



CORRELATION BETWEEN LITERACY & SEX RATIO IN WEST BENGAL: A GEOGRAPHICAL ANALYSIS

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Abstract:

This paper is an attempt to analyze the 'Correlation between Literacy and Sex Ratio in West Bengal'. Education is universally recognized as a major component of human development. As such, certain minimum level of literacy seems to be essential for a population to break out the vicious of poverty. Literacy affected on various attributes of the population such as fertility, mortality, migration and also sex ratio. The knowledge of sex ratio is essential for the understanding the condition of women in society. A decline or low number of female population in the total population is strongly suggestive of the neglect of girl children, sex selective abortions and traditional attitudes of the society. Thus, the analysis of literacy and sex ratio is immense significant. According to 2011 census, the total population of West Bengal is 91,347,736, sex ratio is 947 and the literacy rate is 77.08.

KEYWORDS:

Education, Literacy, Sex Ratio, Correlation, West Bengal

INTRODUCTION

Literacy refers to the ability to read for knowledge, write coherently and think critically about the written word. Literacy is one of the most important indicators of social development. Literacy is the heart of basic education for all. It is essential for poverty reduction, mortality, curbing population growth, achieving gender equality and ensuring sustainable development, peace and democracy. 'Literacy has been defined as the ability both to read and write with understanding in any language of children who are above six years of age'.

India is one of the least literate societies in the world. According to the census of 2011, in India, the literacy rate was 74.04 percent. This however, does not include the children who are below six years of age. In 2011, the highest literacy rate was found in Kerala i.e. 93.91 percent and lowest literacy rate was found in Bihar where it was 63.82 percent.

In West Bengal, the overall literacy was recorded as 77.08 percent in 2011. There are wide disparities from district to district in literacy rate. The highest literacy was found in Kolkata district lowest in Uttar Dinajpur district i.e. 87.14 percent and 60.13 percent respectively.

The sex ratio is also important demographic component for the human development. The sex composition of a population is usually expressed in terms of sex ratio i.e. number of female per thousand of males. According to 2011 census, the sex ratio of India is 940. Among the states , Kerala records the highest sex ratio of 1084 and Haryana has the lowest sex ratio of 877. In West Bengal, the sex ratio is higher than the national average, it was recorded sex ratio of 947. Among the districts, the highest sex ratio found in Darjeeling district and lowest in Kolkata district i.e. 971 and 899 respectively.

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STUDY AREA

The state of West Bengal has been selected as a study area which is located between 21°25' to 26°50' north latitudes and 86°30' to 89°58' east longitudes with three international boundaries i.e., Bangladesh, Nepal and Bhutan. It occupies a geographical area of about 88,752 sq. km. (2.70 per cent of the India's total geographical area) and extending from the Himalayas in the north to the Bay of Bengal in the south. It is surrounded by Sikkim and Bhutan in the north, Assam and Bangladesh in the east, the Bay of Bengal in the south and Orissa, Jharkhand, Bihar and Nepal in the west. According to 2011 Census, its total population is 91,347,736 (7.79 per cent of India's total population), density is 1030 persons per sq. km. (in terms of population density West Bengal is on the second among the Indian states).

OBJECTIVES

The major objectives of this paper are as under:

1. To study the spatial pattern of literacy rate in the study region.
2. To examine the spatial pattern of sex ratio in the study region.
3. To analyze the correlation between spatial pattern of literacy and sex ratio in the study region.

DATABASE AND METHODOLOGY

The paper is based on secondary data sources. To fulfill the objectives data regarding literacy and sex ratio of West Bengal is obtained from census of West Bengal (2011), statistical abstract of West Bengal.

The collected data are processed to analyze the pattern of literacy rate and sex ratio in West Bengal. The districts of West Bengal are grouped into three categories i.e. high, medium and low literacy on the basis of simple statistical method. To analyze spatial pattern of sex ratio, the same technique is applied for calculation. The Spearman's Rank Difference method is used for analyzes the correlation between literacy and sex ratio.

Spatial Pattern of Literacy Rate

West Bengal as a whole has 77.08 percent literacy in 2011. But the district level literacy differs from district to district ranges from 60.13 per cent to 87.66 per cent. All 19 districts of West Bengal are divided into three categories as following: (in Fig. 1)

High Literacy Rate

The districts which have above mean plus one standard deviation are included in this category. The districts have the literacy rate above 79.92 per cent are included in high category. High literacy rate was recorded in the district of Midnapore(East), Howrah, Hoogly, 24 Parganas(North) and Kolkata due to high number of educational institutions, availability of educational facilities, high urbanization, development of transport and communication and so on.

Moderate Literacy Rate

The districts which have literacy rate ranges from 70.95 to 79.92 per cent are included in this category. Moderate literacy was recorded in the districts of Burdwan, Bankura, Midnapore(West), 24 Prganas(South), Nadia, Dakshin Dinajpur, Jalpaiguri, Darjeeling and Cooch Behar district. In these districts, moderate literacy was found due to lack of educational infrastructure.

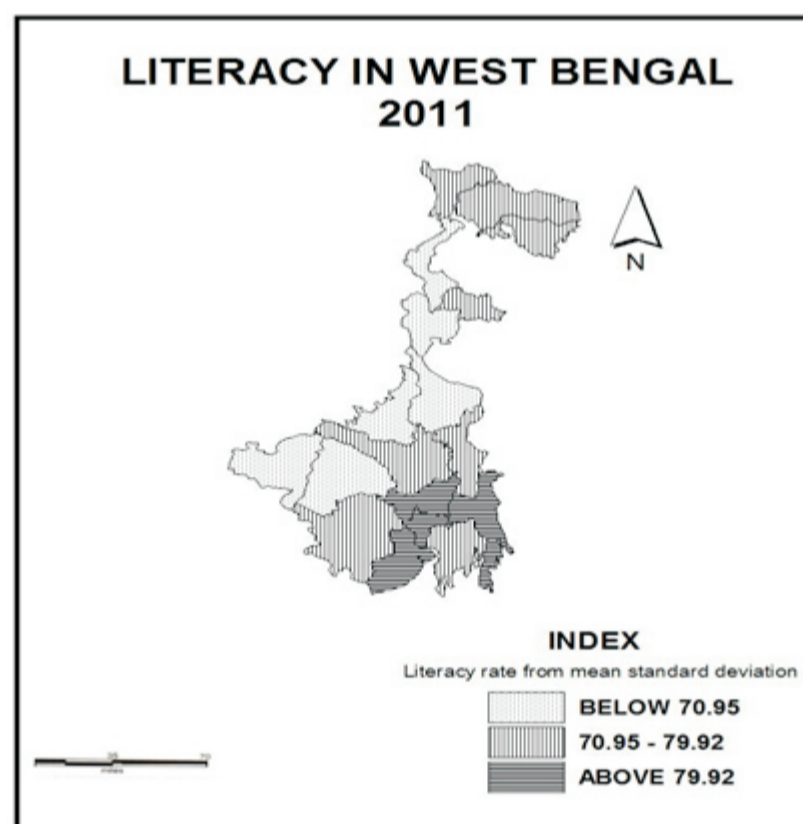
Low Literacy Rate

The districts which have literacy rate below 70.95 per cent are included in low category. Low literacy rate was found in the districts of Birbhum, Murshidabad, Malda, Uttar Dinajpur and Purulia. In these districts low literacy was recorded due to lack of educational institution, poverty and low student teacher ratio.

Table No.1: Literacy Rate and Sex Ratio in West Bengal, 2011

| Sr. No | Districts | Literacy Rate | Sex Ratio |
|-----------|--------------------|---------------|------------|
| 1 | Burdwan | 77.15 | 943 |
| 2 | Birbhum | 70.90 | 956 |
| 3 | Bankura | 70.95 | 954 |
| 4 | Midnapore(East) | 87.66 | 936 |
| 5 | Midnapore(West) | 79.04 | 960 |
| 6 | Howrah | 83.85 | 935 |
| 7 | Hoogly | 82.55 | 958 |
| 8 | 24 Parganas(North) | 84.95 | 949 |
| 9 | 24 Parganas(South) | 78.57 | 949 |
| 10 | Nadia | 75.58 | 947 |
| 11 | Murshidabad | 67.53 | 957 |
| 12 | Uttar Dinajpur | 60.13 | 936 |
| 13 | Dakshin Dinajpur | 73.86 | 954 |
| 14 | Malda | 62.71 | 939 |
| 15 | Jalpaiguri | 73.79 | 954 |
| 16 | Darjeeling | 79.92 | 971 |
| 17 | Cooch Behar | 75.49 | 942 |
| 18 | Purulia | 65.38 | 955 |
| 19 | Kolkata | 87.14 | 899 |
| 20 | West Bengal | 77.08 | 947 |

Source: Census of India, 2011



Spatial Pattern of Sex Ratio

West Bengal as a whole has 947 number of females per thousand of males population in 2011. But the districts level sex ratio is varies from district to district ranges from 899 to 971. All 19 districts are categorized into three groups as follows: (in Fig. 2)

High Sex Ratio

The districts which have the sex ratio above 947 are included into high category. High sex ratio was recorded in the districts of Birbhum, Bankura, Midnapore(West), Hoogly, 24 Parganas(North), 24 Parganas(South), Murshidabad, Dakshin Dinajpur, Jalpaiguri, Darjeeling and Purulia.

Moderate Sex Ratio

The districts which have sex ratio ranges from 900 to 947 are included in the moderate category. Moderate sex ratio was recorded in the districts of Burdwan, Midnapore(East), Howrah, Nadia, Uttar Dinajpur, Malda and Cooch Behar.

Low Sex Ratio

The districts which have the sex ratio below 900 are included in this group. Only Kolkata district has the lowest sex ratio in West Bengal. The following are the some reasons for low sex ratio in West Bengal:

1. Neglected of girl child
2. High maternal mortality
3. Sex selective
4. Female infanticide.

With small family norms, many young couples do not for a second child happens to be a male. Higher female life expectancy is likely to initiate a new trend and tilt the scale of low sex ratio.

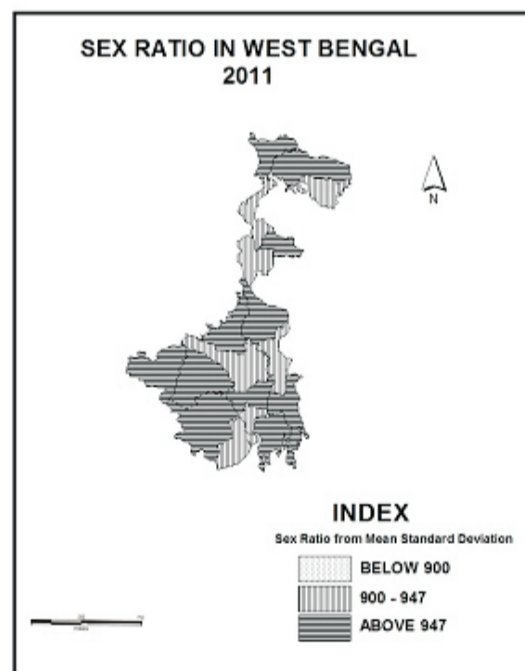


Fig. 2

Correlation between Literacy and Sex Ratio

The Spearman's Rank Difference method is used for the calculation of the correlation of literacy and sex ratio in West Bengal. It is observed that there is rather low and negative correlation i.e. $p=-0.14$ between the literacy and sex ratio in West Bengal.

CONCLUSION

There are wide disparities in the literacy and sex ratio of West Bengal in 2011. The highest literacy was found in Midnapore(East) district and lowest in Uttar Dinajpur District. The highest sex ratio was found in Darjeeling district whereas lowest in Kolkata district of West Bengal. But the correlation between literacy and sex ratio found in low degree and negative angle i.e. $p= -0.14$. It means high literacy rate, low sex ratio. It was observed higher the literacy rate lower the sex ratio i.e. Kolkata district and lower the literacy higher the sex ratio i.e. Dakshin Dinajpur district of West Bengal.

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