

Gender Disparity in Literacy Rates: Focusing on North-East India

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Abstract

Literacy rate is one of the key indicators of a country's development. It influences a person's daily life and helps her/him perform a range of activities. The enhancement of literacy rate pre-supposes a set of enabling conditions ensuring adequate and equitable opportunities and scope for creative engagement through a system of quality education which reflects the social, economic and political status of respective region. Literacy rate is varying from region to region and it increases with time. The educational system is often found to perpetuate gender inequalities in terms of access, participation and attainment. So, the prime objective of the paper is to study the gender disparity in terms of literacy rate in the states of NER. The present study is based on secondary data, collected from Census of India, 2011 and Assam Human Development Report, 2014. Sopher's Disparity Index is used to measure for the purpose of analysis. The study clearly demonstrates that the disparity level in literacy rate in case of overall as well as urban and rural sector of the NER states.

Key Words: Sopher's Index, Gender Disparity, Literacy Rate, North-East India

1 Introduction

Literacy rate is a key indicator of a country's development. Literacy rate is defined as the total number of literate persons in a given age group, expressed as a per centage of the total population in that age group. The adult literacy rate measures literacy among persons aged 15 years and above, and the youth literacy rate measures literacy among persons aged 15 to 24 years. Literacy rate is usually measured by dividing the number of literates of a given age range by the corresponding age group population and multiply the result by 100. As per Census 2011, the literacy rate of India stood at 74.04 per cent as compared to 64.8 per cent in Census 2001. The most notable thing that came across in the 2011 census is the sharp rise in the female literacy over male literacy. The male literacy rate is 82.14 percent and the female literacy rate is 65.46 percent according to 2011 census. There is a wide gender disparity in the literacy rate in India. The low female literacy rate has had a dramatically negative impact on family planning and population stabilization efforts in India. However, the census provided a positive indication that growth in female literacy rates (11.8 per cent) was substantially faster than in male literacy rates (6.9 per cent) in the 2001-2011 decadal period, which means the gender gap appears to be narrowing. Our economy is enhanced when learners have higher literacy levels. Effective literacy skills open the doors to more educational and employment opportunities so that people are able to pull themselves out of poverty and chronic underemployment. In our increasingly complex and rapidly changing technological world, it is essential that individuals continuously expand their knowledge and learn new skills in order to keep up with the pace of change.

Socio-economic development of any region/state depends largely on its level of educational attainment. Among other educational indicators, literacy rate is considered as an important input for enhancing the quality of any social set up. North-Eastern Region (NER) attains much in terms of literacy rate. Literacy rate in the region has been above the national average recording 75.60 per cent as compared to the national average of 74.04 per cent in 2011. As per Census 2011, the two states, Arunachal Pradesh (65.4 per cent) and Assam (72.2 per cent), fall below the national figure of about 74.04 per cent of literacy, whereas Mizoram scores the highest of 91.3 per cent followed by Tripura (87.2 per cent), Sikkim (81.4 per cent), Nagaland (79.6 per cent), Manipur (76.9 per cent), and Meghalaya (74.4 per cent). In this chapter, attempts have been made to identify the spatial pattern of male-female literacy scenario of the north-eastern region as a whole and secondly, the inter-states scenario of the NER across rural-urban areas for the year 2011. Moreover, male-female disparity has been considered as a unit for the analysis of disparity index constructed on the basis of Sopher's method. It should be noted that, the greater the value of DI, the greater the extent of disparity and lower value, the lower the disparity.

2 Review of Literature

There have been a number of endeavors to investigate the gender gap in the literacy rate. Following is an attempt at a literature review on the topic of gender disparity in terms of literacy rate. This is an attempt to analyze the evolution of Karnataka's literacy rates across districts. Coefficient of Variation is utilized to represent inter-district differences in literacy rates. During the period of 2001-2011, the analysis indicates that the female literacy rate has increased relative to the male literacy rate. During the decade of 2001-2011, the percentage of regional and gender disparity between districts has decreased, but the rate of decline is less pronounced (Ahmed, 2012). In terms of gender equality, the study reveals that the northeast is in a stronger position than the rest of the country. Inequality exists between women and men in the region despite the preponderance of diverse ethnic groups that, in general, do not support sex discrimination. The study reveals that women in the region are relatively powerless and have a status that is somewhat inferior to that of males. Access to education, employment, and health is unequal between the sexes. The study concludes with the observation that access to education, employment, and health care are only enabling factors that do not necessarily guarantee achievement of the goal, which depends primarily on the mentality of the people (Mahanta & Nayak, 2013). Using secondary data from the censuses of 2001 and 2011, various aspects of gender gaps in education pertaining to Assam's literacy rate, such as the Gender Crude Literacy Rate, the Gender Education Index, and the Gender Equity Education Index, were calculated to determine the extent to which gender gaps exist in Assam's literacy. In addition, a prediction has been made for the gender gap in literacy rate for the year 2051, and the study reveals that the gender disparity in literacy will reach zero differences by the year 2091. Sarmah & Hazarika (2015) discovered a nearly negative correlation between the gender disparity in literacy and the sex ratio in Assam from 1951 to 2011. India has one of the world's greatest adult illiteracy rates, which is a dubious distinction. According to India's 2011 Census, a quarter of the country's population is still illiterate. And within this number, nearly one-fifth of men are illiterate, compared to more than one-third of women. Individual, societal, and national growth are hampered by illiteracy. Literacy is an important factor in reducing gender inequality (Katiyar, 2016). The purpose of this article is to map and analyze gender disparities in literacy across the states and union territories (UTs) of India.

3 Objectives of the study

1. The prime objective of the present study is to study the gender disparity in terms of Literacy Rate in the North-Eastern states of India.

4 Data Sources and Methodology

The present study is only based on secondary data, collected from Census of India, 2011. The method of research is purely descriptive in nature. Absolute population from Census data has been converted to percentage for easier comprehension and adding up the number of illiterates it accounts to hundred per cent.

The literacy rate for the NER states have been measured by dividing the number of literates of a given age range by the corresponding age group population and multiply the result by 100. Further, the gender disparity in terms of male-female literacy across the states has been examined by using Sopher's Disparity Index (1974). The disparity index measures disparity between two groups in their possession of a particular property in terms of the logarithm of the odds ratio. The objective of taking log is to reduce the leveling off effect i.e. regions with higher literacy rate may show a lower level of disparity than the region having low literacy rate even though the gap is the same for both region (Sopher, 1980; Ramotra, 1988, Husain, 2011). Sopher's Disparity Index is a well-accepted measurement technique to identify the disparity between male-female literacy groups (Kundu & Rao, 1986; Mulimani & Pujar, 2015). The following formula has been used for the analysis:

$$DI = \text{Log} (X2 / X1) + \text{Log} (100 - X1) / (100 - X2)$$

Where, DI = Disparity Index

X2 = Percentage of male Literates.

X1 = Percentage of female Literates.

(Here, $X2 \geq X1$ and $X1 \& X2 \neq 0$)

Disparity Index technique is useful in measuring relative disparity between two variables. It should be noted that, the value of Disparity Index is '0' in case of perfect equality and '1' in case of perfect inequality. Thus, higher value of DI indicate, higher extent of disparity and lower the value, the lower is the disparity (Biswas, 2016).

5 Results and Discussion

In this section, a comparative scenario of the NER states on the issue of gender disparity in terms of literacy rate has been analyzed. The NER states were disadvantageous in many ways, such as lack of infrastructure and resources with economic and social vulnerability. So, increasing literacy rate among people may lead them towards growth and prosperity into some extent by developing skill, ability and innovation. Besides, gender issue is one of the major concerns among the society and policymakers, thus the present study might be a addition to the existing study.

5.1 Male-Female literacy levels in the North-Eastern Region

Table 1 reveals that in case of urban area, literacy rates are highest in Mizoram and is followed by Tripura and Meghalaya. Literacy rates are lowest is in Arunachal Pradesh. Literacy rate, among the males are highest in Mizoram and is followed by Tripura. On the other hand, it is lowest in Arunachal Pradesh. And the literacy rates among the females are highest in Mizoram followed by Tripura and Meghalaya (89.1per cent). And it is least for Arunachal Pradesh (76.7per cent) and Manipur (79.3per cent).

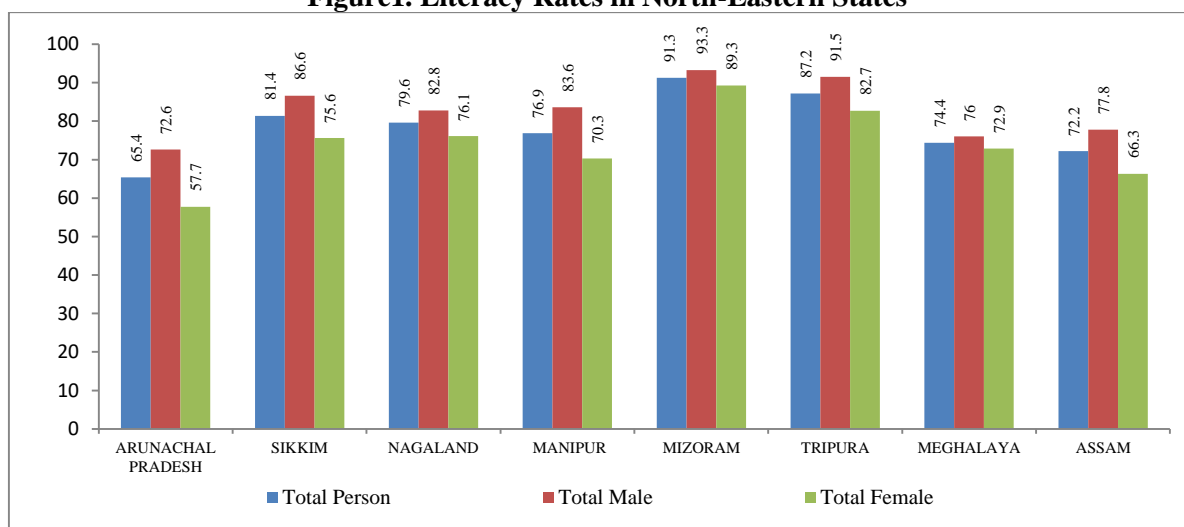
Table 1: Male-Female Literacy Rate in North-Eastern States

State Name	Urban			Rural		
	Person	Male	Female	Person	Male	Female
ARUNACHAL PRADESH	82.9	88.4	76.7	59.9	67.4	52
ASSAM	88.5	91.8	84.9	69.3	75.4	63
MANIPUR	85.4	91.7	79.3	73.4	80.3	66.3
MEGHALAYA	90.8	92.5	89.1	69.9	71.5	68.4
MIZORAM	97.6	98	97.3	84.1	88.2	79.8
NAGALAND	89.6	91.6	87.4	75.3	79	71.5
SIKKIM	88.7	92.4	84.7	78.9	84.6	72.4
TRIPURA	93.5	95.5	91.4	84.9	90.1	79.5

Source: Calculated from Census 2011, India

In case of rural area, literacy rate is highest in Tripura (84.9per cent) and is followed by Mizoram (84.1per cent). And it is least for Arunachal Pradesh (59.9per cent), Assam (69.3per cent) and Meghalaya (69.9per cent). Literacy rate, among the males are highest in Tripura (90.1per cent) and is immediately followed by Mizoram (88.2per cent). The score for Arunachal Pradesh (67.4per cent) and Meghalaya (71.5per cent) are among the least. And the literacy rates among the females, Mizoram (79.8per cent) is at the top and is followed by Tripura (79.5per cent). Whereas, Arunachal Pradesh (52.0per cent) and Assam (63.0per cent) were placed at the bottom.

Figure1. Literacy Rates in North-Eastern States



Source: Based on Calculation using the data from Census 2011, India

Figure 1 shows that in case of overall, the literacy rate is highest in Mizoram (91.3per cent) and is immediately followed by Tripura (87.2per cent). The lowest is in Arunachal Pradesh (65.4per cent).

Literacy rates among the males are highest in Mizoram (93.3per cent) followed by Tripura (91.5per cent). And it is lowest in Arunachal Pradesh (72.6per cent). And the literacy rate among the females is highest in Mizoram (89.3per cent) and is followed by Tripura (82.7per cent). On the other hand, the lowest is in Arunachal Pradesh (57.7per cent).

5.2 Gaps in the literacy levels in North-Eastern Region

To examine the status of women in North- Eastern states of India, first we have a look at the DI values of all the individual states of the region (*Table 2*).

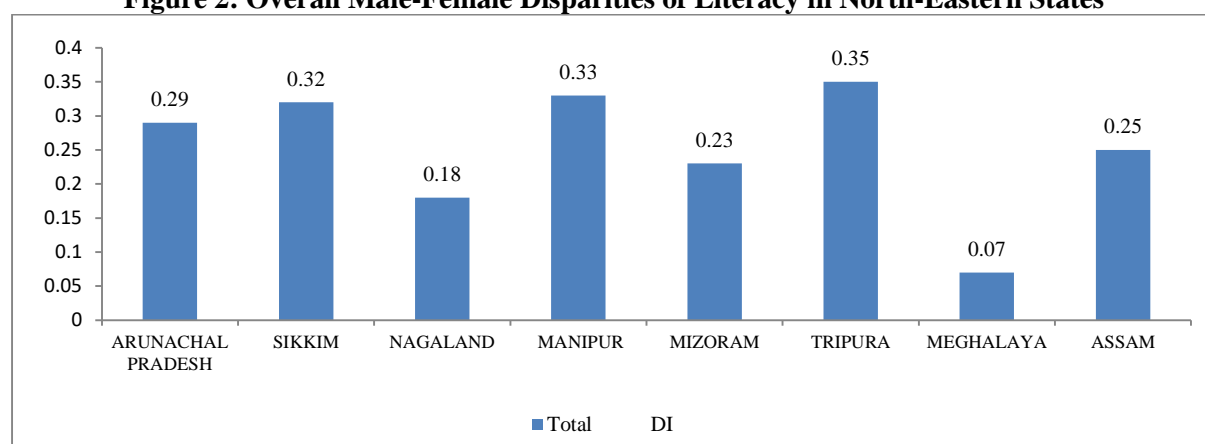
Table 2: Male-Female Disparities of Literacy in North-Eastern States

State Name	Urban	Rural
	DI	DI
ARUNACHAL PRADESH	0.37	0.28
ASSAM	0.30	0.25
MANIPUR	0.46	0.32
MEGHALAYA	0.17	0.06
MIZORAM	0.13	0.27
NAGALAND	0.20	0.17
SIKKIM	0.34	0.32
TRIPURA	0.30	0.37

Source: Calculated from Census 2011, India

The figure reveals that all the states have satisfactory DI values. In case of urban area, Manipur (0.46) has the highest DI value and is placed in the first rank among the North-Eastern States as against Mizoram (0.13). And Assam is placed in the fourth rank both in case of highest and lowest DI value in urban sector. And similarly, in case of rural area, Tripura (0.37) has the highest DI value whereas Meghalaya (0.06) has the lowest DI value. And Assam is placed in the sixth rank in case of highest DI value and is placed in the third rank in case of low DI value in rural sector.

Figure 2: Overall Male-Female Disparities of Literacy in North-Eastern States



Source: Based on Calculation using the data from Census 2011, India

Figure 2 shows that, in case of overall, Tripura (0.35) has the highest DI value and is placed in the first rank among the northeastern states and is followed by Manipur (0.33) as against Meghalaya (0.07) which is placed in the last rank. And Assam is placed in the fifth rank in case of high DI value and it placed in forth rank in case of low DI value.

6 Conclusion

The current study highlights the significant gender disparities in literacy rates within the states of Northeastern India (NER). It also reveals variations in literacy rates across different regions of NER, including urban and rural areas. The disparities between male and female participation in education can be attributed to various sociological, psychological, and economic factors. To overcome these obstacles, it is crucial to prioritize the key issues concerning women's education within specific localities. Additionally, the successful implementation of women's education initiatives relies on the active cooperation between the community and government authorities. Only through such

collaboration can government initiatives effectively enroll and sustain female populations at various educational levels.

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