



UNRAVELING THE GENDER IMBALANCE: A SPATIAL ANALYSIS OF CHILD SEX RATIO IN SATARA DISTRICT, MAHARASHTRA

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ABSTRACT:

The Child Sex Ratio (CSR) is a crucial demographic indicator reflecting gender distribution among children. A skewed CSR signifies gender discrimination and harmful practices. Satara District in Maharashtra, India, exemplifies diverse socio-cultural settings, ideal for studying CSR dynamics. This research analyzes CSR through a spatio-temporal lens, using Census data and GIS technology to uncover trends, explore influencing factors, and understand gender imbalances. Gender equality is pivotal for sustainable development. Despite socio-economic progress, CSR decline persists, attributed to son preference, economic incentives, and gender disparities. Satara's unique blend of tradition and modernity adds complexity to CSR dynamics. Urban areas often exhibit better ratios, indicating potential correlation with development. However, challenges persist, especially in tahsils like Patan and Phaltan. Changes in CSR show nuanced patterns, with localized improvements in some urban areas. Overall, Satara District faces a gender balance challenge, requiring comprehensive interventions. Findings emphasize the need for sustained efforts to promote gender equality, guiding policymakers toward inclusive development.

Keywords: spatial pattern, Child Sex Ratio, Satara.

INTRODUCTION:

The Child Sex Ratio (CSR) is a critical demographic indicator that reflects the distribution of female and male children in a population. A declining or skewed CSR is a cause for concern as it highlights gender discrimination and the persistence of harmful practices like female feticide and infanticide. In India, the

issue of a declining CSR has drawn widespread attention due to its profound socio-economic implications. Satara District, situated in the western state of Maharashtra, represents a microcosm of diverse socio-cultural settings, making it an ideal case study to understand the factors influencing CSR variations.

This research paper seeks to unravel the gender imbalance in Satara District through a spatio-temporal analysis of the Child Sex Ratio. By analyzing census data spanning over a significant period, we aim to explore the trends and changes in CSR, providing insights into the dynamics affecting the distribution of female and male children. Through Geographic Information System (GIS) technology and statistical tools, we will delve into the spatial patterns of CSR across different regions of Satara District. Additionally, we will examine the socio-economic, cultural, and health-related factors that may influence the observed CSR variations.

Gender equality is a fundamental human right and a crucial aspect of sustainable development. A balanced Child Sex Ratio is indicative of a society that values and respects both female and male children equally. However, across India, including Satara District, the CSR has experienced worrisome declines in recent years. Factors such as son preference, economic incentives, and inadequate access to healthcare and education for girls have contributed to this imbalance.

Satara District stands at the intersection of traditional practices and modern aspirations, making it an intriguing area for studying CSR dynamics. Despite progress in various socio-economic indicators, gender disparities persist in many parts of the district. Understanding the spatial and temporal trends of CSR can provide valuable insights into the root causes of gender discrimination and inform targeted interventions for achieving gender equality.

OBJECTIVES:

1. To analyze the spatial variation of Child Sex Ratio in Satara District.
2. To identify the Change in Child Sex Ratio in Satara District.

THE STUDY REGION:

Satara district is located in the western part of Maharashtra. It is bound by Pune district to the north, Solapur district to the east, Sangli district to the

south and Ratnagiri district to the west. Raigad district lies to its north-west. The geographical area of Satara district is 10,480 Sq.Km. which is about 3.4 per cent of the state's total geographical area. Satara district lies between 17.5 to 18.11 degree North latitude and 73.33 to 74.54 degree Eastern longitude. The district comprises of 11 tehsils namely Satara, Koregaon, Khatav, Karad, Patan, Wai, Jaoli, Mahabaleshwar, Khandala, Phaltan and Man. The climate ranges from very heavy rainfall in Mahabaleshwar region, which has an average annual all of over 6000 mm to the driest in Man tahsil where the average annual rainfall is about 500 mm. The vegetation cover too varies from the typical monsoon forest in the western parts to scrub and poor grass in the eastern parts. As per the Census 2011, the total population of the Satara district was 30.04 lakh with a population density of 287 per square kilometer.

DATABASE & METHODOLOGY:

The present study is entirely based on secondary data which is obtained from the Census Handbook of Maharashtra 1991, 2001, and 2011. For the present study, the tahsils has been selected as a basic unit of investigation. The period selected for the present study is during 1991-2011. The Child Sex Ratio (CSR) is computed by using the following formula.

$$CSR = \frac{\text{Female (0 – 6 Age Group)}}{\text{Male (0 – 6 Age Group)}} \times 1000$$

Maps prepared for express decadal spatio-temporal changes in child sex ratio and tahsils are delimited into high, medium, and low child sex ratio areas using Arc GIS software.

RESULTS AND DISCUSSIONS:

Spatial Patterns of Child (0-6 Years) Sex Ratio in 2011:

Total Child Sex Ratio (0 – 6 years Age Group):

According to census 2011, total child (0 – 6years) population in Satara district is 371885 (12.38 %) and the sex ratio of 0 – 6 years age group in Satara district is 895. According to population geography/Demography, this picture of sex ratio is very danger for the social form. According to 2011 census the very high child sex ratio is found in PatanTahsil (947) and very low child sex ratio is found Karad Tahsil (880). Jaoli (935), Mahabaleshwar (921), Koregoan (911) in

these talukas the 0 – 6 years age group sex ratio is found very high. Because these talukas are backward, absence of medical facilities, less development of urbanization, low educational facilities is mainly affected on high sex ratio found in these tahsils.

Khandala (883), Phaltan (864) and Karad (880) tehsils child sex ratio is found very low because these tahsils are very well literate, economically this region is very strong, availability of medical facilities are sufficient in this region.

Table No.1: The Satara District: Spatial Patterns of Child(0-6 Years) Sex Ratio in 2011

Sr. No.	Tahsils	Total	Rural	Urban
1	Satara	889	888	891
2	Wai	909	909	908
3	Khandala	883	881	895
4	Koregaon	911	918	878
5	Phaltan	864	863	864
6	Man	886	886	888
7	Khatav	892	892	NA
8	Karad	880	876	894
9	Patan	947	948	915
10	Jaoli	935	932	993
11	Mahabaleshwar	921	962	854
	Satara District	895	897	889

Source: District Census handbook of Satara District, 2011.

Rural Child Sex Ratio (0 -6 years age group):

According to 2011 census, the rural child population in Satara district is 2,58,567 (8.61 %) and the sex ratio of 0 – 6 years age group in rural area is 897. In the study region very high rural child sex ratio is found in Mahabaleshwar tahsil (962), Jaoli (932), Patan (948), Koregaon (918) and Wai (909) in these tahsils the rural child sex ratio is comparatively high than the district average, because these tahsils are located in hilly area, less developed agricultural activities, very backward region, and also social, economic and cultural factors are responsible. Whereas in the remaining Khandala (881), Phaltan (863), and Karad (876) tahsils has low child sex ratio. Satara (888), Man (886), Khatav (892) tahsils are moderate child sex ratio.

Urban Child Sex Ratio (0 – 6 years Age Group):

In the Satara district according 2011 census the urban child population in 59318 (3.77 %) and urban sex ratio is 889. In the study region very high urban sex ratio is found in Jaoli (993) after that Patan (915), Wai (908), Khandala (895) are there. According 2011 very low sex ratio is found in Mahabaleshwar (854) in all tahsils. Phaltan (864), Koregaon (878) tahsils has urban child sex ratio is comparatively less than district average. In the Sataraans Karad urban areas the development of business is very good. In the Mahabaleshwar tahsil the development of urbanization is not sufficient, less development of business and industries. So Mahabaleshwar tahsil is well developed by urban tourism.

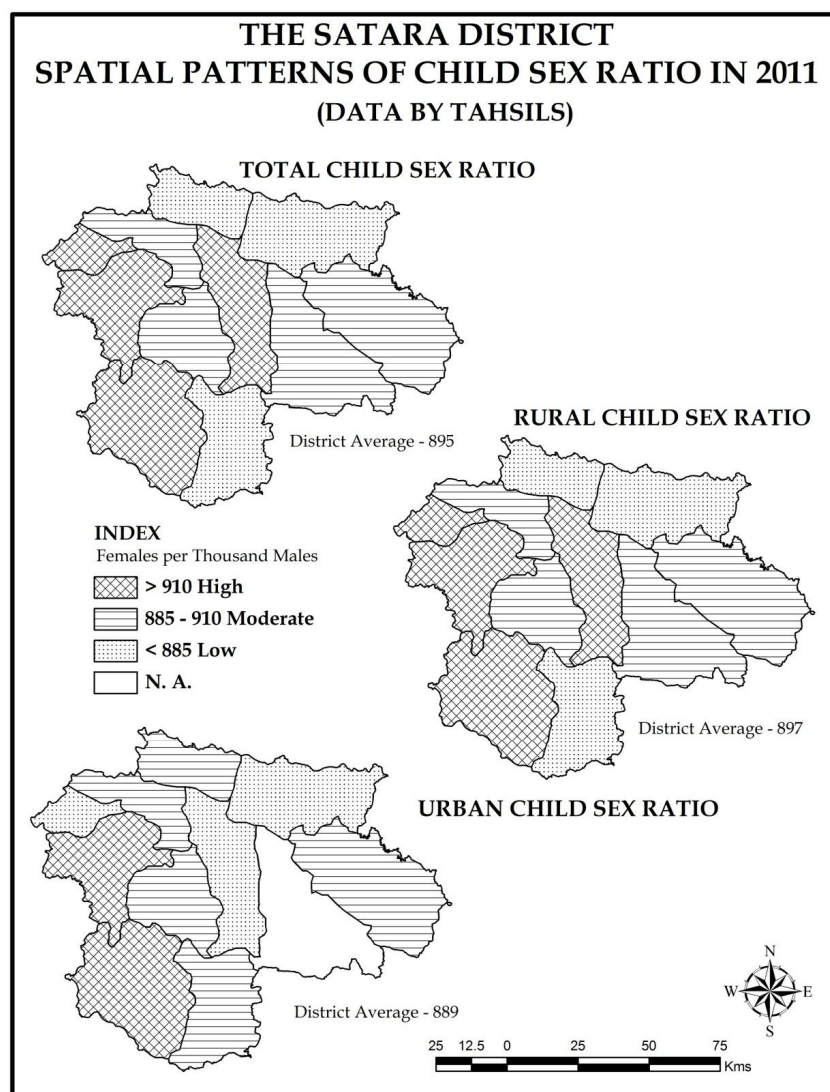


Fig. No. 1

Change in Child Sex Ratio (0-6 Years) Age Group (1991- 2011):**Table No. 2: The Satara District: Change In (0-6 Years) Child Sex Ratio In Points Since (1991 -2011)**

Sr. No.	Taluka	Change in Sex Ratio in Points		
		Total	Rural	Urban
1	Satara	-45	-57	-15
2	Wai	-60	-71	+5
3	Khandala	-48	-50	NA
4	Koregaon	-38	-42	-22
5	Phaltan	-80	-86	-52
6	Man	-53	-50	-81
7	Khatav	-50	-50	NA
8	Karad	-55	-60	-37
9	Patan	-21	-20	-64
10	Jaoli	-8	-11	NA
11	Mahabaleshwar	-13	-326	+48
	Satara District	-50	-53	-19

Source: District Census handbook of Satara District, 1991 & 2011.

Change in Total Child Sex Ratio:

According to change in total child sex ratio since last 3 decades (1991-2011). The proportion of girls population per thousand boys come down from 945 to 895 (-50 points), but this change in the study region was not uniform. In Phaltantaluka (-80 points) there is highest negative change in sex ratio. After that wai (-60), Karad (-55) and Man (-53) has high negative sex ratio comparatively district average child sex ratio. Change in child sex ratio in khatavtaluka (-50) was equal to district average sex ratio. Remaining Khandala (-48), Satara (-45), Koregaon (-38), Patan (-21), Mahabaleshwar (-13) and Jaoli (-8) there all talukas has low change in sex ratio comparatively district average sex ratio.

Change in Rural Child Sex Ratio:

According to change in rural child sex ratio since last 3 decades (1991-2011) the proportion of girls population per thousand boys come down from 950 to 897 (-53 points) in rural area. But this change in the region is not uniform. In mahabaleshwar taluka (-326) there is highest negative change in sex ratio. After that phaltan (-86), wai (-70), Karad(-60), Satara(-57) has high negative sex ratio

as compare to district average rural child sex ratio. Remaining Khatav, Khandala, and Man (-50), Koregaon (-42), Patan (-20) and (-11) these all talukas has low change in rural child sex ratio comparatively district average child sex ratio.

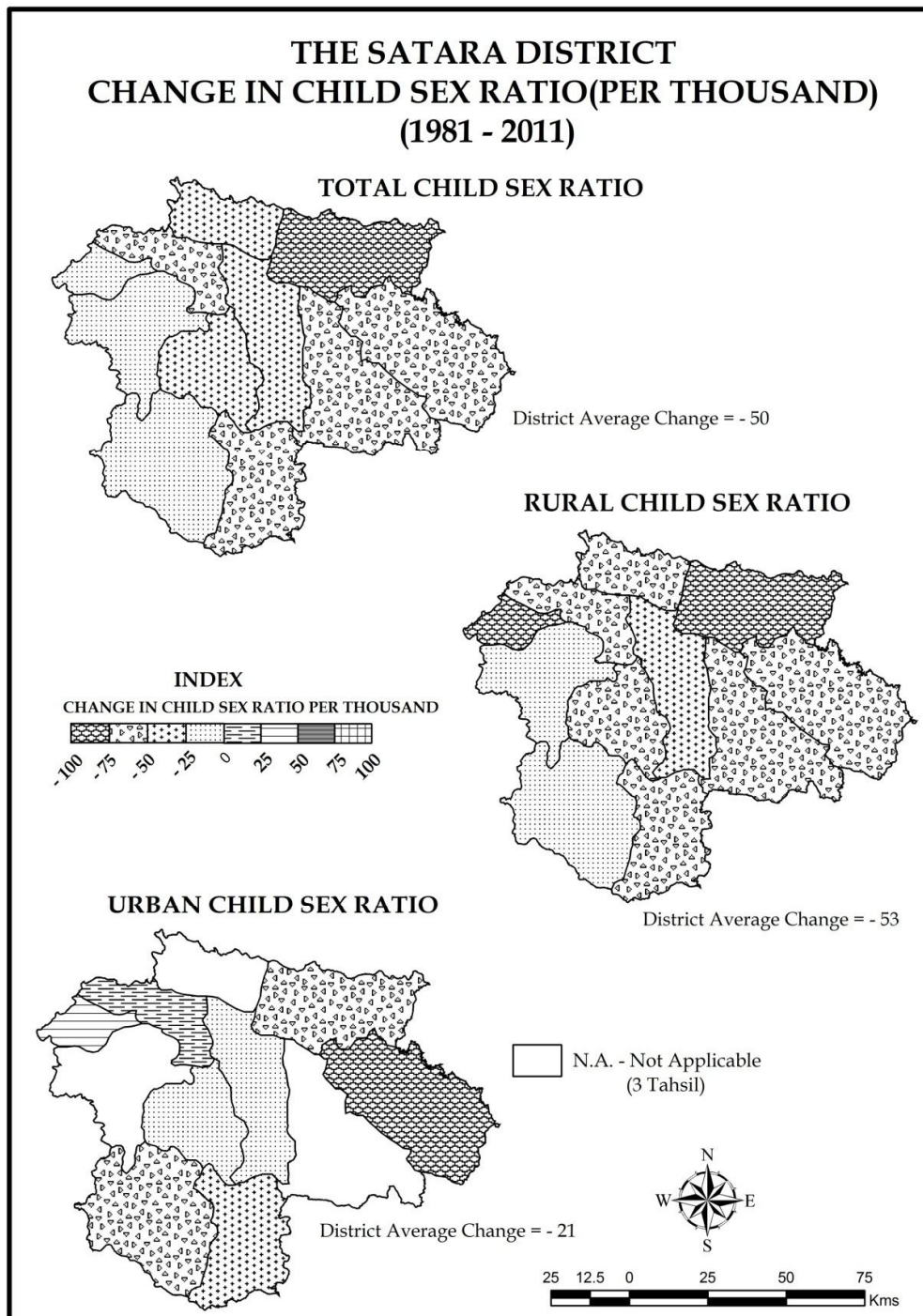


Fig. No. 2

Change in Urban Child Sex Ratio:

According to change in urban child sex ratio since last 3 decades (1991-2011) the proportion of girls population per thousand boys come down from 910 to 889 (-21 points) but this change in the study region was not uniform. In man taluka (-81) there is highest negative change in the sex ratio. After that Patan (-69), Phaltan (-52), Karad (-37), Koregaon (-22) has high negative child sex ratio comparatively district average child sex ratio. Only Mahabaleshwar (+48) and Wai (+5) talukas were positive child sex ratio.

CONCLUSION:

It is concluded that there is a noticeable variation in the Child Sex Ratio across different tahsils of Satara District in the year 2011. Some tahsils, such as Koregaon and Wai, exhibit higher sex ratios, indicating a relatively favorable gender balance in the age group of 0-6 years. The distinction between rural and urban sex ratios underscores intriguing trends. Urban areas, as seen in several tahsils like Karad, Satara, and Mahabaleshwar, tend to have slightly higher child sex ratios compared to their rural counterparts. The presence of tahsils with higher child sex ratios in both rural and urban contexts indicates a positive correlation between gender equality and development. Such areas may have better access to healthcare, education, and social services. On the other hand, tahsils like Patan and Phaltan exhibit lower child sex ratios, suggesting potential gender-related challenges that may require focused interventions.

A range of changes in the Child Sex Ratio in Satara district is both positive and negative. Negative values indicate a decline in the sex ratio, implying a decrease in the number of girls per 1000 boys in the age group 0-6 years, while positive values suggest an improvement. Urban areas in certain tahsils, like Wai, have shown positive changes in the Child Sex Ratio, suggesting localized improvements in gender balance, possibly due to better access to education and healthcare facilities. The comparison between rural and urban change values points to nuanced dynamics. While most tahsils exhibit negative changes in both contexts, some urban areas have shown resilience or improvement in maintaining a balanced sex ratio. Aggregating the changes for the entire Satara District, an overall decrease is observed. This suggests a district-wide challenge in maintaining gender balance among children aged 0-6 years, warranting a comprehensive approach to address underlying factors.

In summary, the findings underscore the critical importance of sustained efforts to promote gender equality and ensure equitable opportunities for

children across all talukas. The insights provided by this analysis offer a foundation for policymakers, community leaders, and stakeholders to design and implement targeted initiatives aimed at rectifying gender imbalances, enhancing socio-economic development, and fostering a more inclusive and harmonious society. It is imperative to address these challenges collectively to build a future where every child, regardless of gender, can thrive and contribute to the betterment of the region.

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