Research Article

GENDER DISPARITIES IN THE LEVELS OF LITERACY RATE: A BLOCK LEVEL ANALYSIS OF PURBA MEDINIPUR DISTRICT, WEST BENGAL, INDIA

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ARTICLE INFO	ABSTRACT

Every Society is composed of people and characterized by various socio-cultural, economic & political attributes. Literacy is an indispensable means to acquire skills for improving socio-economic development of well-being. The National Adult Education Programme launched countrywide during 1978 has viewed literacy as a means to bring about fundamental change in socio-economic development. Literacy and education attainment are the key variable influencing fertility, mortality and migration. Therefore, literacy is the decisive factor for development and population control as well Inequality in literacy rate tends to lead to a number of socio-economic problems, which in turn give rise to regional imbalance. Despite trying our efforts in bridging the gap between male female variation in literacy, women are still far behind and there exists a large gender bias in the area under study. Hence, in the present paper an attempt has been made to evaluate the gender disparity in the levels of literacy, and correlation between literacy and urbanization and between literacy and non-primary activities.

To analyse the gender disparity of 25 blocks of Purba Medinipur, percentage of literacy to the total population has been considered. The gender disparity in the levels of literacy has been found with the help gender disparity index (after David Sopher 1980) for the year 2001 and 2011 census data. It has been observed that in 2011 female in Panskura-I, Kolaghat, Egra-I, Egra-II and other blocks possess a low literacy rate as a result of high gender disparity prevailing in these districts (range > 0.108). The female literacy in 2011 of Tamluk, Chandipur, Mahisadal, Nandigram-I, Nandigram-II, Sutahata, Haldia, Khejuri-I, Bhagawanpur-II, Deshapran, Contai-III recorded high proportion of literacy (> 80%) and low gender disparity (range < 0.0943) is found in these blocks. It has been observed that the study region as a whole, rate of literacy both in male-female has increased from 2001 to 2011 and the gap in gender disparity reduced, however female literacy rate in few blocks is yet be to improved.

INTRODUCTION

Education is recognized as a fundamental human right, along with other necessities, such as food, shelter and water (The universal declaration on human rights-1948). Literacy is an indispensable strategy for eradicating the poverty, control the population growth and actively participate in the development activities. To achieve skills for improving economy and general well-being and effective socio-economic development literacy acts as a tool. The overall development of a country depends on the rate of literacy, health care and employment. Gender disparity always leads to weaker economic growth, while the stronger economic growth usually leads to reduction in gender disparity (Stotsky, 2006).

Many researchers, policy makers and academicians believe that literacy is the starting point for development (Pattison1982, Strect1984). For centuries, reading and writing have been considered as a key for achieving democracy, economic growth, stability, social harmony and most recently for competitiveness in world markets. Graff (1987), Stanley (1972), and other scholars opined that knowing how to read and write is often linked with moral fortitude. In the opinion of Srinivasan and Shariff (1997) "Adult Literacy rate and per capita income are the important development indicators. It is

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believed that the demographical variables namely literacy and educational attainment certainly affect fertility, mortality and migration".

The National Adult Education Program (NAEP-1978) viewed literacy as means to bring about fundamental change in socio-economic development, despite this; India achieved only 74.04% literacy as per 2011 census. Of this male literacy accounted for 82.14% and female literacy rate was 65.46%. West Bengal state as a whole accounted for 82.67% of male (ranks 20 in India) 71.16% of female literacy (ranks19 in India). Purba Medinipur district as a whole accounted for 92.32% of male & 81.37% of female literacy. Women are the pivot around whom family life revolves. They play multiple roles simultaneously especially in modern society. They are supposed to look after the elders in the family and to inculcate perfection in the younger generation to face the challenges of life. To meet all these requirements successfully females have to be educationally well equipped. As literacy is the first indispensable step towards education, it is imperative to make females literate for our bright future.

Study Area

Purba Medinipur district came into existence after bifurcation of erstwhile Medinipur on and from January 1, 2002. This district is situated on the southern side of the state of West Bengal. The total area of the district is 4151.64 square kilometres. It exists between 21°38' N to 22°31' N and 87°27' E to 88°12' E. The District is surrounded by Ghatal sub-division of Paschim Medinipur district in the north, Bay of Bengal in the south, Paschim Medinipur district in the west and Hoogly-Rupnarayan river in the east (Rupnarayan river separates this district from Howrah). Tamluk, Haldia, Contai and Egra are its 4 subdivisions. The district comprises of 25 blocks and 5 municipalities, namely Panskura, Tamluk, Egra, Contai and Haldia.

Objectives

The present effort solely aims to study the female literacy and their socio-economic condition with the following specific objectives:

1. To find out the gender disparity in literacy rate.
2. To find out various factors behind the emergence and growth of gender disparities in literacy in the study region.
3. To examine the relationship between literacy and various socio-economic variables.

DATA BASE AND METHODOLOGY

The present investigation is exclusively based on secondary information. The study has been entirely based on secondary data and sources are Census of India, relevant issue, 2001 & 2011 and District Statistical Handbook-2004 & 2011 of Purba Medinipur. The tabulated data have been represented by cartographic methods (maps and graphs). To categorize the state into high, medium and low disparity regions the standard deviation grouping technique has been applied.

The Gender disparity in literacy has been computed with the help of following methods (after David Sopher, 1980)

$$GDI = \text{Log}\frac{X_2}{X_1} + \text{Log}\frac{200 - X_1}{200 - X_2}$$

Where, $X_2 > X_1$

GDI = Gender Disparity Index
X_2 = % of male literate
X_1 = % of female literate

In order to measure male-female disparities in literacy, the female literacy rate is taken as x_1 & male literacy rate x_2. It is because male literacy rate is generally more than that of the female literacy rate. The objective of taking log is reducing the levelling off effect (Sopher, 1980). The value of the index should always vary between + 1 and – l and in ideal case it should be zero. If it is negative then there is no disparity against x_2. Higher the value of the index greater is the disparity or vice-versa.
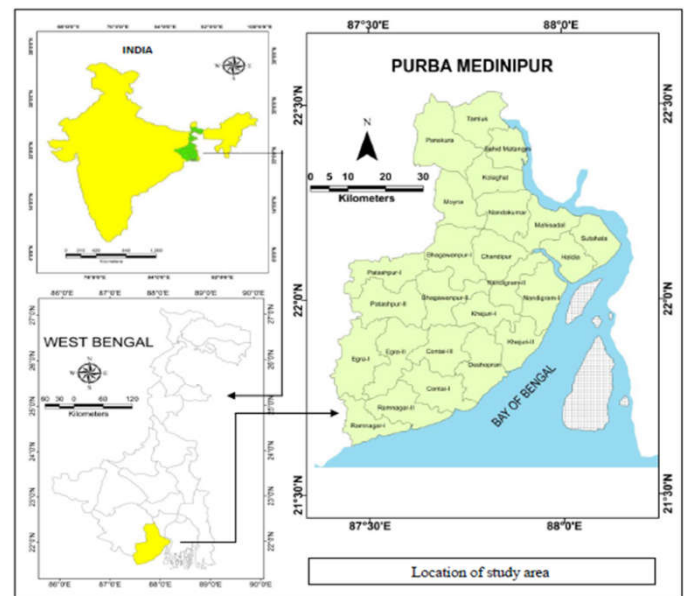

Fig 1 Location of study area

RESULT & DISCUSSION

The disparity in male-female literacy is a universal phenomenon prevailing in many parts of our country; similarly, the study region is also not free from the disparity. The reasons this disparity are deeply rooted in socio-economic aspects. Female education was considered a matter of little functional and social issue. In recent decades, the government has launched many programmes and policies to increase the rate of female literacy. Accordingly, the female literacy has been growing at a faster rate than that of males. It appeared from the fact that the male literacy rate has increased by 41.04% during 2001-2011. The corresponding figure for female was 47.35%. As a result, the male-female literacy gap has considerably narrowed down. However, there exists a disparity in rural-urban areas. Hence, in the present study an attempt has been made to understand regional variation in male and female literacy by employing the disparity index. The Gender Disparity Index (GDI) after David Sopher (1980) has been calculated for all the 25 blocks, and values are categorized into three groups. With the help of standard deviation grouping technique, the study region is divided into high, medium and low disparity regions. Accordingly the disparity was 0.1655 in 2001 and 2011 it came down to 0.0943 (Table-1, Fig-2 and Fig-3).

Table 1 Gender Disparity Index (GDI) in Literacy Rate, Purba Medinipur 2001 & 2011

Blocks	% of literacy to the total population in Purba Medinipur 2001				% of literacy to the total population in Purba Medinipur 2011			
	Total Literacy Rate	Male Literacy Rate	Female Literacy Rate	Gender Disparity Index (GDI)	Total Literacy Rate	Male Literacy Rate	Female Literacy Rate	Gender Disparity Index (GDI)
Tamluk	82.40	89.80	74.90	0.1339	88.62	93.24	83.74	0.0837
Sahid Matangini	81.80	90.50	72.40	0.1633	86.98	92.64	80.89	0.1040
Panskura-I	77.50	87.40	67.00	0.1877	84.31	90.23	78.07	0.1085
Kolaghat	77.60	87.00	67.60	0.1784	84.93	91.02	78.37	0.1127
Moyna	81.10	90.20	71.30	0.1711	86.33	91.95	80.24	0.1037
Nandakumar	77.70	86.60	68.30	0.1681	85.56	90.71	80.07	0.0945
Chandipur	79.30	87.90	70.30	0.1603	87.81	92.38	82.93	0.0834
Mahisadal	81.10	89.20	72.60	0.1500	86.21	91.25	80.84	0.0923
Nandigram-I	78.60	86.40	70.50	0.1452	84.89	88.86	80.71	0.0725
Nandigram-II	80.70	89.30	71.90	0.1575	89.16	93.21	84.88	0.0732
Sutahata	80.00	88.10	71.30	0.1525	85.42	90.45	80.09	0.0920
Haldia	81.35	89.45	72.50	0.1531	87.25	92.14	81.97	0.0899
Patashpur-I	80.40	90.30	70.00	0.1844	86.02	91.93	79.90	0.1067
Patashpur-II	77.00	86.70	66.80	0.1835	86.50	92.10	80.53	0.1025
Bhagawanpur-I	80.40	89.90	70.50	0.1761	88.13	93.38	82.50	0.0960
Egra-I	77.35	86.90	67.35	0.1800	84.96	90.94	78.72	0.1088
Egra-II	79.90	90.30	69.00	0.1939	86.47	92.99	79.45	0.1200
Khejuri-I	80.70	89.00	71.90	0.1549	88.90	93.19	84.36	0.0777
Khejuri-II	73.90	84.20	63.20	0.1969	85.37	90.68	79.80	0.0967
Bhagawanpur-II	83.70	91.60	75.30	0.1459	90.98	95.37	86.29	0.0795
Ramnagar-I	81.50	91.80	70.80	0.1898	87.84	93.76	81.72	0.1063
Ramnagar-II	83.30	92.90	73.30	0.1759	89.38	95.02	83.37	0.1024
Contai-I	83.70	92.50	74.50	0.1612	89.32	94.57	83.73	0.0954
Deshapran	85.10	91.70	78.10	0.1211	91.01	94.68	87.02	0.0670
Contai-III	84.30	92.50	75.50	0.1519	89.89	94.75	84.75	0.0878
District Total	80.20	89.10	70.70	x 0.1655 σ 0.0193	87.02	92.32	81.37	x 0.0943 σ 0.0137

It is clear from the fact that the literacy rates in the study region have remarkably increased (from 80.20% to 87.02%), and that helped in bringing down the disparity i.e. from 0.1655 (2001) to 0.0943 (2011).

Areas of High Disparity: During the study period i.e. from 2001 to 2011, all most all the blocks of the state witnessed declined movement in male-female disparity in literacy. In this regard in 2001 there were four blocks namely Panskura-I, Egra-II, Khejuri-II and Ramnagar-I which showed high disparity (range > 0.1848). In 2011, Panskura-I, Panskura-II, Egra-I & Egra-II had maintained the pace of high disparity (range > 0.1080), (Fig.2 & Fig.3). It is noticed that during the study period few of the blocks of Purba Medinipur had remained in high disparity. These blocks have disadvantages both in terms of natural resources & socio-economic condition. These blocks are subjected to the low level of cultural aspects.

Areas of Medium Disparity: In 2001, medium disparity (range 0.1655 - 0.1848) was identified in eight blocks of Purba Medinipur district, namely Kolaghat, Moyna, Nandakumar,

Table 2 Range of (GDI) in Literacy Rate, Purba Medinipur 2001

GDI Range	Name of Blocks	Total no. of Blocks
Low <0.1655	Tamluk, Sahid Matangini, Chandipur, Mahisadal, Nandigram-I, Nandigram-II, Sutahata, Haldia, Khejuri-I, Bhagawanpur-II, Contai-I, Deshapran, contain-III	13
Medium 0.1655-0.1848	Kolaghat, Moyna, Nandakumar, Patashpur-I, Patashpur-II, Bhagawanpur-I, Egra-I, Ramnagar-II	8
High > 0.1848	Panskura-I, Egra-II, Khejuri-II Ramnagar-I	4

Patashpur-I, Patashpur-II, Bhagawanpur-I, Egra-I & Ramnagar-II. In 2011, medium disparity (range 0.0943 – 0.1080) showed more blocks which earlier (2001) belonged to low disparity showed fall in literacy rate and fell under medium disparity.

Table 3 Range of (GDI) in Literacy Rate, Purba Medinipur 2011

GDI Range	Name of Blocks	Total no. of Blocks
Low <0.0943	Tamluk, Chandipur, Mahisadal, Nandigram-I, Nandigram-II, Sutahata, Haldia, Khejuri-I, Bhagawanpur-II, Deshapran, contain-III	11
Medium 0.0943-0.1080	Sahid Matangini, Moyna, Nandakumar, Patashpur-I, Patashpur-II, Bhagawanpur-I, , Khejuri-II, Ramnagar-I, Ramnagar-II, Contai-I,	10
High > 0.1080	Panskura-I, Kolaghat, Egra-I, Egra-II	4

Areas of Low Disparity: In 2001, low (range < 0.1655) disparity was observed in thirteen blocks namely Tamluk, Sahid Matangini, Chandipur, Mahisadal, Nandigram-I, Nandigram-II, Sutahata, Haldia, Khejuri-I, Bhagawanpur-II, Contai-I, Deshapran & contain-III of Purba Medinipur district where more than 80% of literacy rate was recorded. In 2011 same blocks had maintained the low disparity (range < 0.0943) status. Low disparity in these blocks in the study area may be attributed to traditionally maintain good human development, high literacy, less gender biasness, well economic development, and suitable environment etc.
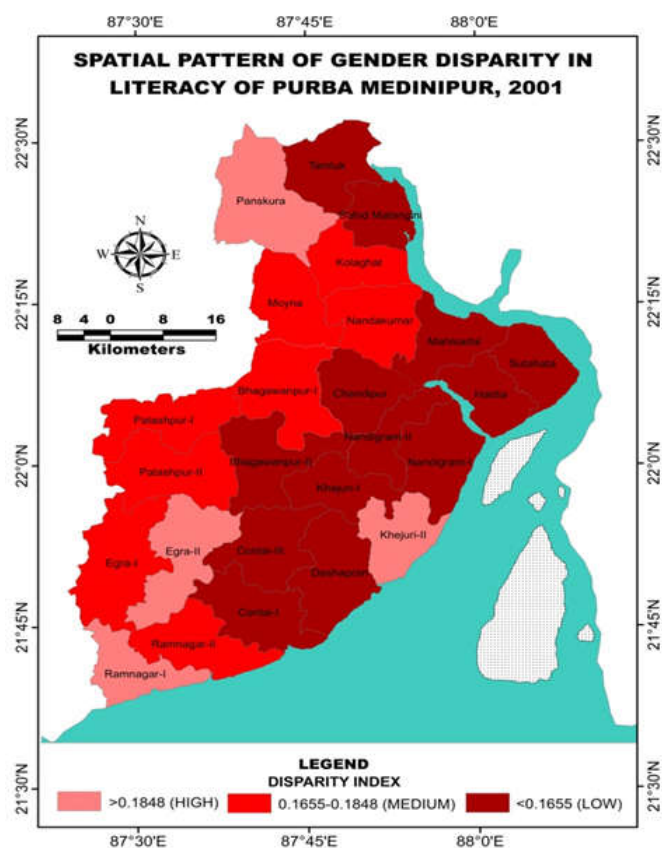
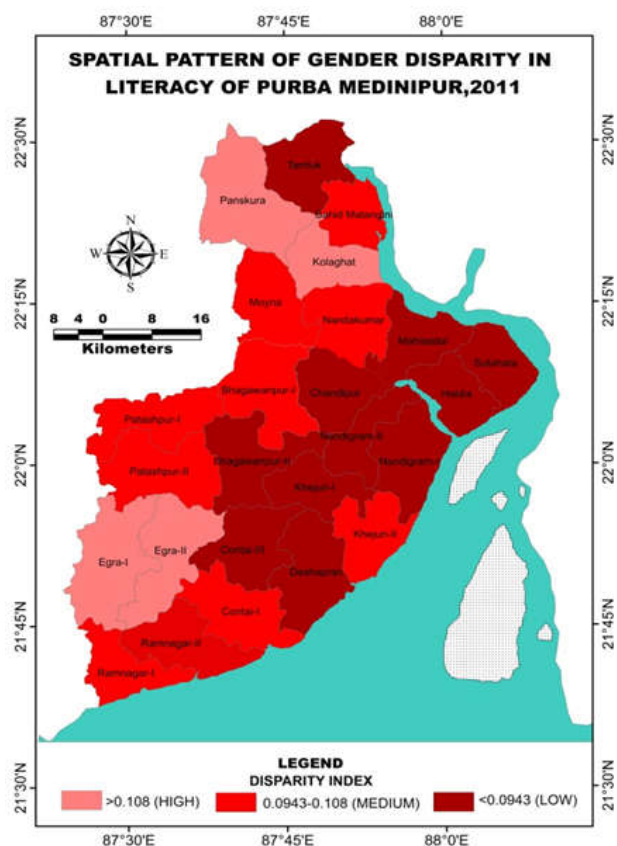**Fig 2** Spatial Pattern of Gender Disparity in Literacy of Puraba Medinipur District, 2001

Fig 3 Spatial Pattern of Gender Disparity in Literacy of Puraba Medinipur District, 2011

Correlation between literacy & other socio-economic components

There is no second opinion that the literacy is one of the prime factors, which determines development of any region. However, this too is dependent on socio-economic and cultural factors, these variables tend to increase or decrease the literacy status. It is well known that literacy level in any area or society is the net result of a complex set of interrelated factors. An analysis of relationship between literacy and different aspects of socio economic reality can give a clear picture. Therefore, in the present context an attempt has been made to identify the socio-economic factors, which seems to be significant in determining the level and changes in literacy rate and to examine the impact of these factors on literacy and urbanization, literacy and non-primary activities and literacy and primary activities.

There is a positive and significant correlation between urbanization and literacy (0.4028), workers engaged in non-primary activities and literacy (0.7560) and negative correlation between workers engaged in primary activities and literacy (-0.7549). This is proved from the fact the districts namely Tamluk, Haldia, Mahisadal, Chandipur, Deshapran and Contai-III have high level of urbanization and their proportion activities, have positive correlation and blocks, which represent more workers engaged in non-primary activities, have positive correlation and blocks, which have high percentage of workers engaged in primary activities show negative. It is interesting to note that urbanization promoted literacy and primary activities tend to lower the literacy.

The above noted correlation exercise shows an increase with an increase in urban population, persons engaged in non-primary activities and a decrease in gender disparity while literacy tends to decline with an increase in number of persons in primary activities.

CONCLUSION

It can be concluded that the area under area study has witnessed increase in literacy rate (from 80.20 % in 2001 to 87.02 % in 2011). However, it has been observed that there is a wide gap between urban-rural and male and female literacy rate. Female literacy rate (81.37%) is lower than the literacy rate of male (92.32%) population in 2011. Further, it is found that the status of female literacy in rural area especially Egra-I, Ramnagar-I is quite low. Gender bias (biasness between boys and girls) preferring to give education to the boys, low socio-economic status of women, and inaccessibility to educational facilities are the influential reasons for low literacy rate in rural females. Accessibility of education facilities of different orders and socio-economic awareness among the residents of urban area especially Tamluk, Haldia have led to higher proportion of literacy rate in urban areas. However, the disparity between urban and rural literacy has steadily declined over time.

It may be noted here that female literacy has been growing faster than of males, as result of which male-female literacy gaps has considerably narrowed down. Low socio-economic development, inaccessibility of education facilities, high superstition, and meagre natural resources are some of the potent factors for low literacy & high disparity. Less biasness,

traditionally maintained good human development, high literacy rate, healthy climatic conditions etc. may be important attributed factors for high literacy and low gender disparity.

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