



## Disparity in Literacy and Sex Ratio of Ahmednagar District

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### Abstract

*The present paper examines the gender disparity in Ahmednagar district based on literacy and sex ratio using secondary data. We found that literacy rate in study area has been 75.3 percent in 2001, which has increased to 79.05 percent in 2011. The sex ratio has observed as 940 in 2001 and 939 in 2011 showing no improvement in one decade. Further, the disparities regarding the both in rural and urban have been identified in the study area as in the state and country. Obviously urban sex ratio is higher than that in rural area, i.e. 942 and 938 respectively according to the 2011 census. However, the study has revealed that there is reduction in gender disparities from 2001 to 2011 though marginally. The paper attempts to discuss the causes for the same.*

**Keywords:** Gender, Sex ratio, Literacy, Rural, Urban, Disparity Index.

### I. Introduction

Literacy has long been considered as one of the significant demographic indicators of socio-economic development as it is instrumental in improving productivity of an individual and for society as well (Schultz, 1961). Literacy alters perceptions, attitude and behavior as it generates awareness and builds personality in such a way that development and welfare of the community and in turn the nation may be promoted (Sengupta and Guha, 2002). The spill over benefits of education might be of greater than the direct financial benefits. This is mainly because education stimulates not only present generation but the generations to come. A number of studies have highlighted the significant role that women's education plays in the development of society and the associated problems of girls' education. Girl's education affects the economic well-being of a country including Gross National product, per capita income, female participation in work force, self-employment, participation in the informal sector and market and home production (Mishra, 2002). According Sengupta and Guha, (2002) women's education is instrumental in reducing fertility and infant and child mortality rates in improving the enrolment. Musmade (2011) has considered literacy and sex ratio as the factors along with other indicators to understand levels of human resource development at village level.

### II. Objectives

The main objective of this study is to analyze tehsil wise gender disparities in literacy and sex ratio of Ahmednagar district during 2001 to 2011 to understand the cause and effect relationship with at micro level.

### III. Study Area

Ahmednagar is the native district of the first author and hence selected for the present exercise. The district is situated partly in the upper Godavari basin and partly in the Bhīma basin occupying a somewhat central position in Maharashtra state. It extends from 18 0 2' to 19 0 9' North latitudes and from 73 0 9' to 75 0 5' East longitudes covering about 17412 sq. km. geographical area which is 5.5% of the state. The rural area encompasses 16945.73 Sq. Km. while urban 466.27 Sq.Km. The total population is about 4543159 (2011) with a density of 266/sq km and literacy, 79.05%.

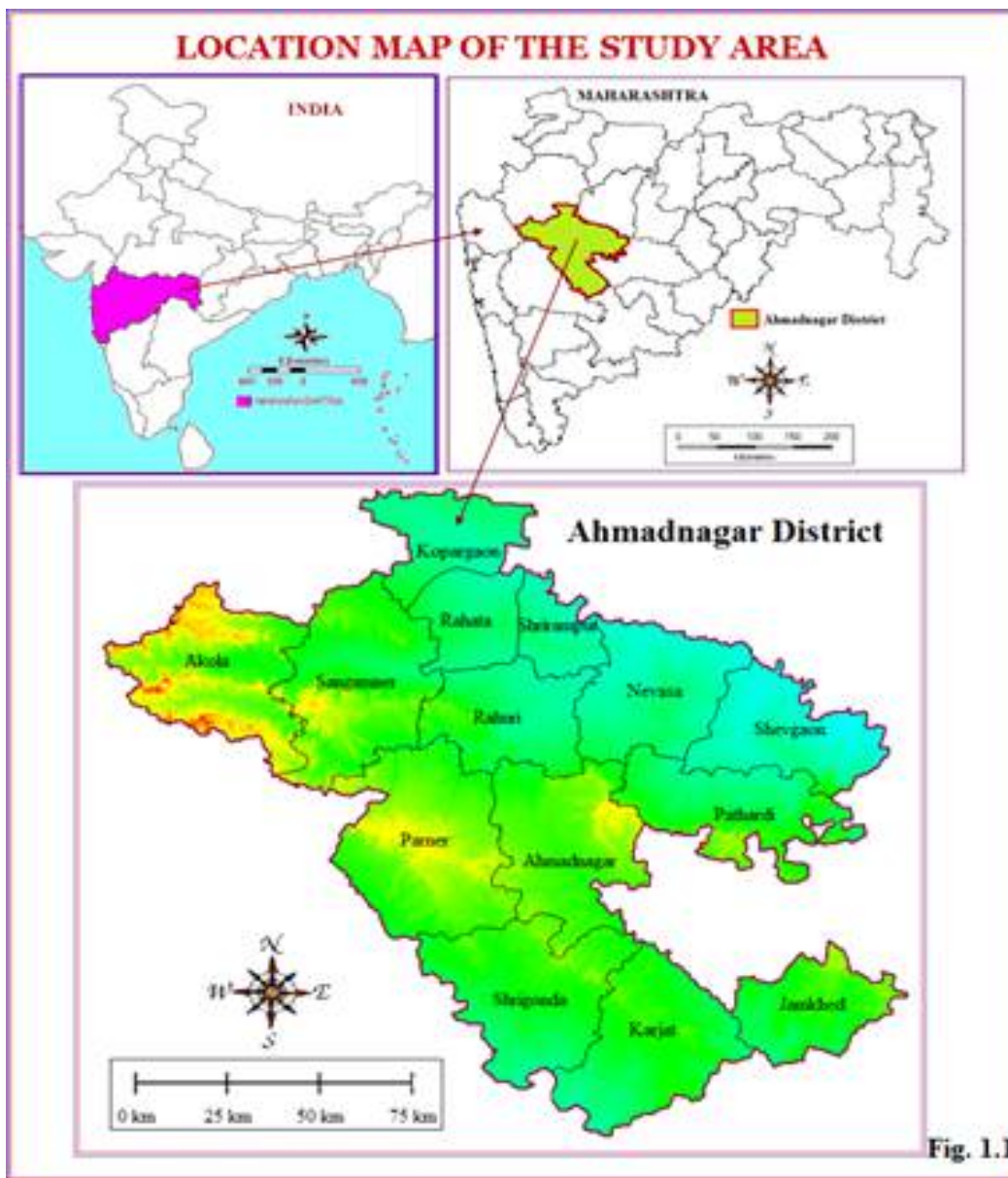


Fig. 1.1

Urbanization in the district is as low as 20.09%. The sex ratio of Ahmadnagar district has been 939 and literacy rate, 79.05 percent. Ahmadnagar district has 14 tehsils namely Nagar, Rahuri Shrirampur, Nevasa, Shevgaon, Pathardi, Jamkhed, Karjat, Shrigonda, Parner, Akola Sangamner, Kopergaon and Rahata. The district has a great deal of disparity of levels of development owing to some irrigated tracks in Shrirampur, Kopergaon, Rahata, Rahuri, Sangamner, tehsils and dominance of rain fed agriculture in Karjat, Parner, Jamkhed, Pathardi, etc. It becomes interesting query about disparity regarding literacy and sex ratio.

#### IV. Database And Methodology

The present research work is based on secondary data obtained from district census handbook and statistical abstracts of Ahmednagar district. Other various sources of secondary data have been utilized such as internet, books and research article. Literacy rate has been computed for the population above 6 years. For the measurement of male female disparity in literacy, the Sopher's Disparity Index (1974) modified by Kundu and Rao (1983) has been employed. Using simple ratio technique sex ratios at tehsil level have been obtained. Bar graphs have been used for underlining the disparity at gross level. The computational work has been based on following simple formulae:

$$1) \quad \text{Literacy Rate} = \frac{\text{Number of Literates}}{\text{Total Population above 6 yr}} \times 100$$

#### 2) David Sopher's Disparity Index:

Sopher's Disparity Index (Sopher DIs, 1974) is a well-accepted measurement technique to identify the disparity between the groups. Here, disparity between rural and urban areas has been computed using the following formula (Kundu and Rao, 1986; Mulimani and Pujar, 2015; Biswas, 2016).

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

Where, **DI** = Disparity Index

**X2** = Percentage of Male Literates, **X1** = Percentage of Female Literates,

Disparity Index technique is useful in measuring relative disparity between two variables. The value of DI is zero in case of perfect equality. If the value is more disparity is greater (Raju, 1991; Biswas, 2016). The present study has applied similar formula to compute disparity index in sex ratio on the basis of spatial variation in rural and urban areas.

#### Results And Discussion:

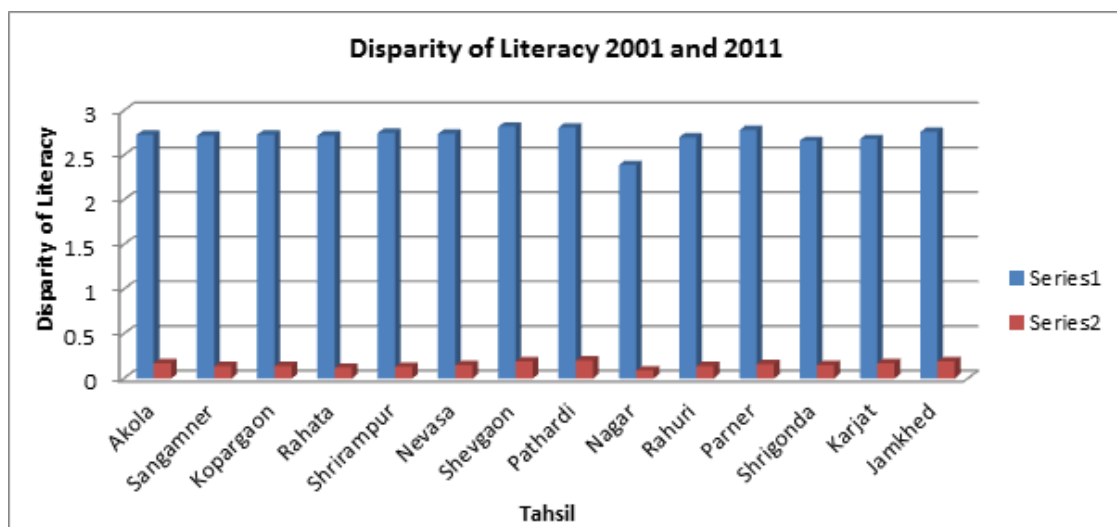
##### V. Disparity in Literacy of Ahmednagar District

Ahmednagar district has literacy rate 79.05% in 2011 and 75.3% in 2001. The male–female disparity has been observed to be 0.4205 in 2001 and 0.2772 in 2011. The table (Table No.1) depicts that the literacy rate in the study area varied from a minimum of 72.62% in Jamkhed tehsil to a maximum of 86.34% in Nagar tehsil of the district. The male literacy is 86.07 percent while female, 69.35% in 2011. It shows a wide gap of 16.72%. Maximum male literacy has been observed in Nagar tehsil (91.47%) while minimum (82.31%) in Jamkhed tehsil. The previous census has recorded a maximum literacy (91.8%) in Nagar tehsil and minimum (80.7%) in Jamkhed. This means that backward character of Jamkhed tehsil has not been changed in the decade. It is interesting to observe that disparity in male female literacy has decreased by 1.52% from 2001 to 2011 because of increase in literacy rates in the backward tehsils. Highest disparity of male–female literacy has been observed in Shevgaon tehsil (0.19%) because of wide gap from male to female literacy. This kind of phenomenal increase in disparity may be attributed to migration of educated males in the town. Lowest disparity has been observed in Nagar tehsil (0.09%) indicating the signs of balanced demographic development in male and female. It may be interesting to note that decadal increase in female literacy is about 4% while in male is less than 1% in the tehsil.

**Table - 1 Disparity of Literacy, 2001-2011**

Sr.No	Tehsil	Male 2001	Female 2001	Total 2001	Disparity of Literacy	Male 2011	Female 2011	Total 2011	Disparity of Literacy
1	Akola	82.1	57.6	70.0	2.73	84.09	65.5	74.85	0.17
2	Sangamner	85.8	64.9	75.5	2.72	87.58	71.98	79.96	0.14
3	Kopargaon	85.2	63.3	74.6	2.73	87.58	71.68	79.84	0.14
4	Rahata	87.5	68.5	78.2	2.72	88.72	75.13	82.08	0.12
5	Shrirampur	87.7	67.8	78.0	2.75	89.27	74.8	82.12	0.13
6	Nevasa	84.7	62.3	73.8	2.74	86.53	70.05	78.51	0.15
7	Shevgaon	83.1	56.5	70	2.82	84.15	63.42	73.94	0.19
8	Pathardi	83.3	57.1	70.4	2.81	84.98	63.85	74.74	0.20
9	Nagar	91.8	76.8	84.6	2.39	91.47	80.09	86.34	0.09
10	Rahuri	85.5	65.1	75.6	2.70	87.42	71.65	79.74	0.14
11	Parner	83.9	59.2	71.5	2.78	84.23	66.78	75.64	0.16
12	Shrigonda	83.6	62.8	73.4	2.66	84.09	67.88	76.25	0.15
13	Karjat	82.2	59.5	71.2	2.68	82.57	64.98	74.11	0.17
14	Jamkhed	80.7	54.3	67.8	2.76	82.31	62.26	72.62	0.19
	<b>Total</b>	<b>84.7</b>	<b>64.3</b>	<b>75.3</b>	<b>2.67</b>	<b>86.07</b>	<b>69.35</b>	<b>79.05</b>	<b>0.15</b>

Source: Compiled and Computed from Census Data



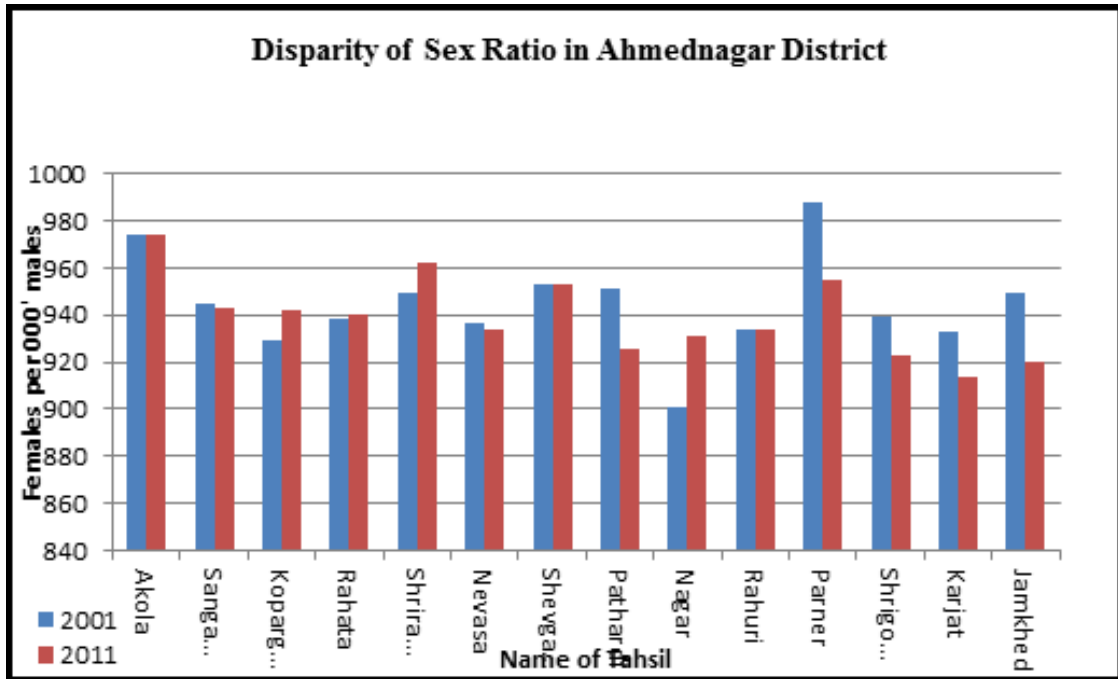
## VI. Disparity in Sex Ratio of Ahmednagar District

Sex ratio is one of the important demographic factors that indicate the status of women in a particular society. A social system with higher sex ratio itself shows the higher status of women (Melorose, Perroy, & Careas, 2015).

Table - 2 Sex Ratios in Rural and Urban of District, 2001-2011

Sr.No	Tahsil	Total 2001	Rural 2001	Urban 2001	Total 2011	Rural 2011	Urban 2011
1	Akola	974	974	-	974	976	918
2	Sangamner	945	951	921	943	942	950
3	Kopargaon	929	931	926	942	936	965
4	Rahata	938	941	917	940	942	932
5	Shrirampur	949	941	963	962	950	991
6	Nevasa	937	937	-	934	934	0
7	Shevgaon	953	953	-	953	953	0
8	Pathardi	951	937	906	926	927	913
9	Nagar	901	934	881	931	929	932
10	Rahuri	934	937	926	934	934	933
11	Parner	988	988	-	955	955	0
12	Shrigonda	939	939	933	923	921	940
13	Karjat	933	933	-	914	913	928
14	Jamkhed	949	952	940	920	911	955
	<b>Total</b>	<b>940</b>	<b>948</b>	<b>908</b>	<b>939</b>	<b>938</b>	<b>942</b>

Source: Compiled from Census



The sex ratio of the district in 2011 has been recorded as 939 females per thousand males are higher than the sex ratio of Maharashtra state (929). For understanding spatial variation the tehsil wise information is tabulated (Table No. 2) and also represented using bar chart. The census data have shown that the highest sex ratio (988) has been observed in Parner tehsil and the lowest (901) in Nagar tehsil. The tehsil wise sex ratios have been compiled in the table (Table No. 2). So far as decadal

change from 1991 to 2011, it has been observed that the seven tehsils have established increasing trend while other seven, decreasing one.

According to 2001 census the maximum sex ratio is recorded in Parner tehsil (988), while minimum in Nagar tehsil (901). Similarly there are wide disparities from Rural to Urban sex ratio. The maximum rural sex ratio in 2001 has been observed in Parner tehsil (988) while minimum in Kopergaon tehsil (931). The urban sex ratio in 2001 it is recorded highest in Shrirampur tehsil (963) and minimum in Nagar tehsil (881).

According to 2011 census Akola tehsil has maximum sex ratio (974) while Karjat has minimum (914). In case of rural sector Akola (976) stands first and Jamkhed (911) the last in terms of sex ratio. The urban sex ratio in 2011 has been highest in Kopergaon tehsil (965) and lowest in Pathardi tehsil (913). However, it must be noted that urbanization in Pathardi tehsil is the quite recent while the same in Kopergaon tehsil is older one. Obviously, recently developed towns show rural urban migration with the majority of males. It is interesting to note that the old city like Ahmednagar has shown positive change in sex ratio, i.e. from 908 to 942 per thousand. It may be added here that improvement in sex ratio might be indicating decrease in female feticides in the city.

### **Conclusion**

The spatial variation of literacy in Ahmednagar district shows a wide gap of 16.72 percent literacy from male to female. The minimum male literacy is in Jamkhed tehsil (82.31%) and maximum in Nagar tehsil (91.47%) as the impact of urbanization. The observation that minimum female literacy (62.26%) percent in Jamkhed tehsil and maximum (80.09%) in Nagar tehsil may be attributed to urbanization and concurrent development reflecting leverage to educational facilities. The persistence of wide disparities from the male–female literacy rates clearly speaks about low level of human resource development and puts forth the need for strategic planning. It is, however, encouraging to note that sex disparity in literacy in the district has been gradually decreasing during the last decades. This is the indicative of increasing spread of female education in different tehsils of Ahmednagar district.

The spatial variation of rural and urban sex ratio shows that urban sex ratio is increasing in the district. In the district five tehsils viz. Kopergaon, Rahata, Shrirampur, Nagar and Rahuri have recorded increasing trend in sex ratio. On the contrary, the tehsils like Sangamner, Nevasa, Pathardi, Shrigonda, Karjat, Jamkhed and Parner have shown decreasing trend. This point must be attended carefully as these tehsils cannot be considered as free from female feticides. The tehsils like Akola, Shevgaon and Rahuri having very low level of urbanization have very low urban rural disparity in sex ratio. Overall in the urban areas in the district sex ratio is increasing. It is certainly a positive sign of demographic development. The study concludes that understanding of spatio-temporal changes in male female literacy and rural urban sex ratio can be useful to identify the issues related to urbanization, population growth and human resource development. Such studies may be useful for developing policy instruments to resolve the issues.

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