

A Review of Gender Disparity in Education Sector in India

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Abstract

Education for all is must at one hand and a challenge on other for an all round development of third world society. Gender wise disparity in education has also remained as a head ace for a country like India. Indian women constituting 50% of the country's human resource, still faces literacy-gender-gaps with only 54.16% literate female. The present study is an attempt to evaluate the disparities in education sector in India along with their impact status based on the data procured from secondary sources. The disparity is calculated by Sopher's Disparity Index on male female literacy state-wise, age-wise in terms of levels of education, social-groups and residence. Finally by employing the technique of Spearman's Rank Correlation Coefficient, it has been observed that female education has significant impact on gender and human development. The study concludes that the essence of development lies in literating women by degendering that will pave way for better future by literating their kids.

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Keywords: Gender disparity, Sopher's Disparity Index, Spearman's Rank Correlation Coefficient, degendering.

Introduction

Education is a process of cognitive cartography, mapping experiences for finding various reliable routes from non-optimal states to optimal states of mind. Rabindranath Tagore analyses education as 'a right which enables individuals and communities to act on reflection'. Women education has remained a matter of prime concern in the present days and a special emphasis should be given for the all round development of female folk. It has been observed that education brings to reduction in inequality and improving the status of female within the family (Suguna, 2011). In the Post-Independence period, various institutional efforts have been taken to degender education and remove disparity. The University Education Commission (1948-49) had made various recommendations regarding women education. Nation Committee on women education was set up in 1958 chaired by Smt. Durgabai Deshmukh. The resolution on the National Policy of Education (1968) has also emphasized on women education. Article 15 of Indian Constitution prohibits any discrimination based on sex including education. Recently the Indian government has launched *Saakshar Bharat Mission* for female literacy. It aims to bring down

female illiteracy by half of its present level. The National Policy on Education (NPE) has sketched views to remove inequalities and disparities. The Eighth Five Year plan had an exclusive National Plan of Action for girl child. Despite several initiatives, a clear and significant disparity of female literacy rates still exists between rural and urban areas in India. The overall literacy rate in India is 65.38% while female literacy rate is 54.16%. Presently, 6 states in India have female literacy rates of below 60%. In Rajasthan, the female literacy rate is even less than 12%.

Objectives

In view of the above, an attempt has been made to review the present status of gender disparity in education sector in India. The specific objectives of the study are

1. to find out the disparity between male-female literacy statewide and age-wise in term of levels of education, social-groups and residence;
2. to evaluate the impact of female literacy on gender and human development in India.

Materials and Method

The study has been conducted based on secondary data. Secondary data has been gleaned from various official websites of Central Government. In addition, various journals and working reports are also scrutinized for shaping the study a geographical identity. Descriptive statistical techniques and simple cartographic presentation have been used for analyzing the data.

To measure the relative disparity between two groups, Disparity Index developed by David V. Sopher (1974) has been used for a specific time period. It can only be used when the values of variables are in terms of percentages. If X_1 and X_2 represent the respective percentage of value of variables of group 1 and 2, the disparity index (D) is:

$$D = \text{Log}(X_2/X_1) + \text{Log} [(Q-X_1) / (Q-X_2)]$$

Where, $X_2 \geq X_1$ (that X_2 should have higher value than X_1) and $Q=100$.

In case of perfect equality i.e. no disparity, the value of D will be 0. With the rising value of D, the disparity rises. Finally, the technique of Speraman's Rank Correlation Coefficient has been employed to measure the impact of women education in GDI as well as HDI in India

History of Women Education in India

Women's Education in Ancient India

Women had not good access to education in ancient India because of various social norms. During the Vedic period, however women was better placed but the right to access to education had lost gradually over passage of time. However, some of the eminent women like *Gargi*, *Maitrei*, *Apala*, *Lopamudra*, etc. had proved that women

education prevailed during the early Vedic period. The Indian scriptures like Rig Veda and Upanishads also mentioned about many sages and seers of women. In the early Vedic era, they enjoyed equivalent position and rights, however after 500 B.C, the position was started to decline. The Islamic invasion has also restricted freedom of the women.

Women's Education in Medieval and Colonial India

After the introduction of *Purdah* system, women education in medieval India was weakened and declined. Various customs and conventions of diverse religions have further deteriorated and depreciated the condition of women. Luckily, an array of socio religious movements has aided to the development of the women literacy. Indian women education has revived with the invasion of the British and with the advent of *Bhakti* movement. In the early centuries of the Christian era, the ordered form of women education was incorporated. Essential expansion was seen. Various movements were launched aiming to literate women.

Women's Education in Modern India

After post independent, Government of India was more aware of women education, which can be easily verified by the seemingly rise in literacy rate. Women education has become a compulsory concern resulting in the soar of female literacy rate. The 86th constitutional amendment has made elementary education is a fundamental of children between 6-14 years. *The Right to Free and Compulsory Education* was incorporated in the Constitution of India which guarantees free primary school education for both boys and girls up to age 14. The *Saakshar Bharat Mission* launched by the Government of India for Female Literacy also aims at to reduce female illiteracy and to spread education and awareness even in the most remote and rural parts of the nation.

Quantitative Measure of Disparity between Male-Female Literacy in India

While analysing the disparity between male-female literacy in India, it has been observed that Kerala has the highest female literacy rate (91%) among other states in India (Table-1). It is followed by North-East states (81%, excluding Assam), Delhi (77%), Goa (77%) and Assam (75%). Rajasthan (40%) scores the poorest rank. Similar experience can be observed in case of Bihar (42%), Chhattisgarh (48%) and Madhya Pradesh (49%).

Table 1. State wise disparity in literacy rate of male and female (7 years and above)

States	Male (%)	Female (%)	Disparity Index
Jammu & Kashmir	70	51	0.351
Himachal Pradesh	89	72	0.498
Uttarakhand	85	64	0.503
Punjab	81	68	0.302

Contd.

States	Male (%)	Female (%)	Disparity Index
Haryana	78	56	0.445
Delhi	92	77	0.536
Uttar Pradesh	75	52	0.442
Bihar	71	42	0.529
Jharkhand	73	48	0.467
Rajasthan	71	40	0.565
Chhattisgarh	72	48	0.445
Madhya Pradesh	75	49	0.494
North-East	90	81	0.325
Assam	83	75	0.212
West Bengal	78	65	0.281
Orissa	80	57	0.480
Gujarat	85	63	0.522
Maharashtra, Goa	89	71	0.519
Andhra Pradesh	69	49	0.365
Karnataka	81	62	0.417
Kerala	96	91	0.375
Tamil Nadu	81	65	0.361
India	79	58	0.435

Source: India Human Development Survey, 2004-05

The highest disparity between male-female literacy has been observed in Rajasthan (0.565) followed by Delhi (0.536), Bihar (0.529), Gujarat (0.522), Maharashtra (0.519), Uttarakhand (0.503), Himachal Pradesh (0.498) and Madhya Pradesh (0.494). The least male-female literacy disparity has been found in Assam (0.212). The similar trend can be observed in West Bengal (0.281), Punjab (0.302), North-East states (0.325), Jammu and Kashmir (0.351), Tamil Nadu (0.361), Andhra Pradesh (0.365), and Kerala (0.375).

Table 2: Literacy rates among different age groups

Age Groups	Male (%)	Female (%)	Disparity Index
7-9	82	77	0.134
10-14	92	88	0.195
15-19	89	79	0.333
20-29	85	66	0.465
30-39	77	50	0.525
40-59	70	38	0.581
60 +	54	19	0.699

Source: India Human Development Survey, 2004-05

It has been observed that the lower the age group, higher is the literacy rate and male-female literacy disparity. It is clear from Table-2 that the age group 60 and above has a high male-female literacy disparity (0.699) with mere 19% female literacy. This Senile population group has suffering much from gender disparity

than the new generation. It is followed by age groups of 40-59 and 30-39 bearing a disparity of 0.581 and 0.525 respectively. The younger generations contributed comparatively high male-female literacy. It has been observed that the age-group of 7-9 has the lowest disparity index i.e. 0.134. This is due to higher number of enrolments in primary classes with negligible discriminations on any bases. 10-14 age groups have disparity a bit higher than its preceding group. This group has experienced many dropouts. Moreover the poor parents prefer girls to stay back home for domestic help which will aid their experience in the laws' house. A vast disparity of literacy rate i.e. 0.333 has been noticed in 15-19 age groups. The percent of male literacy rate is less due to a tendency of drop-outs in this stage. Boys of the poor families eventually migrated to big cities in search of job. In this phase many girls get married. It has been observed that the male-female disparity is 0.465 in the age group of 20-29. Marriage at the early age and children has played a great role in engulfing such disparity.

Table 3: Literacy rate among different social groups

Social Groups	Male (%)	Female (%)	Disparity Index
Hindu (higher caste)	91	74	0.551
OBC	80	57	0.480
SC	72	50	0.410
ST	66	44	0.393
Muslim	72	55	0.323
Other religion	91	84	0.285

Source: India Human Development Survey, 2004-05

Religion, ethics, race, caste etc. are the important factors in influencing literacy rate. In a country like India, where people of various faiths, religions, tradition, customs, cultures, castes etc. these factors can never be avoided. The Hindu (higher caste) social group has male literacy of 91% and female literacy of 74%, though comparatively high even there is a substantial gap between male-female educations. This disparity can also be observed through Sopher's Disparity Index which is 0.551 (Table-3). The other religions like Christian, Sikh, Buddhist, Jain, etc. have less gender disparity index (0.285). The tendency to educate all along with least gender discrimination in other religion is also prominent. The existence of these religions came out of preaching which attracted both the sexes while the norms and rights were made for both. This aided many to transform into other religion. Schedule Caste (SC) has a disparity of 0.410 with 72% male and 50% female literacy rate. Schedule Tribe (ST) category has also poor male female literacy performance. 66% of male and 44% of female are literate which indicates that they are still lagging behind in terms of female education. Interestingly Muslim community has a male-female literacy disparity of 0.323, which is less than its preceding social groups. But the fact is that both SC and Muslim male community have a literacy rate of 72%. The women have a comparatively less literacy rate (55%) than its counterpart.

Table 4: Gender disparity in the levels of education

Levels of Education	Male (%)	Female (%)	Disparity Index
Illiterate	38	25	0.265
Primary	79	47	0.628
Secondary	85	60	0.577
Higher Secondary	92	72	0.651
Under Graduate	94	75	0.718
Graduate	96	85	0.627

Source: India Human Development Survey, 2004-05

Literacy is actually the way by which we can pave and tackle the problems. There is broad scope to inculcate knowledge through education even in daily work. Levels of education are the good determinant to enhance the scope for skilled work force. 38 % of male and 25% of female population in India is illiterate. The fact is that larger percentages of male population are deprived from the gift of education. Thus the disparity (0.265) may be positive i.e. women are lagging behind in illiteracy, but the sense is negative i.e. the rest are literate. The primary education level indicates while 79% of male has acquired the knowledge, the female participation is quite poor with only 47%, and thus the disparity has risen to 0.628. A quick view to the table reveals that female literacy is lagging behind the male to a great extent. The highest gap has been observed in under graduate category with a disparity of 0.718 (Table- 4).

Table 5: Male-female literacy rate according to different places of residence

Places of Residence	Male(%)	Female(%)	Disparity Index
Metro	93	82	0.465
Other urban	87	74	0.371
More developed village	77	56	0.420
Less developed village	73	48	0.467

Source: India Human Development Survey, 2004-05

Literacy and learning directly depends on the surrounding environment and place of residence. Less developed regions generally lags behind developed regions with rare exceptions thus, mass literacy is insulate. Table-5 clearly depicts that urbanization directly influences mass literacy rate. Deficiency of productive works in rural areas might have been a determinant factor for rural laggings. It has been observed that male literacy is 93% in metro, 87% in other urban, 77% in more developed village and 73% in less developed village. Tendency in education is concentrated in developed regions. Even the rear villages have a tendency to at least literate their boy child. While female literacy is 82% in metro, 74% in other urban, 56% in more developed village and 48% in less developed village. There is a huge gap between urban and village literacy rates. The tendency to marriage and

serving laws house for domestic help has compelled many girls away from studies. Less developed villages has the highest disparity of 0.467. Metro has a disparity of 0.465 which is also high. This may be due to the fact that large cities and metros have the problem of slum and other labour class people dwelling in situ. Other urban areas and more developed village have the disparity of 0.371 and 0.420, respectively.

Impact of Women Education upon Gender Development Index (G.D.I.) and Human Development Index (H.D.I.) of the country

In a welfare state like India, female literacy plays a greater role in shaping prospects of a country. It has a good impact on Gender Development and Human Development. According to Jawaharlal Nehru, “If you educate a man you educate an individual, however, if you educate a women you educate a whole family. Women empowered means mother India empowered”. Female literacy also tends to empower women. To justify the aforesaid, the below jotted method has been employed.

Table 6. Correlation between female literacy and gender development

State	Rank based on Female Literacy (R_x)*	GDI Rank 2007-08 (R_y)**	Rank Difference (di)	di ²
Jammu & Kashmir	17	10	7	49
Himachal Pradesh	6	5	1	1
Uttarakhand	11	9	2	4
Punjab	7	6	1	1
Haryana	15	11	4	16
Delhi	3.5	3	0.5	0.25
Uttar Pradesh	16	22	-6	36
Bihar	22	23	-1	1
Jharkhand	20	17	3	9
Rajasthan	23	19	4	16
Chhattisgarh	21	18	3	9
Madhya Pradesh	18	21	-3	9
N.E States (except Assam)	2	8	-6	36
Assam	5	15	-10	100
West Bengal	9	13	-4	16
Orissa	14	20	-6	36
Gujarat	12	12	0	0
Maharashtra,	8	4	4	16
Andhra Pradesh	19	16	3	9
Karnataka	13	14	-1	1
Kerala	1	2	-1	1
Tamil Nadu	10	7	3	9
Goa	3.5	1	2.5	6.25
n=23				$\Sigma di^2=381.5$

Source: *Compiled by author from India Human Development Survey, 2004-05 (Table 1)

**Gendering Human Development Indices: Ministry of Women and Child Development of India, Govt. of India, 2009.

According to Spearman's Rank Correlation Coefficient i.e. $\rho = 1 - \frac{6\sum di^2}{n^3 - n}$

It has been observed that the value of $r = +0.811512$. This shows a positive relation between the impacts of female literacy on GDI of India. It means that higher female literacy adds to better gender development. Gender Development has also an effect on Human Development indirectly. It has been found that the value of $r = +0.802619$. It signifies that fact that higher female literacy adds to better human development.

Table 7: Correlation between female literacy and human development

State	Rank based on Female Literacy (R_x)*	HDI Rank 2007-08 (R_y)**	Rank Difference (di)	di ²
Jammu & Kashmir	17	10	7	49
Himachal Pradesh	6	3	3	9
Uttarakhand	11	14	-3	9
Punjab	7	5	2	4
Haryana	15	9	6	36
Delhi	3.5	2	1.5	2.25
Uttar Pradesh	16	18	-2	4
Bihar	22	21	1	1
Jharkhand	20	19	1	1
Rajasthan	23	17	6	36
Chhattisgarh	21	23	-2	4
Madhya Pradesh	18	20	-2	4
North-East	2	6	-4	16
Assam	5	16	-11	121
West Bengal	9	13	-4	16
Orissa	14	22	-8	64
Gujarat	12	11	1	1
Maharashtra,	8	7	1	1
Andhra Pradesh	19	15	4	16
Karnataka	13	12	1	1
Kerala	1	1	0	0
Tamil Nadu	10	8	2	4
Goa	3.5	4	-0.5	0.25
n=23				$\Sigma di^2=399.5$

Source: *Compiled by the author

**India Human Development Report, 2011

Conclusions and Policy Implications

Women education deals with entire female realms and their individual fields of both worldly phenomena and uniquely feminine narratives that have no literal, physical existence. The main reason behind educating women in India is that 'a literate mother will never have an illiterate child'; thus educating women means an educated tomorrow. Lower educational levels of women do adversely affect the

health and living conditions of children. Further, educated women can also help in the lessening of child death rate and expansion of population. There is a correlation between women education and their economic growth. Education has led to their economic independence and equality with men counterpart.

There is a large disparity between female literacy rates in different states. For instance, in Kerala, female literacy rate is about 86%, while Bihar and Uttar Pradesh this is around 55-60%. Consequently Kerala has the lowest infant mortality rate, while Bihar and Uttar Pradesh have lowest life expectancies.

The determinant of such disparity in literacy is basically due to the desire of male child and consequently rising negligence for the girl child. Therefore, society has a great role to play. Girl child is considered for laws' house and thus they are involved in domestic chores. It results to low enrolment of girls, low retention rates, high dropout rates, etc. Absence of female teachers in schools, establishment of schools in faraway places, etc. are some decelerating factors for most orthodox families for letting their girls educated. Customs and traditions along with family norms are some important factors for lowering down the female illiteracy.

Eliminating stereotyping to women folk can to certain extent be possible by encouraging co-education (Rani, 2010). Universalization of elementary education with emphasis to girl child can oppress the issue to some extent. Disparity can also be treated by special and exclusive scholarship schemes for girl children. Degendering education at grass root levels, especially at home can enhance the scope of lessened gender discrimination in education sector. Reservation for female can not only provide employment of women, but may encourage mass to involve in such activity.

References

- Agarwal, S.P. 2001. 'Women's Education in India (1995-98) Present Status, Perspective, Plan, Statistical Indicators with Global View. Vol. III' Concept Publications Co, New Delhi.
- Bandhopadhyay, M. and Subrahmanian, R. 2008. 'Gender Equity in Education: A Review of Trends and Factors'. Creative Pathways to Access Research Monograph No. 18. Consortium of Research on Educational Access, Transitions and Equity. National University of Educational Planning and Administration (NUEPA), New Delhi.
- Desai, M. 2010. 'Hope in Hard Times: Women's Empowerment and Human Development.' United Nations Development Programme, Human Development Research Paper, 2010/14.
- Desai, S.B., Dubey, A., Joshi, B.L., Sen M, Shariff, A. and Vanneman, R. 2010. 'Human Development in India, Challenges for a Society in Transition', Oxford University Press, New Delhi.
- Gupta, N.L. 2003. 'Women's Education through Ages', Concept Publications Co, New Delhi.
- Malhotra, S. 2011. 'Indian Human Development Report 2011, Towards Social Inclusion' Indian Institute of Applied Manpower Research, Planning Commission, Government of India, Oxford University Press, New Delhi.
- Rani, S.G. 2010. 'Women's Education in India- An Analysis', *Asian-Pacific Journal of Social Sciences*. **II**(1):106-124.

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Rao, R.K., 2001. 'Women and Education'. Kalpaz Publications, Delhi.

Sopher, D.K. 1974. 'Measurement of Disparity'. *The Professional Geographer*, **26**(4):389-392.

Suguna, M. 2011. 'Education and Women Empowerment in India', *Zenith International Journal of Multidisciplinary Research*. **1**(8):196-204.