International Journal of Health Sciences and Research
www.ijhsr.org ISSN: 2249-9571

Original Research Article

Generation and District Wise Study of Sex Ratio

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Received: 17/08//2012 *Revised: 22/09/2012* *Accepted: 27/09/2012*

ABSTRACT

The present study was undertaken to investigate the effect of truncation after two children on the sex ratio. For this purpose they were selected four districts Satara, Sangali, Kolhapur and Solapur from the state Maharashtra, India.

Maharashtra is the third largest state regarding geographical area and second largest state in respect of population in India. Maharashtra has overall sex ratio of 925 females per 1000 males. It has increased from 922 to 925 during last decade. Sex ratio in Maharashtra has declined over the period 1991-2011 from 972 to 925.

The sex ratio has large variation from one district to another district in Maharashtra state. The top five districts in Maharashtra according to sex ratio 2011 census were Ratnagiri (1123), Sindhudurg (1037), Gondiya (996), Satara (986), Bhandara (984). Bottom three districts in Maharashtra according to sex ratio 2011 census were Mumbai (838), Mumbai suburban (857), Thane (880).

To explain the consistently decreasing trend of sex ratio, some of the common reasons put forward are son preference, neglect of girl child. Tables, Graphs and Maps are used to explain the change in sex ratio over the period in the study region.

Key words: Sex –Ratio, Son preference, Population.

INTRODUCTION

In 2011 India has 1,21,01,93,422 people living in 640 districts of 35 States and Union Territories. The state Maharashtra having population according to 2011 census was 11,23,72,972; in this 5,83,61,397 males and 5,40,11,575 females. The sex ratio in India is 940 females per thousand male as per 2011census and Maharashtra has 925 females per thousand males.

The declining f/m ratio has been further intensified after the publication of the 2001 census data which showed a considerable lowering of the f/m ratios in

the child population. The overall population sex ratios are affected by migration figures, the sex ratio in the younger population is not. As such an analysis of the child sex ratio data is considered more appropriate. Usually, the census figures for the 0-6 year age group become readily available due to the imperative of estimation of literacy figures in the country.

Excess Female Mortality' is the basic reason for declining sex ratio and excess female mortality n turn is the result of female infanticide, female foeticide, neglect of females and maternal mortality. [1] It was found that while sex differentials in childhood mortality were substantial and widely distributed in rural part of India at the time of the 1961 Census, they were even more so by the time of the 1971 census. [2]

Another recent study of spatial variations in sex ratio in the context of India, where they found labour force participation rate and literacy rate of women significant in lessening sex ratio; while increasing recourse to sex selective abortions worsen it. [3]

The sex ratio consists of three factors, namely sex ratio at birth, difference in mortality in two sexes and sex selectivity among migrants. It plays a role in religions, national income, education, housing etc. The sex composition of population is the basic demographic characteristics depending on directly incidence of birth, death and marriage. [4]

Maharashtra has declined Sex ratio over the century from 972 in 1901 to 925 in 2011. Some of the reasons commonly put for-ward to explain the consistently low levels of sex ratio are son preference, neglect of the girl child resulting in higher mortality at younger age. There are several factors responsible for discrimination against the girl child such as preference for son, low status of women, social and financial security associated with sons, socio-cultural practices like dowry and violence against women. [5]

The 2001 census recorded that there are 1079 males per 1000 females in the 0–6 age group, which is slightly higher than the overall ratio of males to females of India's total population (1072 males per 1000 females). This was the first census where the sex ratio of the child population was shown to be higher than that of the overall population, though the reasons for this are not readily understandable. One can merely attribute it to problems associated with sex differential census counts, but during the last 40 years the ratio of males to females of total population declined by eight points, while the sex ratio of the population aged 0–6 increased by almost 50 points, suggesting a decline in the proportion of girls by 5 percent. [6]

Families in India, as in a number of traditional or Islamic societies, attach a very special value to sons because sons usually live with their parents after marriage and contribute to the family income. Sons provide vital support to the elderly or parents in case of illness, who often have often no other source of sustenance or survival in their old age. Many parents try to realize the unfulfilled ambitions of their life through the achievements of their sons. Hence, people tend to have a stronger preference for sons than daughters. [7, 8]

The sex ratio of the population of India (males/females), as reported in censuses, has risen almost continuously since the beginning of the twentieth century. It was 1.029 (102.9 males per 100 females) in the 1901 census, and had increased to 1.075 by 1971. For the first time in the century, a decrease in the sex ratio was recorded in 1981, by which date it had declined marginally to 1.070. By 1991, however, the sex ratio had risen again, to reach 1.079, the highest value ever recorded. [9]

Within south Asia, India now has the largest share of missing females in South Asia and next to China in the global comparison. In some studies, sex selective abortions and son preference are also identified as determinants of declining sex ratio related to Asian countries. [10]
The effect of the economic value of women on the 0-9 cohort population sex ratio indicated that Turkey does not reflect a significant deficit of women in the population as compare to the alarming figures from India and China. There was direct relationship between women's labour force participation and the sex ratio but this effect is present only where women's engagement is unpaid family labour. [11]

Study Region:

Maharashtra is a state located in west central India. It is the second most populous state after Uttar Pradesh and third largest state by area in India. Maharashtra is the richest state in India, contributing 15% of the country's industrial output and 13.3% of its GDP (2006–2007 figures). Maharashtra is bordered by the Arabian Sea to the west, Gujarat and the Union territory of Dadra and Nagar Haveli to the northwest, Madhya Pradesh to the northeast, Chhattisgarh to the east, Karnataka to the south, Andhra Pradesh to the southeast, and Goa to the southwest. The state covers an area of 307,731 km^2 (118,816 sq mi) or 9.84% of the total geographical area of India. The study region has an area of 41,232 sq. km and a population of 14,014,039 as per 2011 census, which is 13.40 percent and 12.47 percent of Maharashtra state, respectively.

MATERIAL AND METHODS

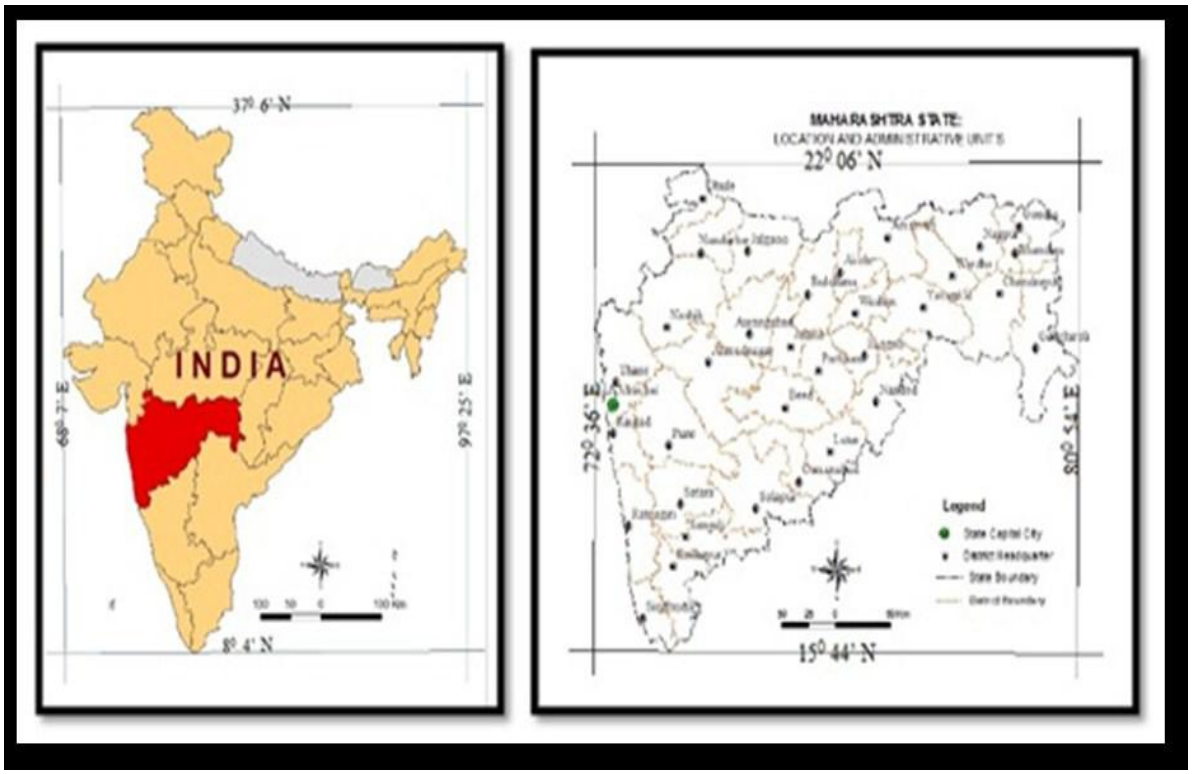
Present study is based on the Primary as well as Secondary sources data (Govt. of Maharashtra-census India). The Maharashtra state is made up of 35 districts, which are grouped in to six divisions as:

1. Amaravti division
2. Aurangabad division
3. Konkan division
4. Nashik division
5. Nagpur division
6. Pune division

In the Pune division five districts Kolhapur, Pune, Sangli, Satara and Solapur were included. For study purpose from Pune division four districts Satara, Sangali, Solapur and Kolhapur were selected.

The source population was students in the shivaji university campus representing above four districts. The study was conducted during June 2009 to Feb.2010. Sample was based on purposive technique and 200 subjects (50 from each district) were taken from the study region. The data was tabulated, analyzed and represented in the form of statistical diagrams and maps.
The sex ratio is calculated using the formula,

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



RESULTS

Table no.1 shows pattern of sex ratio of the study region in past and present generation:

Districts	Past Generation	Present generation
Satara	875	708
Sangali	974	864
Kolhapur	851	842
Solapur	1093	743

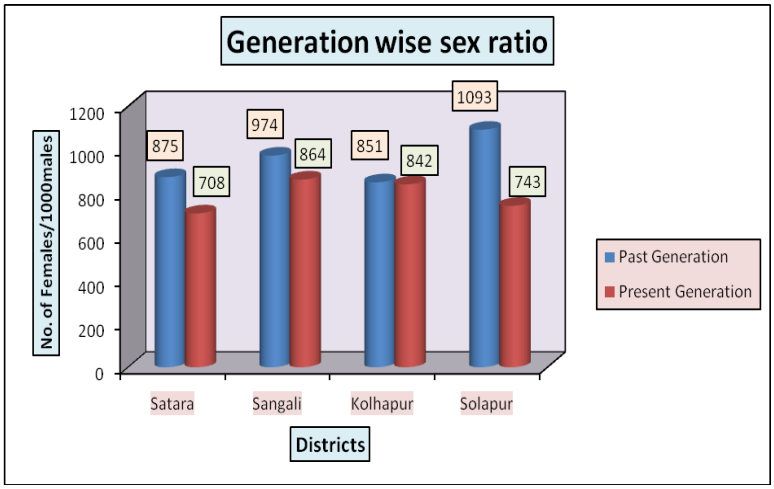


Fig. 1. Generation wise sex ratio in four districts.

There is serious decline in sex ratio for the Satara, Sangali and Solapur districts. Though for Kolhapur district mostly stable over a period of past and present generation.

Table no. 2 and Figure no. 2 below shows the sex ratio for all four districts after truncation of two children

Table 2: Sex ratio after truncation:

Districts	Not truncation	Truncation
Satara	708	863
Sangali	864	994
Kolhapur	842	976
Solapur	743	974

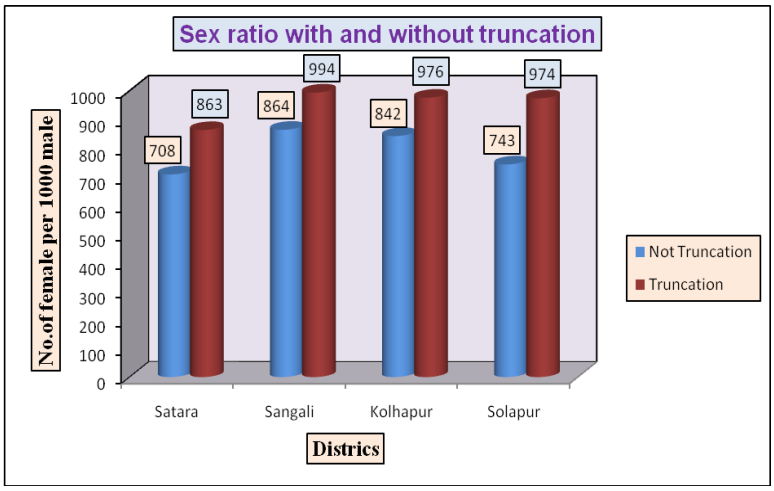


Fig. 2. Sex ratio with and without truncation in four districts.

After truncation of two children sex ratio is increasing for all four districts and very less for the Satara district.

DISCUSSION

The 2001 census recorded that there are 1079 males per 1000 females in the 0–6 age group, which is slightly higher than the overall ratio of males to females of India's total population (1072 males per 1000 females). This was the first census where the sex ratio of the child population was shown to be higher than that of the overall population, though the reasons for this are not readily understandable. One can merely attribute it to problems associated with sex differential census counts, but during the last 40 years the ratio of males to females of total population declined by eight points, while the sex ratio of the population aged 0–6 increased by almost 50 points, suggesting a decline in the proportion of girls by 5 per cent. [8]

The present study also shows that the study region has decline in the sex ratio in respect of generation as well as the truncation of two children. The proportion of the females per thousand males is not satisfactory in the study region. [1]

Sex ratio at birth is not equal. It is partly due to higher mortality of female children and sizeable maternal mortality. Attitude of preference of male child and neglecting female child result this type of imbalance. Abortions of female child still performed in

the society. Therefore strict implementation of legal provisions is necessary to stop such type of abortion. [2]

There are large regional differences in the sex ratio in India (Kumar et al. 1997), especially between Northern and Southern states, with the former traditionally having higher ratios than the latter (Dyson and Moore 1983; Agnihotri 2000). Nevertheless, the focus of this paper is on trends at the national level. This is because the national trend has been the main issue at stake in discussions of the sex ratio in India and, as such, deserves particular attention. [9]

In the Barakade AJ study, which was aimed to assess the changing pattern of population density in Satara district of Maharshtra shows that, there is a complex relationship between patterns of population growth and density increase by the Satara district. [6]

From the above discussion inference can be made that there was a declining in the sex ratio at the birth and the age group 0-6 years.

CONCLUSION

For Satara and Solapur district there is a serious drop in the sex-ratio in the current generation than their older generation. A less serious but still decreasing trend is observed in other district. Also, among Sangli, Kolhapur and Solapur populations of old generation have inflated natural sex ratio whereas current generations have less Sex Ratio.

After truncation of two children's among Satara District populations of current generation has vary less sex ratio as compare to all other Districts.

In the sex ratio of all the four districts there is large variation during the 1991-2011. In the study region, the proportion of females per 1000 males is not satisfactory.

REFERENCES

1. Visaria PM. The sex ratio of the population in India Census Monography. 1971 No.10, New Delhi.
2. Miller BD. Changing Patterns of Juvenile Sex Ratios in Rural India, 1961 to 1971. Economic and Political weekly. 1989; 1229-36.
3. Kalsen S,Wink C. Missing Women; Revisiting the Debate. Feminist Economics. 2003; 9(2-3):263-99.
4. Kankure KB. A study of sex ratio in Parbhani dstrict (M.S.). International Reffered Research J. 2011; III (31):1-2.
5. Barakade AJ. Declining Sex Ratio: An analysis with special reference to Maharashtra state. Geoscience research. 2012; 3(1):92-95.
6. JP Singh. Socio-cultural Aspects of the High Masculinity Ratio in India. Journal of Asian and African Studies. 2010; 45(6):628–44.
7. Caldwell JC, Reddy PH, Caldwell P. The causes of demographic change in rural south India. Population and Development Review. 1982; 8(4): 689–727.
8. Singh JP. Changing village, family structure and fertility behaviour: Evidence from India. International Journal of Contemporary Sociology. 2001; 38(2): 229–48.
9. Michel Guillot. The dynamics of the population sex ratio in India, 1971–96. Population Studies. 2002; 56:51–63.
10. Lekha S Chakraborty, Darshy Sinha. Determinants of declining child sex ratio in India : An Empirical Investigation. Munich Personal RePEc Archive. 2008, 1-22.

11. Berik G, Bilginsoy C. Type of work matters: Women's Labor Force Participation and the Chil Sex Ratio in Turkey. World Development. 2000; 28(5): 861-78.

How to cite this article: More VP, Ingale AR, Shinde VS. Generation and district wise study of sex ratio. Int J Health Sci Res. 2012;2(7):7-13.

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