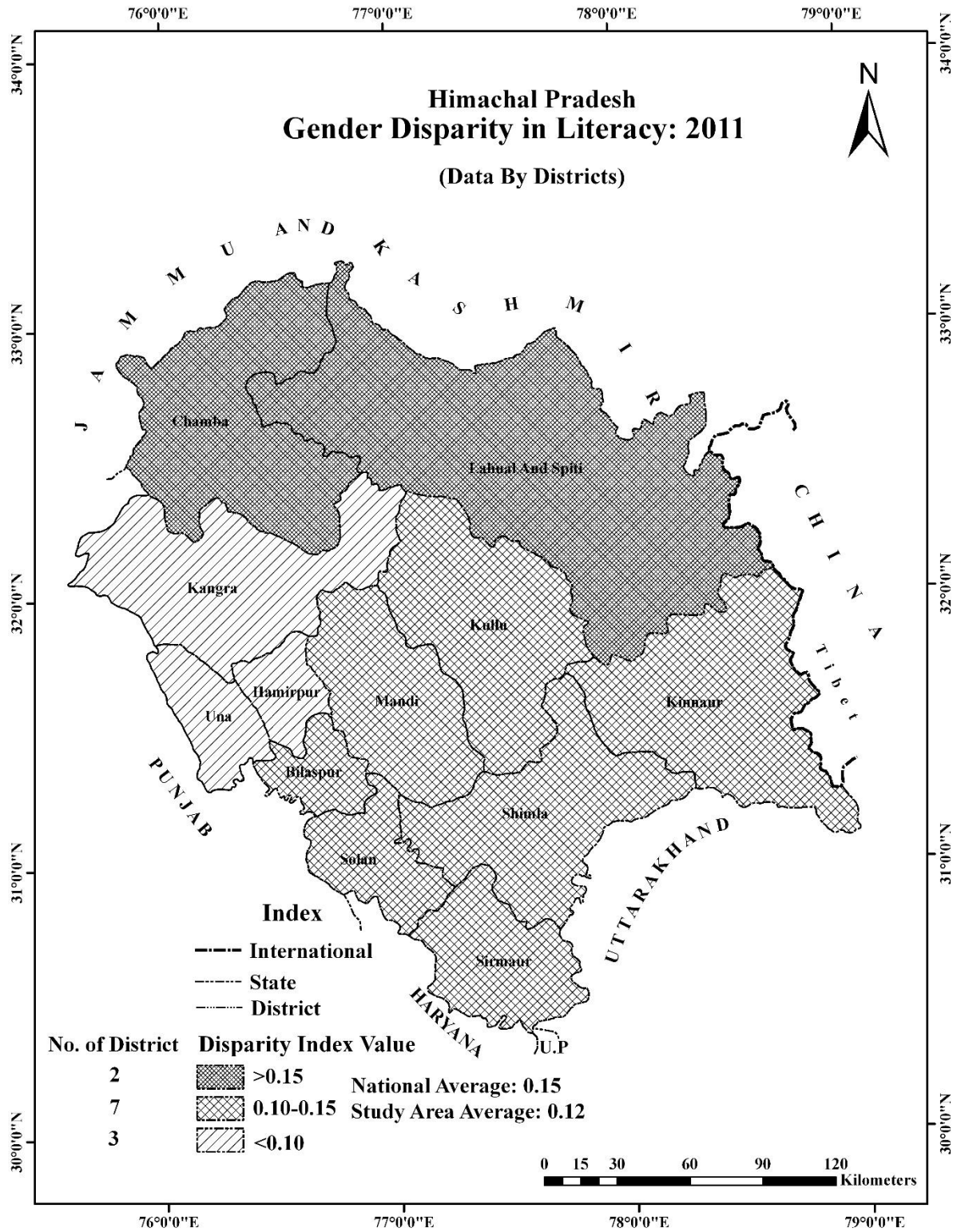


Fig: 5

Source: Prepared by authors, Census of india data, 2011, HP State

It is evident from the fig 5 that at the national level the gender disparity in literacy was 0.15 while in Himachal Pradesh it was slightly lower and has recorded 0.12 in 2011. However, there were remarkable variations in gender disparity at the district level. The district Chamba has and Lahual-Spiti have high gender disparity above national and state average. On the other hand, Hamirpur, Una and Kangra district have observed gender disparity less than 0.10. The fig. 5 shows that the remaining seven district namely Kullu, Mandi, Bilaspur, Shimla, Solan, Kinnaur and Sirmaur have witnessed gender disparity ranged from 0.10 to 0.15.

Himachal pradesh: Gender disparity by residence, 2011

The variations of literacy among the male and female in the state become further clear when it is considered separately for rural and urban areas. It is evident from the table that the gender disparity in literacy is more pronounced in rural areas as compare to urban areas.

Table- 3
Himachal pradesh: Gender disparity in literacy by residence, 2011

(Data by districts)

District	Rural Literacy Rate		Urban Literacy Rate		Gender Disparity in Literacy	
	Male	Female	Male	Female	Rural	Urban
Chamba	81.51	59.73	95.31	88.25	0.21	0.06
Kangra	91.42	79.64	92.60	86.52	0.10	0.05
Lahul & Spiti	85.69	66.84	NUP	NUP	0.17	NUP
Kullu	86.96	69.52	91.18	84.63	0.16	0.06
Mandi	89.24	72.64	94.06	88.98	0.15	0.04
Hamirpur	94.29	82.14	95.15	89.66	0.11	0.05
Una	92.08	80.94	89.94	83.06	0.10	0.06
Bilaspur	90.93	77.22	94.34	88.96	0.12	0.05
Solan	89.56	76.97	88.85	74.98	0.12	0.04
Sirmaur	84.64	69.33	93.35	87.82	0.14	0.05
Shimla	87.79	72.74	94.56	91.30	0.14	0.03
Kinnaur	87.27	70.96	NUP	NUP	0.15	NUP
H.P.	89.05	74.62	93.42	88.37	0.13	0.04
INDIA	65.78	49.62	78.47	70.17	0.17	0.08

Source: Computed by authors from census of india, H.P. State data, 2011.

Nup stands for no urban population.

Table 3 shows that in rural areas of the state, the Hamirpur district has the highest male (94.29 per cent) and female literacy (82.14 per cent) followed by Una and Kangra district, whereas lowest male and female literacy in rural areas has been observed in Chamba district i.e. 81.51 per cent and 59.73 per cent respectively. The rural areas of Sirmaur and Lahual-Spiti district have also witnessed low literacy especially the female literacy. By comparisons, the urban areas of the state performing better with respect to male and female literacy. Interestingly, the Chamba district which has lowest overall literacy in state, with 95.31 per cent male literacy in urban areas ranked first in state. With regard to female literacy in urban areas, Solan districts with 74.98 per cent placed at bottom place followed by Una and Kullu district (Table 3).

It is evident from the table 3 that in rural areas, the Chamba district with 0.21 has highest gender disparity followed by Lahual-Spiti (0.17), Kullu (0.16), Kinnaur (0.15) and Mandi (0.15). These districts have gender disparity in literacy more than national and state average. The Una district has low gender disparity (0.10) in rural areas closely followed by Kangra and Hamirpur district. By comparison, in urban areas, Chamba and Kullu district have recorded disparity above 0.06 whereas urban areas of Shimla, Solan and Mandi districts have witnessed lesser disparity in male and female literacy.

Conclusion

The foregoing discussion reveals the following facts regarding gender disparity in literacy:

As per 2011 Census, Himachal Pradesh ranked 5th in literacy at national level and observed significant improvement in overall literacy as well as male and female literacy rate since from its formation in 1971. The study shows that there has been remarkable variations in male and female literacy rate in 2011. The districts like Una, Hamirpur and Kangra which are performing better both in male and female literacy have recorded low gender gap and gender disparity. On contrary, the district namely Chamba, Lahul & Spiti, Kinnaur, Kullu, and Mandi have high male literacy rate on one hand and low female literacy rate on other hand, resulted with high gender gap and disparity during study period. Notably, the male-female difference in literacy shows that the Una district has observed low gender gap (10.78 per cent) in literacy followed by Kangra (11.48 per cent) and Hamirpur (11.74 per cent). By comparison, the Chamba district has recorded highest gender gap (20.92 per cent) followed by Lahul & Spiti (18.85 per cent), Kullu (16.47 per cent) and Kinnaur (16.31 per cent).

The Sopher disparity index shows that the gender disparity in literacy was lower (0.12) in study area as compare to national average of 0.15. However, there were notable spatial variations at district level. The gender disparity in literacy is two-fold higher (0.20) in Chamba district which ranked at top place while Una district with 0.10 placed at bottom rank among all twelve districts. Furthermore, the variations of literacy among the male and female in the state become further clear when it is considered separately for rural and urban areas. It is evident from the study that the gender disparity in literacy is more marked in rural areas as compares to urban one. In rural areas, the Chamba district with 0.21 has highest gender disparity followed by Lahual-Spiti (0.17) and Kullu (0.16). On contrary, Una district has low gender disparity (0.10) in rural areas, closely followed by Kangra (0.11) and Hamirpur district. With regard to gender disparity in urban areas, Chamba and Kullu district have recorded disparity above 0.06. The Shimla district with 0.03 index value has least disparity in male and female literacy and closely followed by Solan (0.04) and Mandi district. It is evident from the study that the gender disparity in rural areas (0.21 in Chamba) seven times more than urban areas (0.03 in Shimla) of the state. The high gender disparity in literacy along with rural and urban areas especially in Chamba, Lahual-Spiti, Kinnaur, Kullu and Mandi districts of the study area require proper consideration and provision in educational policies. So we assure equal participation of both male and female in state development.

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