



## Sex Ratio A Demographic Characteristic of Western Maharashtra: A Geographical Analysis

Dr. Chandrakant Narhari Kale

### *Abstract*

*A Sex ratio of Human Population is one of the basic demographic characteristics which are extremely vital for any meaningful demographic analysis. Primarily it is the simple count of males and females. Many Socio-economic relationships are untimely related to the balance or disparity between the number of males and females. The proportion of males and females in the population affect the social and economic relationships within a region. The sex ratio data helps in various types of planning and for the analysis of other demographic indicators like fertility, mortality, migration and economic structure. Sex ratio is noteworthy demographic and cultural index. The ratio can reflect biological, Sociological, economic and marginal characteristics of population. An analysis of sex ratio is important for a proper understanding of various demographic characteristics of any region, while sex ratio is an index to the economy prevailing in an area and is a useful tool for regional analysis of other demographic elements like, population growth, marriage rates, occupational structure fertility rates etc. (Franklin, 1956). Sex ratio influences the form and tempo of life in any country. The balance between the sexes is an important aspect of population structure. The Western Maharashtra region is located in Maharashtra state. It covers an area of 57235 sq k.m with comprises five districts and 58 tehsils and population of about 23449049 as per 2011 census. Secondary data have been used. The study region of High Sex Ratio is namely Wai, Khatav, Patan and Jaoli (Satara district), Chandgad, Shahuwadi, Gadhinglaj and Ajara (Kolhapur district) Khanapur and Walwa (Sangli district) Except Khatav and Khanapur, in Satara and Walwa, tehsils in Sangli district. The Research Paper is Examined Distribution of Sex Ratio in Western Maharashtra.*

**Key Words:** Population, Sex Ratio Mortality, Fertility,

### **Introduction**

Sex ratio influences the form and tempo of life in any country. The balance between the sexes is an important aspect of population structure. Trewartha (1953) observes the proportion of two sexes is fundamental to graphic analysis because it is an important demographic feature, which influences the other demographic parameters significantly and also provides an additional means for analyzing the regional landscape, of all the demographic attributes of population the sex structure is one of the most fundamental and directly related to the reproductive potential of the humankind, deaths and marriages (United Nations 1973). Define Sex ratio The sex ratio is three a basic factors i.e. sex ratio at birth, differentials in mortality between sex as at different stages of life and sex selective migration (Clarke, 1960) The Indian censuses define sex ratio as the number of females per 1000 males influenced mainly by sex differential in mortality and migration and the sex ratio at birth it is the basic social indicator to measure the prevailing equity between males and females.

**Objectives:** The Present research paper is examined Sex ratio A demographic Characteristic of Western Maharashtra: A Geographical Analysis

**Database & Methodology:** The present research paper is based on Secondary sources of data mainly collected from districts census Hand books, Socio-Economic abstracts. Poppulation Sex ratio is measured the number of 1000 male population on area. It is an average dividing number of sex ratio is calculated the number of female population on area. The data was tabulated and presented in the form of cartographic techniques and maps. Population Sex ratio is calculated using formula. Sex ratio as the number of females per 1000 males

**The Region:** The Western Maharashtra region is located in Maharashtra State. The Study region western Maharashtra extends between 15° 45' North to 19° 02' North latitudes and 73° 15' East to 76° 15' East longitudes. It covers an area of 57235 Sq. Km With comprise five district and 58 tehsils and population of about 23449049 as per 2011 census. The density of population is 347 persons. The region is surrounded by Karnataka state in the south, Konkan region in the west, Nasik in the north and the eastern boundary is surrounded by Aurangabad administrative region of Maharashtra. Fig No 1.1 broadly, The Physiographic of the region is uneven in nature. Higher elevation is Sahyadris. The average height of the range is 1300 meters. The highest peak of the region is Kalsubai 1646 Meters. Harishchandra-Balaghat and Shambhu-Mahadev these are the sub ranges of sahyadri, which extends in North-West and South -east direction in the study region. The major river system is Bhima and Krishna. These rivers with their tributaries flow in Southeast direction throughout the region. Sina, Nira, Ghod, Kukdi, Indrayani, Mula, Mutha, are the major tributaries of Bhima .Koyana, Yerla, Warana, Panchganga, are major tributaries of river Krishna. As mentioned earlier the study region comprises of five districts i.e. Pune, Satara, Sangli, Kolhapur and Solapur .There are total 58 tehsils in the Study region.The Solapur, Sangli, Kolhapur, Satara and Pune districts falls in Western part of the Maharashtra State.

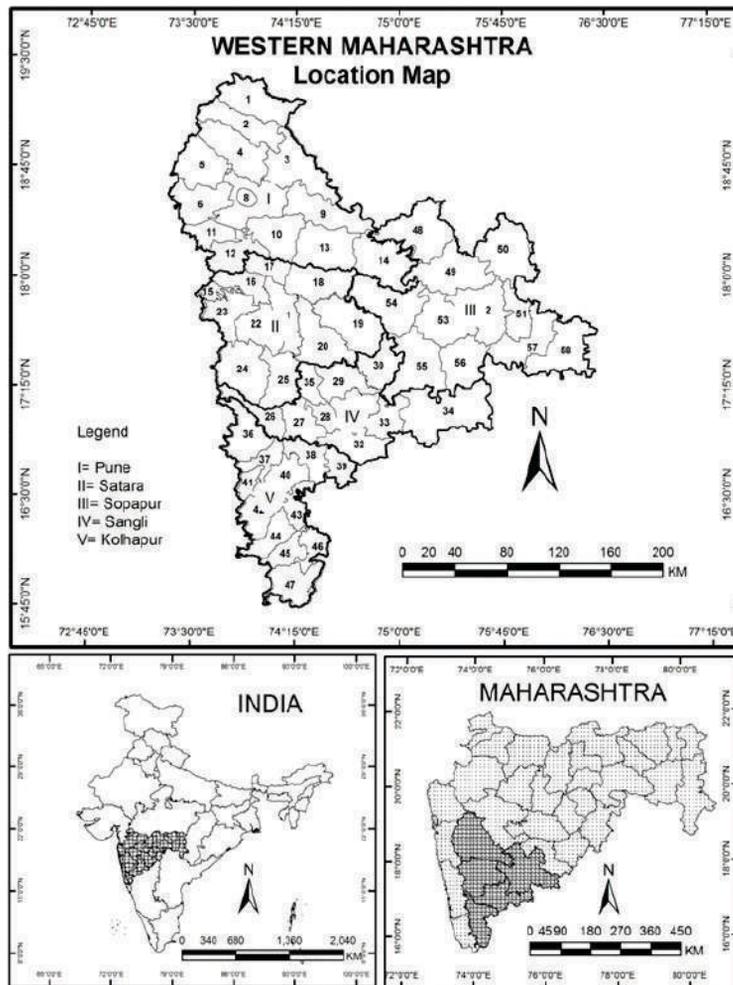


Fig. 1.1

**Spatial Distribution of Sex ratio:** The study region i.e. Western Maharashtra consists the five districts out of 35 districts of Maharashtra and these districts showed overall sex ratio as 946 females per thousand males. This is higher than that of state average with sex ratio of 922. So far as the sex ratio is concerned with in the study region, the sex ratio varies from 1095 in Ajara tehsil to 835 in Radhanagri tehsils, It means that the study region had some better situation than the state average sex ratio. From the analysis of these region data it was found that in these five districts Satara district was more favorable to females by Kolhapur, Sangli, and Pune and Solapur districts. Three zones of sex ratio are given below,

- Zone of High Sex ratio having more than 1000 females per 1000 males.
- Zone of Moderate sex ratio having between 946-to 1000 females per 1000 males.
- Zone of low sex ratio having less than 945 females per 1000 males

1) **Zone of High Sex Ratio:** Sex ratio refers simply to the number of female per thousand male population, hence in this part, the tehsil, which were having female population above 1000 to the 1000 males considered are included in the zone of high sex ratio. In the early decades of the 20th century, population growth was minimum, low urbanization and poor industrialization, subsistence agriculture were the basic means of economic survival, Because of this, migration rate was minimized due to lack of medical facility and other epidemic and natural calamities mortality rate of male population was maximized, Due to this situation, the sex ratio was comparatively high, However as time passed, male population was getting more and more dominant in number and it affected number female population. Total ten tehsils were included in this zone. These are namely Wai, Khatav, Patan and Jaoli (Satara district), Chandgad, Shahuwadi, Gadhinglaj and Ajara (Kolhapur district) Khanapur and Walwa (Sangli district) Except Khatav and Khanapur, Walwa, tehsils in Satara and Sangli district and remaining tehsils viz. Wai, Chandgad, Shahuwadi, Gadhinglaj, Patan, Jaoli and Ajara located at the western Ghats or Sahyadrian ranges Because of this these tehsils have undulating terrain, limited land for agriculture, unfavourable weather conditions, low degree of urbanization, very low and poor and almost lack of industrial development. All these factors forced the migration of males, in search of livelihood, so a male out migration rate was high. This male out migration has played a major role in the increase of sex ratio in these tehsils. In addition to that, sound and improvement medical facilities provided at the village level, which resulted in to decreasing female mortality rate in these tehsils, which is responsible for increase in the sex ratio in these tehsils (Fig No.1.2, Table No 1)

**Table No 1: Tehsil wise Sex Ratios in Western Maharashtra 2011**

Sr No.	Tehsils	Sex Ratio per 1000 Male population
1	Karmala	918
2	Madha	912
3	Barshi	923
4	North Solapur	971
5	Mohol	919
6	Pandharpur	920
7	Malshiras	931
8	Sagola	936
9	Mangalwedha	922
10	South Solapur	944
11	Akkalkot	950
	<b>Solapur</b>	<b>938</b>
12	Mahabaleshwar	937
13	Wai	1005
14	Khandala	947
15	Phaltan	944
16	Man	976
17	Khatav	1012
18	Koregaon	999
19	Satara	976
20	Jaoli	1068
21	Patan	1065
22	Karad	972
	<b>Satara</b>	<b>988</b>
23	Shirala	966
24	Walwa	1015
25	Palus	933
26	Kadegaon	993
27	Khanapur( vita)	1011
28	Atpadi	995
29	Tasgaon	962
30	Miraj	966
31	Kavathemahankal	993
32	Jat	951
	<b>Sangli</b>	<b>966</b>
33	Shahuwadi	1021
34	Panhala	915
35	Hatkanagale	932
36	Shirol	957
37	Karveer	937

Source – District Census Handbook of Solapur, Sangli, Kolhapur, Pune and Satara District, 2011

**2) Zone of Moderate Sex Ratio:** Some tehsils in the study region were continually having a sex ratio between 946 to 1000 females per 1000 males according to 2011 census figure in the region; these tehsils have been categorized to the zone of moderate sex ratio. There were 22 tehsils in the zone of moderate sex ratio. Satara district Khandala, Karad, Man, Koregaon and Satara tehsil these five tehsils had sex ratio between 946 to 1000 females per 1000 males, Seven tehsils from Sangli district were included in this zone, which are Kavthemahankal, Atpadi, Jat, Tasgaon, Shirala, Miraj, and Kadegaon, whereas Pune district had five tehsils Viz. Purandhar, Bhor, Ambegaon, Juneer and Velhe in this zone of moderate sex ratio Bhudargad, Kagal and Shirol, from Kolhapur district and Solapur North and Akkalkot tehsils from Solapur district were included in this zone. Out of the Ambegaon, Junner, Purandhar, Bhor and Velhe tehsils from Pune district, Satara, Bhudargad tehsils from Kolhapur district were having unfavorable physiographical conditions. Basically, these tehsils are located on the Sahydran ranges mainly the Shambho – Mahadeo ranges, Due to the adverse physiographical location, these tehsils suffered from many socio-economic problems such as hostile climate, low agricultural productivity, low degree of urbanization, poor industrialization, lack of basic infrastructural facilities, lack of good facilities of transportation and communication. Due to these problems, these tehsils faced economic backwardness, these conditions forces the males to migrate to nearby urban areas for their survival. Moreover, hilly topography influenced the phisic of people, therefore, their immune system became strong and it is scientifically proved that, immune system of women is much stronger than men; hence the mortality rate was also low in these tehsils. These reasons mostly reflected on the sex ratio in above said tehsils.

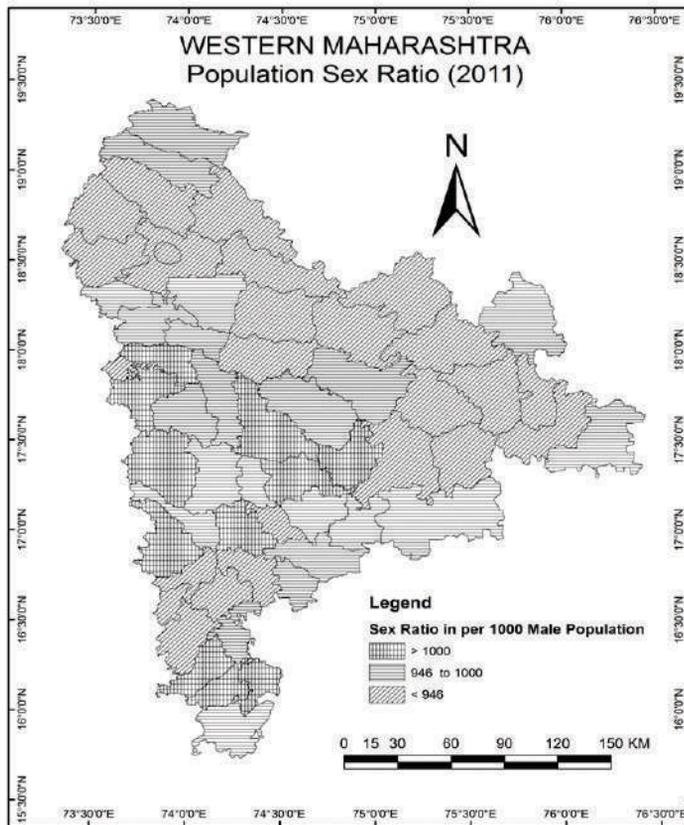


Fig 2.12

**3) Zone of Low Sex Ratio:**As per the investigation, 26 tehsils (45.0%) had less than 945 females per 1000 males. These tehsils are included in the zone of low sex ratio. It means that there were 26 tehsils from entire study region were in the zone of low sex ratio, which is major reason of worry. Thus lot of extension work has to be done as early as possible to improve the number of females per thousand males. Solapur district was leading districts in this zone with nine tehsils. It means that almost all the tehsils from Solapur and Pune district recorded low sex ratio. Particularly, Mohol, Madha, Pandharpur, Mangalwedha, Barshi.Malshiras, Sangola, South Solapur, Karmala tehsils in Solapur district, in the tehsils were zone of low sex ratio. Similarly, Pune district also had nine tehsils in the zone of low sex ratio. Havali, Khed, Mulshi, Shirur, Maval, Indapur, Daund, Pune city, Baramati tehsils from Pune district have been included in the zone of low sex ratio. Kolhapur district had tehsils in the zone of low sex ratio Karveer, Bavda, Hatkanagale, Panhala, Radhanagri, and Palus tehsils from Kolhapur district were included in this zone. Likewise Satara district namely Mhabaleshwar, Phaltan were included in the zone of low sex ratio. Sangli district had one tehsil namely Palus were included in the zone of low sex ratio. It is observed that highly urbanized and industrialized tehsils from the study region were placed in this zone of low sex ratio; immigration was the one of the reasons for this. Beside dominated community early marriages illiteracy among women importance of male child in particularly, physically and mentally tortured girl increasing their mortality are the reason for low sex ratio in these tehsils.

**Conclusion:** A Sex ratio of Human Population is one of the basic demographic characteristics which are extremely vital for any meaningful demographic analysis. Indian census has the traditional of bringing out disaggregated information by on sex on various aspects of Population. Primarily it is the simple count of males and females. Many Socio-economic relationships are untimely related to the balance or disparity between the number of males and females. The study region i.e. Western Maharashtra consists the five districts out of 35 districts of Maharashtra and these districts showed overall sex ratio as 946 females per thousand males. This is higher than that of state average with sex ratio of 922. So far as the sex ratio is concerned with in the study region, the sex ratio varies from 1095 in Ajara tehsil to 835 in Radhanagri Tehsils, It means that the study region had some better situation than the state average sex ratio. From the analysis of these region data it was found that in these five districts Satara district was more favorable to females by Kolhapur, Sangli, and Pune and Solapur districts. The high density total ten tehsils were included in this zone .four Tehsil each from Satara and Kolhapur districts two from Sangli district. These are namely Wai, Khatav, Patan and Jaoli (Satara district), Chandgad, Shahuwadi, Gadhinglaj and Ajara (Kolhapur district) Khanapur and Walwa (Sangli district). Except Khatav and Khanapur, Walwa, tehsils in Satara and Sangli district and remaining tehsils viz. wai, Chandgad, Shahuwadi, Gadhinglaj, Patan, Jaoli and Ajara located at the western Ghats or Sahyadrian ranges Because of this these tehsils have undulating terrain, limited land for agriculture, unfavourable weather conditions, low degree of urbanization, very low and poor and almost lack of industrial development. All these factors forced the migration of males, in search of livelihood, so a male out migration rate was high. This male out migration has played a major role in the increase of sex ratio in these tehsils. In addition to that, sound and improvement medical facilities provided at the village level, which resulted in to decreasing female mortality rate in these tehsil, which is responsible for increase in the sex ratio in these tehsils. As per the investigation, 26 tehsils had less than 945 females per 1000 males. These tehsils are included in the zone of low sex ratio. It means that there were 26 tehsils from entire study region were in the zone of low sex ratio, which is major reason of worry. Thus lot of extension work has to be done as early as possible to improve the number of females per thousand males. Solapur district was leading districts in this zone with nine tehsils. It means that almost all the tehsils from Solapur and Pune district recorded low sex ratio. Particularly, Mohol, Madha, Pandharpur, Mangalwedha, Barshi.Malshiras, Sangola, South Solapur,

Dr. Chandrakant Narhari Kale

Karmala tehsils in Solapur district, in the tehsils were zone of low sex ratio. Similarly, Pune district also had nine tehsils in the zone of low sex ratio. Haveli, Khed, Mulshi, Shirur, Maval, Indapur, Daund, Pune city, Baramati tehsils from Pune district have been included in the zone of low sex ratio. Kolhapur district had 43 per cent tehsils in the zone of low sex ratio Karveer, Bavda, Hatkanagale, Panhala, Radhanagri, and Palus tehsils from Kolhapur district were included in this zone. Likewise two tehsils (14 %) from Satara district namely Mhabaleshwar, Phaltan were included in the zone of low sex ratio. Sangli district had one Tehsil namely Palus were included in the zone of low sex ratio.

**Referances:**

- Chandhana R.C. and Sindhu M.C. (1980): In Introduction to Population Geography, Kalyan Publishers, New Delhi p-96
- Deshpande, C.D. (1971): Maharashtra State Gazetteers Solapur Revised Edition.
- Govt. of Maharashtra (1960 and 1973): Report of Fact Finding Committee for Survey of Scarcity Area of Maharashtra State.
- Golden Hilda H. (1980): Literacy International Encyclopedia of Social Science Vol.19, McGraw Hill Co. and pre-press p. 415
- Kale C.N. (2008) Causes and Effects of Flood Situation in Upper Krishna Basin of Maharashtra – A Geographical Analysis, Unpublished M. Phil Dissertation Submitted to Tilak Maharashtra University, Pune Pp 28.
- Monkhouse, F.J. and Wilkinson H.P. (1971): Map and Diagrams, London, Mathun and Co. Ltd., P- 195.
- Subrahmanyam and Hemamalini (1978): Delimitations of Drought Prone Area – Techniques and Methodology, Report of Symposiums on Drought Prone Area Tirupati, Pp – 1-8

\*Dr Chandrakant Narhari Kale  
Karmaveer Bhaurao Patil Mahavidyalaya  
Pandharpur Dist Solapur (MS)