



ISSN: 0976-3031

Available Online at <http://www.recentscientific.com>

International Journal of Recent Scientific Research  
Vol. 7, Issue, 9, pp. 13277-13282, September, 2016

**International Journal of  
Recent Scientific  
Research**

## Research Article

### FLUCTUATION OF SEX RATION IN MAHARASHTRA WITH SEPAL REFERENCE TO PUNE DISTRICT

Arjun B. Doke

Shankarrao Bhelke College Nasrapur, Tal. Bhor, Dist. Pune, Maharashtra

#### ARTICLE INFO

##### Article History:

Received 15<sup>th</sup> June, 2016

Received in revised form 25<sup>th</sup> July, 2016

Accepted 23<sup>rd</sup> August, 2016

Published online 28<sup>th</sup> September, 2016

##### Key Words:

Sex ratio, sex composition, sex structure, Sex imbalance, changing pattern, Literacy.

#### ABSTRACT

The study of sex ratio ventilates the demographic scenario of any States. Its calculation is of prime importance for understanding the population structure and its peculiarities within any territorial area. The sex ratio is defined as the number of females per 1,000 male population. The sex ratio is one of the significant indices of social but also economic conditions of an area and important device for regional analysis. Of all the demographic attributes of a population, the sex structure is an essential aspect of mankind. Sex ratio represents most radially recognizable components of the population. It is in advance and rising objective consequence with growing emphasis on the regional planning and regional approach to the population policy. An information about the pattern of Sex Ratio helps to enlighten the employment and consumption pattern, the social requirements of the people and perhaps the psychological characteristics of a society. In addition, the ratio can reflect the biological, social, economic and migration characteristics of the population. According to Census of the India, the general sex ratio in Maharashtra in 2001 was 922 which have experienced an upward trend up to 929 in 2011. In the state, the child sex ratio in the Maharashtra has experienced a declining trend from 913 in 2001 to 894 in 2011. The study of Pune District has experienced a decrease in general sex ratio of 919 (2001) to 915 (2011). While the child sex ratio is declining from 902 (2001) to 883 (2011). Within the District General, sex ratio is more than 1000 in 1971 census shows in Ambegaon, Junner, Purandhar, Bhor, Valhe, Mulshitehsil. In census 2011 no signal tehsil shown more than 1000 general sex ratio. This paper is an attempt to analyze the distribution of sex ratio in Pune District as well as to investigate the nature of regional or social disparities and impact of such disequilibrium upon society.

**Copyright © Arjun B. Doke., 2016**, this is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution and reproduction in any medium, provided the original work is properly cited.

#### INTRODUCTION

Sex ratio is an important parameter that reflects the status of women in society. Some of the worst gender ratios, indicating a gross violation of women's rights are found in south and East Asian countries such as India and China. Maharashtra state in India is no exception to this. In India, sex-ratio is declining it is a fact, but more important and serious thing is that with social, educational, economic development, it is declining. Sex ratio is not lowest in the poor tribal district or other backward areas, but in the relatively prosperous Western Maharashtra, it's economically better off districts. Pune is one of the most progressive district in the Maharashtra in health, literacy, urbanization and socio-economic indicators but there also the declining trend sex ratio can be seen. A study by the Gokhale Institute of Political and economics establishes a clear correlation between the number of sonography center and a decline in chide sex ratio in Maharashtra, India. The report reveals that 78% of sonography clinics are registered in the rich Western Maharashtra district of Mumbai, Pune, Nashik, Sangli

and Kolhapur (Sanjeevani and Nagarajan, 2006). For this study researchers have selected Pune district in western Maharashtra and find out thasil wise sex variation in last five decades.

Sex ratio is the basic tool for the analysis of the composition of the population. A part from its direct influences married persons in a population and birth rate, it also determines the socioeconomic and political structure of the population. Several geographers have been made his work on the sex ratio is as follows. Explained sex ratio at district level in Haryana's population and observed the deficiency of females which was attributable to low sex ratio at the time of birth and higher rate of mortality. There was the difference in urban and rural sex ratio, according to state sex ratio is lower than then ation (Krishnan and Chandana, 1973). A study carried out the study on sex ratio of urban centers in Madhya Pradesh. It was focused that Scheduled Caste population and the size of urban centers determines on the sex ratio (Ayyarand Srivastava, 1978). Gives an account on sex ratio threethousand settlements

\*Corresponding author: **Arjun B. Doke**

Shankarrao Bhelke College Nasrapur, Tal. Bhor, Dist. Pune, Maharashtra

in south konkan in the districts of Kulabaand Ratnagiri. The time series account has revealed that sex ratio are increasing in south konkan region due to in migration (Pednekar and Sita1980). Gives a state wise account of the female per thousand male in India's population from 1871-1971. It was observed that the regions for variation in sex ratio in various part of the country, the higher mortality rates, maternal mortality, lack of medical facilities for female and an overall second class citizen of the female population (Mitra, 1982). Gives an account on sex composition of India by using 2001 census data. He observed that male selective migration has been mainly responsible for regional variation in the sex ratio of country's population (Gosal, 2001). An attempt has been made on sex ratio in Karvirtehsil in Kolhapur district in the Maharashtra state. It is noted that there is wide variation in sex ratio in Karvirtehsilfrom village to village. The natural sex ratio in an Asian population typically ranges from 950 to 970 girls per 1,000 boys (Agnihotri et. al, 2002). India has an alarming gender imbalance and population experts have revealed that female foeticide is being practiced at alarmingly big numbers. The deficit of females was found in prosperous urban and prosperous rural areas applying that this phenomenon is being practiced by educated and prosperous families (More et.al, 2012). The study region recording high sex ratio suffers from poor agriculture and show emigration. There is a rise in sex ratio during1981 to 1991 and decline in sex ratio during 1981-2001 (Zodage, 2008). The fluctuation of sex ratio in India with special reference to west Bengal study by (Dawn and Basu, 2015).

**Objective**

1. To identify the major tehsil with fluctuations in sex ratio.
2. To trace the reasons behind such fluctuation.
3. To study the dimensions of changing sex ratio among the tehsil of Pune District.

**Data Base and Information**

**Primary Data:** - In field survey, the primary data are collected.

**Secondary:** - This study is based on the reliable and accurate census data. The required secondary data will be collected from the following sources. Census of Maharashtra and District census handbook (1971, 1981, 1991, 2001 and 2011).Published records of the Government like.1) Socio-economic Review. 2) Census of Maharashtra. 3) Records of ZillaParishad.4) District Statistical Abstract. 5) District Gazetteers. SOI map for the creation of shape file of the study area.

**Study Area**

Pune District is in the western region of Maharashtra in India. It is bounded by Thane District to the northwest, Raigad District to the west, Satara District to the south, Solapur District to the southeast, and Ahmednagar District to the north and northeast. Pune district lies in the Western Ghats or Sahyadri mountain range and it extends on to the Deccan Plateau on the east. Pune stands on the leeward side of the Western Ghats. Pune is at an altitude of 559m. (1863 ft.). Pune district is located between 17.5° to 19.2° North and 73.2° to 75.1° East. In the most recent census on 2011, the total population of the district was 9,426,959, making it the fourth most populous district in India and roughly equal to the nation of Beninor the US state of North Carolina. The district has a population density of 603 inhabitants per square kilometre. Its population growth rate over the decade 2001–2011 was 30.34%.Pune has a sex ratio of 915 females for every 1000 males and a literacy rate of 87.19%. As of the census of 2001, there were 7,232,555 people and 1,517,041 households. The population density was 462 people per /km<sup>2</sup>. In the district the population was spread out with 685,022 under the age of 4; 1,491,352 from 5 to 15; 4,466,901 from 15 to 59 and 5, 89,280 60 years of age or older.

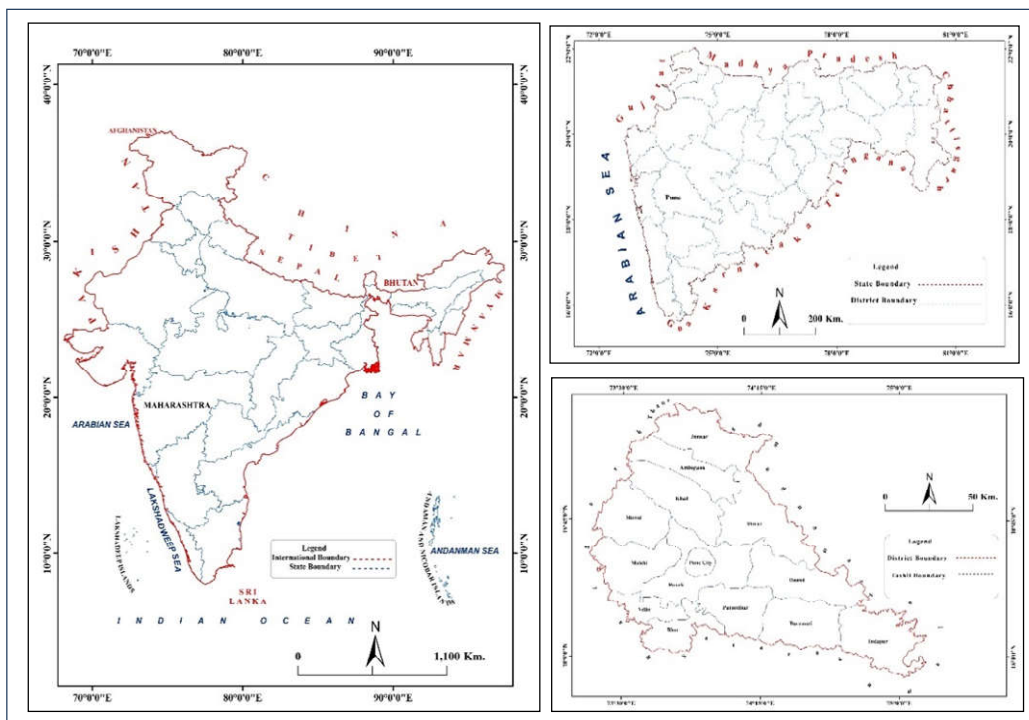


Fig. 1 Location Map of Study Area

**METHODOLOGY**

The study has been accomplished mainly through secondary data which have been collected from census records published by the Government of Maharashtra. Apart from these, a number of articles published in various National and International journals have also been consulted for the purpose. Necessary primary data have been generated through questionnaire-based survey meant for different target groups following the stratified random method of sampling with a sample size of 625 household's representing households of slums and shanties on one hand while household and apartment's categorized under non-slum communities on the other. The data thus collected will be processed, analyzed by using different quantitative, statistical techniques. The tables are used to analysed the data. Computation of data is followed by cartographic representation and analytical notes.

To calculate the sex-ratio of population formula will be used as given below.

$$\text{Sex Ratio} = \frac{\text{Female Population}}{\text{Male Population}} \times 1000$$

**General Sex Ratio = Total female population / Total male population X 1000.**

To calculate the Literacy ratio of population formula will be used as given below.

$$\text{Literacy ratio} = \frac{\text{Literate Population}}{\text{Total Population}} \times 100$$

**RESULTS AND DISCUSSION**

The highest literacy rate are found in Mumbai (suburban) (89.9), Mumbai (89.2), Nagpur (88.4), Akola (88.0) and Amravati (87.4) Districts. The lowest literacy rate are found in Nandurbar(64.4), Jalna (71.5), Dhule (72.8), Parbhani (73.3), Gadchiroli (74.4) Districts. The gap between male and female literacy in 2011 has come down to 12.5 percent from 19.0 percent in 2001. As opined by the demographer's health and education are invariably correlated with one another. With the improvement of education, the condition of health especially that of maternal health is bound to improve. The condition of literacy is, however, highly skewed in the Maharashtra with better education facilities observed in urban areas than the rural areas. Table No. 01 shows Male and Females literacy rate in percentage as well as Rural and Urban Male and Females literacy rate of Maharashtra.

**Table 01** Decadal Variation of Male, Females and Rural-Urban Literacy rate in Maharashtra, 1971 to 2011 (Source: Census of India, 1971-2011)

Years	Literacy Rate (in Percentage)				
	Persons	Males	Females	Urban	Rural
1971	45.77	59.40	31.00	66.21	36.1
1981	57.24	70.06	43.50	72.0	43.5
1991	64.87	76.56	52.32	79.2	55.5
2001	76.88	85.97	67.03	85.5	70.4
2011	82.30	88.40	75.90	88.7	77.0

The Districts Mumbai (suburban) and Mumbai of Maharashtra made progress in the field of human development especially in health and education. The Health and education as two

components of social infrastructure are invariably linked. This is true in case of Nagpur also. The over view of chide population result that Male and Female chide (0-6) population has decreased in rural area (-7.5% from males and -10.1% for females). In the 10 district the growth rate 0-6 age population is positive but in case of female children it is positive only in 7 district. Kolhapur, Sangli, Satara and Chandrapur the decline in male child population is more than the same of the female child population. The state of Maharashtra has recorded an upward general sex ratio with a declining child sex ratio. In 2001 the state has registered general sex ratio of 922 which has increase to 929 in 2011. The top five districts in general sex ratio are Ratnagiri, Sindhudurg, Gondiya, Satara and Bhandara. The general sex ratio low in Mumbai (suburban), Mumbai, Yhane, Pune and Bid. The child sex ratio has, however, declined from 913 in 2001 to 894 in 2011. The highest child sex ratio in Gadchiroli (961), Gondiya (956), Chandrapur (953), Bhandara (950) and Nundurbar (944) Districts are recorded. The lowest child sex ratio is found in Bid (807), Jalgaon (842), Ahmadnagar (852), Buldhana (855) and Aurangabad (858) District of Maharashtra.

**Table 02** Decadal Variation of General Sex Ratio and Child Sex Ratio in Maharashtra and Pune District 1971 to 2011 (Source: Census of India, 1971-2011)

Year	General Sex Ratio		Child Sex Ratio	
	Maharashtra	Pune	Maharashtra	Pune
1971	930	933	978	974
1981	937	937	956	950
1991	934	933	946	943
2001	922	919	913	902
2011	929	915	883	833

The District of Pune has always played a significant role in the state socio-economic and political scenario since the colonial period. The capital of Pune District is the second largest city of Maharashtra. In 1971 the general sex ratio in the Pune District was 933, which was higher the state figure of 930. At present in censens 2011 general sex ratio in Pune District 915, which was lower the state figure of 929. The gap in general sex ratio in 1971 is Positive (+3) and 2011 is Negative (-14) so the difference increases day by day it's not a good condition for Pune District. In 1971 the child sex ratio in the Pune District was 974, which was lower the state figure of 978. At present incensens 2011 child sex ratio in Pune District 833, which was lower the state figure of 833. The gap in child sex ratio in 1971 is Negative (-4) and 2011 is Negative but its increase rapidly (-50) so the difference between child sex ratio increase day by day it's not a good condition for Pune District. Decadal variation of General Sex Ratio and Child Sex Ratio with comparative demonstration Maharashtra and Pune District shown in Table No. 02.

**An Inter-Tehsil Study of Sex Ratio in Pune District**

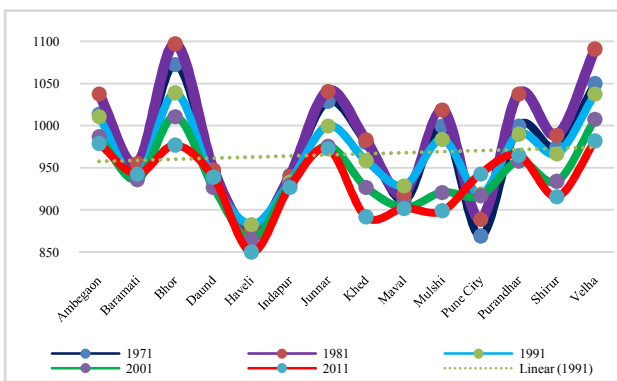
The District of Pune has always played a signification role in the state socio-economic and political scenario since 1961. The District is considered as the dominant one among the western Maharashtra District in the field of human development as well as trade and commerce. There were 13 tehsil and one City (Combine Pune (within two cantonments) and Pimprichinchwad) November 2015. The level of human development in the State is highly concentrated in around the Pune city which was the cultural capital of the State.

**Table 03** Decadal Variation of General Sex Ratio in Pune District 1971 to 2011 (Source: Census of India, 1971-2011)

Tehsil	Area Km <sup>2</sup>	SR 1971	SR 1981	SR 1991	SR 2001	SR 2011
Haveli	1337	877	874	883	865	850
Khed	1400	980	983	959	927	892
Mulshi	1039	1000	1019	984	921	899
Maval	1131	911	918	929	903	902
Shirur	1557	974	989	967	934	916
Indapur	1468	941	940	933	930	927
Daund	1290	947	948	934	927	939
Pune City	184	869	889	919	917	943
Baramati	1422	949	955	938	936	943
Purandhar	1103	1000	1038	990	958	965
Junnar	1385	1029	1041	1000	976	973
Bhor	892	1073	1097	1039	1011	977
Ambegaon	1043	1014	1038	1011	987	979
Velha	497	1050	1091	1038	1008	982

However, the level of human development varies among the district as well as within the districts. The sex ratio in the State is linked with the status of female literacy, the age of marriage, incidences of female feticide and infanticide as well as female work participation rate. In case of tehsil-wise analysis of Pune District Pune Municipal Corporation (PMC) area has recorded lowest sex ratio in 1971 when the city's sex ratio was as low as 869 mainly because of male migration in a growing city offering job opportunities while highest sex ratio prevailed in Bhor where the figure was 1073.

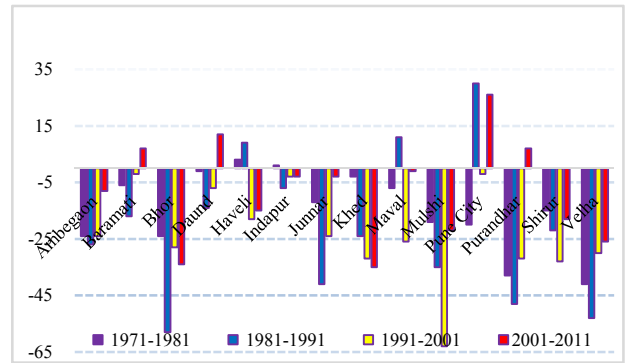
In consecutive years Haveli had always been the tehsil with lowest general sex ratio up to 2011 only inappropriate the year 1971. PMC follow the increasing general sex ratio only the 2001 year inappropriate. Table 03 shown Decadal Variation of General Sex Ratio in Pune District 1971 to 2011. When you see the overall general sex ratio its decreasing tendency in general sex ratio. Purandhar, Baramati, Daund and PMC general sex ratio increase in 2011. Bhor, Junnar, Ambegaon, Indapur and Velhe shown the decreasing tendency in sex ratio over the year (1971-2011). The base year considers 1991 is linear line it's slightly increasing tendency in general sex ratio in Pune District shown in Fig. No.03.



**Fig. 2** Shows the Decadal Variation in General Sex ratio in Pune District

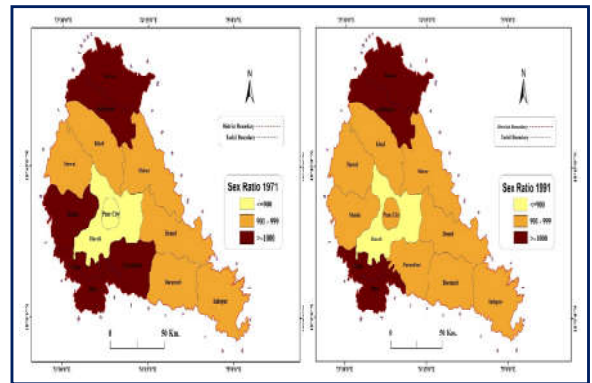
It is observed that there has been a dominance of the male population over female population throughout the past five decades, for the decade of 1971, the Tehsil Bhor, Ambegaon, Junnar and Velhe show a dominance of the female population. In the decade of 1981, the Tehsil Mulshi, Purandhar, Bhor, Ambegaon, Junnar and Velhe show a dominance of the female population. In the decade of 1991, the Tehsil Bhor, Ambegaon,

Junnar and Velhe show a dominance of the female population. Only two tehsil shows the dominance of the female population in 2001 which is Bhor and Velhe. In 2011 census there is no signal tehsil present in the dominance of the female population.



**Fig. 3** Shows the Decadal Difference in General Sex Ratio from Previous Decadal in Pune District.

The above Fig. 3 indicate that the decadal difference in general sex ratio different tehsil of Pune District. Ambegaon, Bhor, Junnar, Khed, Mulshi, Shirur and Velhe indicate the decreasing general sex ratio. Baramati, Daund and Purandhar decreasing general sex ratio in census 1971, 1981, 1991 and 2001 but its increasing in census 2011, it is good for balance between male and female. Tehsil Indapur different than the other tehsil it is decreasing but very lightly. The Pune city make a different role in the general sex ratio of Pune District. Within the five decade two time decries and two-time increase.



**Fig. 4** Shows the Variation in General Sex ratio in Pune District

Fig. 4. Presenting the decadal fluctuation in General Sex of Pune District from 1971 to 1991. In Census 1971, General sex ratio is below 900 in Pune City and Haveli. Maval, Khed, Shirur, Daund, Baramati and Purandhar presenting general sex ratio is between 901 and 999. Six tehsil present the General Sex ratio positive, where the male population is rather than Female. The above situation same in census in 1981. In Census 1991 only three tehsil presenting positive in General Sex Ratio and Pune City change his position in stage one to two.

Fig. 5 Presenting the decadal fluctuation in General Sex of Pune District from 2001 to 2011. In Census 2001 only Bhor and Velhe Tehsil presenting the positive General Sex ratio. The Pune city and ten tehsil presenting the general sex ratio between 901 and 999. Only one tehsil Haveli general sex ratio is less than 900. In census 2011 there is on signal tehsil represent the positive general sex ratio. Two tehsil convert in stage two to one it's a below 900.

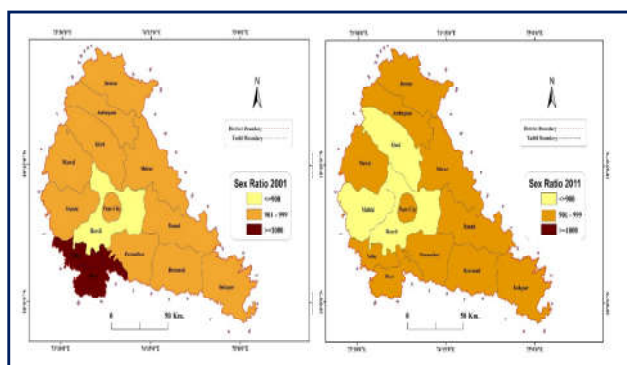


Fig.5 Shows the Variation in General Sex ratio in Pune District.

### Finding of the Study

The present study has revealed some shocking facts if Maharashtra demographic structure. Despite progress in the state civilization reflected through modernization of society, the state is still experiencing a male dominated society where the women are considered as a weaker sex. In the rural area of Maharashtra girl is married even before attaining the legal age of 18 years. She is denied the access to education and healthcare facilities even during her reproductive period. The women in these areas are facing the health problem. Protein Energy Malnutrition (PEM) and iron deficiency anemia are the common causes of nutritional dwarfism among children where the frequency of childbearing is high among mothers. In the case of a gross nutritional deficit, the weight gain is slow and the muscles are wasted (Ghai *et al.*, 2005). PEM and growth retardation are probably the most widespread health and nutritional problems of the developing countries including India (Mehta, 2000). Poverty and extension of the family to next generation both are possible through a male child. It has been observed that tehsil with low female literacy rate like Bhor, Valhe, Junnar, Ambegoan present the high general sex ratio. Where the female literacy rate high in that area like Pune city and surrounding tehsil present the low general sex ratio. The well-developed area in the Pune District suffer from heinous crimes like female feticide, sex-selective abortion etc. which tends to adversely affect the sex ratio at berth. Another grave crime, which often strikes media as female infanticide, is still prevalent among lower strata of society in urban areas and in villages. Abandoning, selling or trafficking of a girl child is a common practice in Indian society today.

### Suggestions

1. Society must break the vicious circle of poverty and female illiteracy.
2. Strict implementation of the law in the case of honor killing must be followed everywhere.
3. Free education up to 12th stand for girls' should not remain only the slogan. But its implementation in reality is necessary.
4. The government should promote higher and technical educational facilities in the rural areas.
5. There should be special incentive package for women education.
6. In the schools, no gender discrimination should be followed.
7. The Anti- Dowry Act should be strictly implemented.

9. Motivation and assistance should be given to collective marriage system.
10. Through employment opportunities, empowerment of women should be done.
11. Finally, mentality of a human being should be changed.

### CONCLUSION

The declining sex ratio is actually an undeclared emergency crisis which has its profound and frightening implication upon society and future of mankind. On the basis of above data researchers have concluded that equality between male and female is important. It is hard to think the effects of an imbalance between male and female. There are many responsible factors behind the declining sex ratio in Pune District such as education, poverty, male dominancy, lack of women empowerment, the social status of women and finally thinking of the human being etc. It is shocking that killing of the girl child both before and after birth is still practiced in the state despite legal prohibitions and incentive-based schemes provided by the State and center Government. Rural society in the state is still entangled in class and caste divide with a deliberate intention that a girl child should not be born. This artificial alteration of the demographic structure has implications not only for gender justice but also on the pattern of social violence and human development. Gender equality is still eluding in Maharashtra and Pune District. Restoration of the gender balance is not only the sole duty of the Government but its responsibility is bestowed on Non-government Organizations also for championing the campaign for mass awareness. 'Betibachao, betipadao' or 'Save and educate the girl child' has to be the motto for every Indian family now-a-days. Empowerment of women in the field of the socio-economic and political arena should be the essence of modern Maharashtra society and then only a balanced demographic structure within the state could be achieved. To avoid this social problem Government should implement various social, employment and educational policies. At the same time Government should implement all legislations about the gender discrimination. But very simple way but equally important way is that changes the mentality of male and give the proper status to female like in developed countries the USA, Norway, UK. Because in India is now marching towards "High Power". So there will be female development. The vision of Pandit Jawaharlal Nehru will be fulfilled i.e. "If you want me to tell you what a nation is like, or what a social organization is like, tell me the position of women in that country".

### References

- Agnihotri, Satish, Richard Palmer, Jones and Ashok Parikh (2002): Missing women in India district: A quantitative analysis, Struct. Chang. Econ. Dynam., 13(3), Pp.285-314.
- Ayyar N. P. and Shrivastava D. S. (1978): 'Urban Sex Ratio in MadhyaPradesh: Distribution and Trends', National Geographer, Vol. 13, Pp. 1-12.
- Dawn Anandita and BasuRanjan (2015): Fluctuation of sex ratio in India with special reference to west Bangal, *International Journal of Recent Scientific Research* Vol. 6, Issue, 5, Pp. 3779-3801.

- District census handbook (1971, 1981, 1991, 2001, 2011): District Social and Economical Review Report, Economics & Statistical Department, Pune District.
- Ghai, O.P., Gupta, P., Paul, V. K. (2005): *Essential Pediatrics*, 6<sup>th</sup> edition, CBS Publishers and Distributors, New Delhi.
- Gosal G. S. (2001): 'Sex Composition in India', *Account Report Indian National Science Academy*, New Delhi. Pp. 31-33.
- Krishna Gopal and Chandana R. C. (1973): 'Sex Composition of Haryana's Population', *Geographical Review of India*, Vol. XXXV, No. 2, Pp. 113- 125.
- Mehta, M.N. (2000): *Protein Energy Malnutrition*, Ed. A. Parthasarathy *et. al.*, Textbook of Pediatrics, Jaypee Brothers, New Delhi.
- Mitra Ashok (1982): 'Implication of Sex Ratio in India's Population', *Population Geography*, Vol. VI, Pp. 107-116.
- More Aniket R., Ingale and Vitthal S. Shinde (2012): *Generation and district wise study of sex ratio*, *Internet J. Heal. Sci. Res.*, 2(7), Pp149-153.
- Pednekar H. M. and K. Sita (1980): 'Spatial Patterns of Sex Ratio in South Konkan (Maharashtra) 1951-1971', *Population geography*, Vol. VI, Pp.130-142.
- Sanjeevanimulay and R. Nagarajan, (2002): *The richer the district, the poorer the sex ratio*, *Info. Change News and Features*, Pp.14-21.
- Zodage S. B. (2008): 'A Study of Sex Ratio in Karvir Tehsil in Kolhapur District, Maharashtra State', *the Deccan Geographer*, Vol. 46, No. 2, Pp.59-65.

\*\*\*\*\*

**How to cite this article:**

Arjun B. Doke.2016, *Fluctuation of Sex Ration in Maharashtra with Sepal Reference to Pune District. Int J Recent Sci Res.* 7(9), pp. 13277-13282.