Investigation of Sex Ratio in Scheduled Castes (SC) in Ahmednagar District

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Abstract: *This paper attempted to examine and map the spatio-temporal changes in the sex ratio of the Scheduled Castes (SC) community using tahsil level data obtained from the 2001 and 2011 census of Ahmednagar District. Census 2001 indicate that District had registered 958 females per 1000 males, Akole had the highest sex ratio with 1002 whereas Rahuri had the lowest with 932, while in 2011 district shows an increase of 968 females per 1000 male but on tahsil level, great regional disparities in sex ratios among SC community were observed. The highest sex ratio had been observed in Shrirampur (1000) whereas the lowest was in Shrigonda (951). There were five tahsils namely, Shrirampur (32), Shevgaon (26), Rahuri (22), Kopergaon (17) and Parner (13) recorded positive change whereas Jamkhed (-31), Akole (-19), and Pathardi (-16), recorded negative change during 2001-2011. With the decreasing trend of sex ratio, some of the common reasons put forward are son preference, neglect of girl child, lack of medical facilities, and low literacy rate.*

Keywords: Sex Ratio, Spatio-temporal change, son preference

1. Introduction

The sex ratio may be expressed as the number of females per thousand males which is the basic demographic determinant of population change. Sex Ratio are important for various types of planning and the analysis of other demographic characteristics, such as mortality, fertility, marital status, economic characteristics, etc. The proporation of twosexes is fundamental to geographic area analysis of an area because it not only an important feature of landscape but also influences the other demographic elements (Trewartha, 1969). Shyrock (1976) observed the profound effect of the propotation of two sexes upon the other demographic elements like population growth, marriage rate, occupation structure. The balance between the two sexes affects the social and economic relations within a community (Chandana 2006). The female per thousand males (sex ratio) is considered an important index of economy prevailing in an area and is usedful tool for regional analysis (Maurya, 2014).

Scheduled Caste population constituted 16.6% of the total population of India, 11.81 % of the total population of Maharashtra State, and 12.62 % of the total population of Ahmednagar district in the 2011 Census. In Maharashtra, sex ratio is in the favour of males, the sex ratio of the SC population in Maharashtra was 952 females per 1000 males in 2001 which further enhanced 962 females per 1000 males in 2011 while in the Ahmednagar district it was 958 females per 1000 males in 2001 it reached 968 females per 1000 males in 20011. The data reveals that SC sex ratio increased during 2001 to 2011, this improvement in state has been possible due to the decline in female mortality because of improving health care facilities during 2001 to 2011.

In this study attempted to examine the spatio-temporal changes in the sex ratio of the Scheduled Castes (SC) community using tahsil level data obtained from the 2001 and 2011 census of Ahmednagar District for the better policy planning to improvement in the socio-economic sonditions of SC community in Ahmednagar district.

2. Study Area

Ahmednagar district is the largest district of Maharashtra state with a geographical area of 17 418 sq. km. which is 5.66 percent of the total area of the State. It lies between 18° 2' N to 19° 9' N latitude and 73° 9' E to 75° 5' E longitude with covering 14 tahsils. The climate of the region is characterized by hot summers and general dry throughout the year except during the southwest monsoon season. The mean maximum temperature is 39.1°C and the mean minimum temperature is 12.3°C. The average annual rainfall in the district is 568.7 mm. about 77 percent of the annual rainfall in the district is received during the SW monsoon season (June–September). The population of the district is 45, 43, 083 of this 573698 (12.62 %) belongs to Scheduled Castes including 291521 male and 282177 female population.

3. Objectives Of Study

To examine the spatio-temporal changes in the sex ratio of the SC community in Ahmednagar District and Mapping the spatio-temporal changes in the sex ratio of SC using GIS techniques.

4. Database & Methodology

For the present study, tahsil has been selected as a basic unit of investigation. The period selected for the present study is during 2001-2011. The present study is entirely based on secondary data which is collected from the Census Handbook of Ahmednagar 2001 and 2011. The SC community sex ratio was computed by using the following formula through MS Excel and SPSS software.

$$\text{Sex Raio} = \frac{Pf}{Pm} X\ 1000$$

Where,

Pf = Population of female
Pm = Population of male

Maps prepared for express decadal spatio-temporal changes in sex ratio and district delimited into high, medium, and low sex ratio areas using Arc GIS 10.4 software. Lastly, based on findings, suggestions have been given to improve the sex ratio of the SC community.

5. Results and Discussions

Table reveals tahsilwise sex ratio pattern in Ahmednagar district. According to 2001 and 2011 Census Hnadbook, Ahmednagar district, SC sex ratio was 958 females per 1000 males in 2001 it reached 968 females per 1000 males in 20011. The highest sex ratio was recorded in Shrirampur 1000 female per thousand males while the lowest was observed in the Shrigonda tahsil with only 951 female per thousand males in 2011.

**Table1:** Spatial pattern of Sex Ratio in Ahmednagar during 2001-2011

Sr. No.	Name of Tahsil	Sex Ratio (2001)	Sex Ratio (2011)	Absolute Change	Change in %
1	Akole	1002	983	-19	-1.89
2	Sangamner	955	967	12	1.25
3	Kopergaon	950	967	17	1.78
4	Rahata	968	972	4	0.41
5	Shrirampur	968	1000	32	3.30
6	Nevasa	956	960	4	0.41
7	Shevgaon	957	983	26	2.71
8	Pathardi	970	954	-16	-1.64
9	Nagar	956	965	9	0.94
10	Rahuri	932	954	22	2.36
11	Parner	979	992	13	1.32
12	Shrigonda	940	951	11	1.17
13	Karjat	951	957	6	0.63
14	Jamkhed	983	952	-31	-3.15
	District	**958**	**968**	**10**	**1.04**

(Source: Computed by Researcher)

The SC sex ratio in Ahmednagar ditrict to be increased from 958 to 968 during 2001 to 2011but deficiency of females per 1000 males is more acute in Akole and Jamkhed tahsils. The absolute change less than 17 in sex ratio has been noticed in the Jamkhed from 983 in 2001 to 952 in 2011 and in the Akole from 1002 in 2001 to 983 in 2011 followed by Pathardi tahsil recored the decline from 970 in 2001 to 956 in 2011.
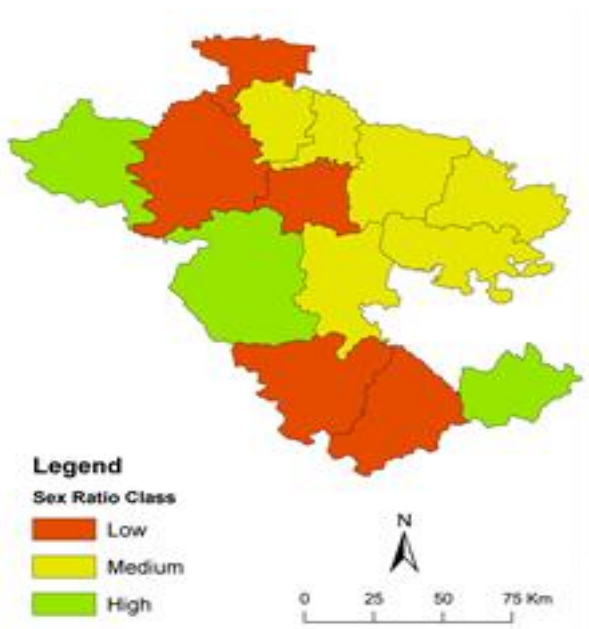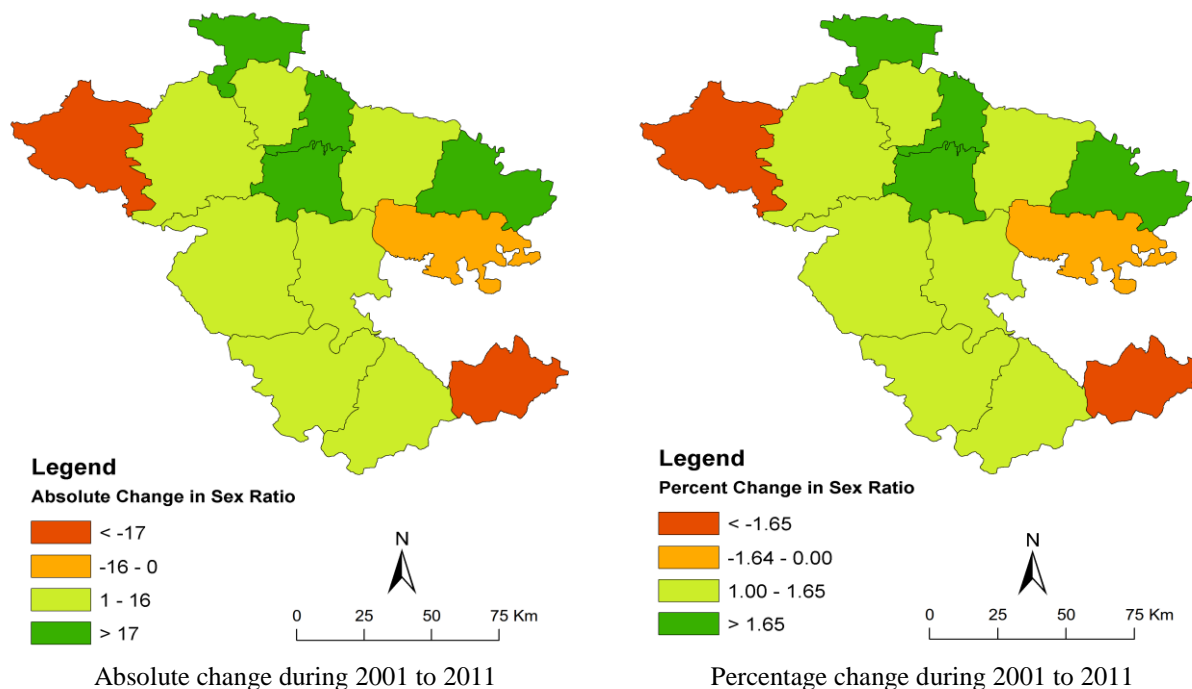

Sex Ratio in 2001   Sex Ratio in 2011
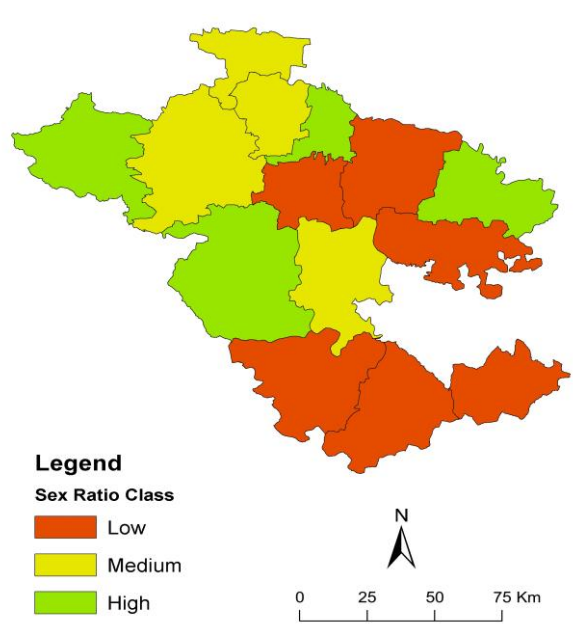
Absolute change during 2001 to 2011   Percentage change during 2001 to 2011
Fig: Spatio-temporal distribution of SC sex ratio in Ahmednagar District

Most of these area display the hilly area hence, female mortalities is high due to lack of health care facilities and low female literacy rate. While Kopergaon, Shrirampur, Rhuri and Shevgaon tahils recored the increasing sex ratio beacause of highly urbanization, female mortality is very lesss due to better medical facilities, feamles are higher than other areas.

6. Conclusion

The present study was undertaken to investigate the spatio-temporal changes in the sex ratio of the SC community using tahsil level data collected by the 2001 and 2011 census of Ahmednagar District using GIS techniques. Census 2001 shows that District had registered 958 female per 1000 males, Akole had highest sex ratio amounting to 1002 whereas; Rahuri had the lowest with 932 while in 2011 District shows an increase, 968 female per 1000 male but on tahsil level, great regional disparities in sex ratios among SC community were observed. The highest sex ratio had been observed in Shrirampur (1000) whereas the lowest was in Shrigonda (951). There were five tahsils namely, Shrirampur (32), Shevgaon (26), Rahuri (22), Kopergaon (17) and Parner (13) recorded positive change whereas Akole (-19), Pathardi (-16), and Jamkhed (-31) recorded negative change during 2001-2011.

It indicates that economic backwardness, unfavorable climatic and physiographic conditions push mostly the male population out of the areas in search of employment, resulting in a high sex ratio while high preference for a son, sex-selective abortion, low female literacy, lower socio-economic status of females in the society and lack of health facilities are some of the causes of low sex ratio. We should pay more attention to women's rights, gender equality, and gender justice. We also need to improve the socio-economic status of women and create a socio-economic environment against sex selection.

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