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## A study on demographic parameters sex ratio and literacy rate of scheduled caste people of Maharashtra: Census-2011 statistical approach

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### ABSTRACT

*Caste is an important factor in Indian social system. From ancient times, the caste is a factor which is considered a standard for ascertaining identity of each person. The nature of social, cultural, economic and political is decided on the basis of caste system. Hence, caste system is an undivided factor of Indian social structure and it is the basis of Indian social structure.. Over the time, Varna system and caste system were generated in India and Indian society got blocked in Varna and caste system. The constitution of India is enriched with several provisions for schedule caste and schedule tribes to safeguard and promote their cultural, social, educational, economic and political interests in order to bring them in mainstream of the nation. This paper aims to study the demographic parameters sex ratio and literacy rate in SC's of Maharashtra state of India. In Maharashtra there are total 59 Scheduled caste as per census-2011. Findings of this study was Mahar caste recorded higher population as compare with other. SC's sex ratio become higher than state sex ratio. But the SC's literacy rate 69.94 was much lower than state literacy rate which is 82.34. The Female situation of SC's community was very critical which is shows that because of female and in SC's they can not take any education. These community needs more educational policies from government to uplift there social and economical condition. Spearman rank correlation coefficient shows that there is strong relationship between sex ratio and literacy rate.*

**Keywords:** Population of SC's, Sex Ratio, Literacy Rate, Spearman Rank

### 1. INTRODUCTION

Indian society is highly stratified, with many glaring inequalities among different social groups. The worst positioned among them are the Dalits and tribals (Cattell, 1942). The caste system segregated the Dalits from the rest of the society to such an extent that they were denied even the basic human rights that one must enjoy in order to ensure one's bare assistance (Warner, 1960). The caste system has created and sustained an unequal opportunity structure, which is an anathema to the egalitarian principles, which are the basis of a modern democratic society. What is worse, it intensifies and perpetuates the sufferings and servitude of disadvantage caste class groups by reducing their access to development benefits visa-vis the higher caste class groups. Thus, after the five decades of planned economic development and all the rhetoric of the socialistic pattern of society, the economic status of these communities is pathetic (Singh, 2000).

A person is born into a caste once born in that caste, his/her status is predetermined and irreversible. Birth decides one's status and this cannot be. Altered by any talent the person may accumulate (Meera Anand, 2005) similarly, the caste in which a person is born predetermines what vocation the person will pursue. Hence in some extent the origin of caste system and untouchability originated that is still prevalent in all the states of India. The social strata which is known as the backward class represents the down trodden classes of the society. BC has its origin in the ancient Indian social system (Prasads, 1961). Census provides the necessary data about Scheduled Caste for evolving suitable plans for their socio-economic up liftment. But census conducted one time in the decade and it is not possible to conduct individual census for collect required data of present socio-economic pattern of Scheduled Caste population within study region.

A complete enumeration of population is known as a census inquiry, it can be presumed that in such an inquiry, when all aspects are covered, no elements of chance left and highest accuracy is obtained, but practice this may not be true. Even slightest element of bias in such an inquiry will get larger and longer, as the number of observations increases. Moreover, there is no way to checking the element of bias through a resurvey. Besides, this type of inquiry involves a great deal of time, money and energy. Therefore, when field of study is large, this resurvey method becomes difficult to adopt because of the resources involved.

Scheduled Castes are notified in 31 States/UTs of India and there are altogether 1,241 individual ethnic groups, etc. notified as Scheduled Castes in different States/UTs. There have been some changes in the List of SCs/STs in States/ UTs during the last decade. As per the 2011 Census of India, there are around 201.4 million SCs comprising of 103.5 males and 97.9 females. The proportion of SCs in relation to the total population is 16.6%, of which 18.5% and 12.6% belong to rural and urban categories respectively. The state-wise & UT distribution of SCs in the country as per the 2011 Census is as follows:

- 1) 20.1% and above - Himachal Pradesh, Punjab, Haryana, Delhi, U.P., West Bengal
- 2) 15.1 – 20.0% - Rajasthan, M.P., Bihar, Uttarakhand, Tripura, Odisha, Andhra Pradesh, Karnataka, Tamil Nadu, Puducherry, Chandigarh
- 3) 10.1-15.0% - Maharashtra, Chhattisgarh, Jharkhand
- 4) 5.1-10.0% - Gujarat, Kerala, J&K, Assam
- 5) 5% and below - Meghalaya, Sikkim, Mizoram, Manipur, Goa, Daman & Diu,

Punjab (31.9%) has the highest proportion of SCs in the country followed by Himachal Pradesh (25.2) and West Bengal (23.5%). As regards the bottom five the North-Eastern states – Mizoram and Meghalaya – have the lowest proportion of SC population. Maharashtra state has recorded 11.24-core population.

### 1.1 Objectives

- To study 59 caste-wise Population of Scheduled caste in Maharashtra.
- To study structure of sex ratio of scheduled caste in Maharashtra.
- To study caste-wise literacy rate of scheduled caste people in Maharashtra.
- To study correlation between sex ratio and literacy in study area.

## 2. STUDY AREA

**Maharashtra**, state of India, occupying a substantial portion of the Deccan plateau in the western peninsular part of the subcontinent. Its shape roughly resembles a triangle, with the 450-mile (725-km) western coastline forming the base and its interior narrowing to a blunt apex some 500 miles (800 km) to the east. Maharashtra is bounded by the Indian states of Gujarat to the northwest, Madhya Pradesh to the north, Chhattisgarh to the east, Telangana to the southeast, Karnataka to the south, and Goa to the southwest and by the union territory of Dadra and Nagar Haveli and the Arabian Sea to the west.

### 2.1 Highlights from Census-2011 among 59 scheduled caste

According to census-2011 in Maharashtra there are total 59 scheduled castes having population of 11.24 crore as per census. The list of SC's with population is as follow.

**Table 1A**

S no.	Name of the caste	% of Population	S no.	Name of the caste	% of Population
1	Ager	0.007	31	Khatik, Chikwa, Chikvi	0.843
2	Anamuk	0.001	32	Kolupulvandlu	0.000
3	Aray Mala	0.003	33	Kori	0.124
4	Arwa Mala	0.004	34	Lingader	0.041
5	Bahna, Bahana	0.002	35	Madgi	0.439
6	Bakad, Bant	0.013	36	Madiga	0.119
7	Balahi, Balai	0.132	37	Mahar, Mehra, Taral, Dhegu Megu	62.223
8	Basor, Burud, Bansor, Bansodi, Basod	0.432	38	Mahyavanshi, Dhed, Vankar, Maru Vankar	0.116
9	Beda Jangam, Budga Jangam	0.211	39	Mala	0.119
10	Bedar	0.109	40	Mala Dasari	0.014
11	Bhambi, Bhambhi, Asadaru, Asodi, Chamadia, Chamar, Chamari, Chambhar, Chamgar, Haralayya, Harali, Khalpa, Machigar, Mochigar, Madar, Madig, Mochi, Telegu Mochi, Kamati Mochi, Ranigar, Rohidas, Nona, Ramnami, Rohit, Samgar, Samagara, Satnami, Surjyabanshi, Surjyaramnami, Charmakar, Pardeshi Chamar	10.967	41	Mala Hannai	0.000
12	Bhangi, Mehtar, Olgana, Rukhi, Malkana, Halalkhor, Lalbegi, Balmiki, Korar, Zadmalli, Hela	1.688	42	Mala Jangam	0.066
13	Bindla	0.005	43	Mala Masti	0.000
14	Byagara	0.003	44	Mala Sale, Netkani	0.002
15	Chalvadi, Channayya	0.026	45	Mala Sanyasi	0.000
16	Chenna Dasar, Holaya Dasar, Holeyaa Dasar	0.005	46	Mang, Matang, Minimadig, Dankhni Mang, Mang Mahashi, Madari, Garudi, Radhe Mang	19.341

17	Dakkal, Dokkalwar	0.007	47	Mang Garodi, Mang Garudi	0.311
18	Dhor, Kakkayya, Kankayya, Dohor	0.904	48	Manne	0.020
19	Dom, Dumar	0.029	49	Mashti	0.001
20	Ellamalvar, Yellammalawandlu	0.026	50	Meghval, Menghvar	0.314
21	Ganda, Gandhi	0.005	51	Mitha Ayyalvar	0.000
22	Garoda, Garo	0.005	52	Mukri	0.000
23	Ghasi, Ghasia	0.015	53	Nadia, Hadi	0.003
24	Halleer	0.001	54	Pasi	0.192
25	Halsar, Haslar, Hulasvar, Halasvar	0.001	55	Sansi	0.004
26	Holar, Valhar	0.846	56	Shenva, Chenva, Sedma, Ravat	0.010
27	Holaya, Holer, Holey, Holiya	0.142	57	Sindhollu, Chindollu	0.008
28	Kaikadi (in Akola, Amravati, Bhandara, Buldana, Nagpur, Wardha and Yavatmal districts and Chandrapur district, other than Rajura tahsil)	0.044	58	Tirgar, Tirbanda	0.001
29	Katia, Patharia	0.040	59	Turi	0.004
30	Khangar, Kanera, Mirdha	0.016			

Source: Census of india-2011

From above table we can conclude that Mahar caste contain higher population (62.223%) among all SC's, Mang caste contain 19.34%, Bhambi, Bhambhi 10.67%, Bhangi 1.68% these 5 caste cover total 94.21% population among all SC's.

### 2.2 Sex Ratio of SC's in Maharashtra

The sex ratio is usually defined as the number of females per thousand males in India. The sex ratio needs special mention for it is one of the related aspects of the socioeconomic characteristics. According to census (2011) male female sex ratio in India is 940 that means there are 940 females of per 1000 males in the country. Maharashtra has below the national level average sex ratio i.e. 929 females per 1000 males. According to census-2011 the castewise sex ratio of Maharashtra observed in four groups

- a) **above 1000 sex ratio** :- i.e above 1000 females per 1000 males are shown in 13 castes which were Mala Masti (1125), 'Kolupulvandlu(1063), 'Arwa Mala (1053), 'Meghval, Menghvar(1025), 'Aray Mala(1023) , Sansi, Holaya,- Holer, Holey, Holiya(1012), 'Ganda, Gandhi(1010), 'Mang Garodi, Mang Garudi(1009) , 'Dakkal, Dokkalwar (1004) 'Mala Jangam (1003) 'Mala Sanyasi (1000), 'Mitha Ayyalvar (1000).
- b) **999-950 sex ratio** :- Sex ratio between 999-950 group contain 17 caste which was 'Garoda, Garo(997), 'Dom, Dumar, 'Basor, Burud, Bansor, Bansodi, Basod, 'Bhangi, Mehtar, Olgana, Rukhi, Malkana, Halalkhor, Labegi, Balmiki, Korar, Zadmalli, Hela (992), 'Mahyavanshi, Dhed, Vankar, Maru Vankar(991), 'Chalvadi, Channayya(989), Madgi(986), Bedar(973), Beda Jangam, Budga Jangam(971), 'Dhor, Kakkayya, Kankayya, Dohor(970), 'Mahar, Mehra, Taral, Dhegu Megu (967)' Mang, Matang, Minimadig, Dankhni Mang(965), 'Holar, Valhar(963), 'Ghasi, Ghasia(960), 'Sindhollu, Chindollu(953), 'Madiga, 'Khatik, Chikwa, Chikvi (951), 'Kaikadi(950)
- c) **949-900 sex ratio**:- Sex ratio between 949-900 group contain 12 caste which was 'Anamuk (943), 'Lingader (941), 'Khangar, Kanera, Mirdha (940), 'Bhambi, Bhambhi, Asadaru, Asodi, Chamadia, Chamar, Chamari, Chambhar, Chamgar, Haralayya, Harali, Khalpa, Machigar, Mochigar, Madar, Madig, Mochi, Telegu Mochi, Kamati Mochi, Ranigar, Rohidas, Nona, Ramnami, Rohit, Samgar, Samagara, Satnami, Surjyabanshi, Surjyaramnami, Charmakar, Pardeshi Chamar(935), 'Ellamalvar, Yellammalawandlu(932), 'Manne(930), 'Byagara(924), 'Bakad, Bant(920), 'Mashti(917), 'Mala Dasari(913), 'Balahi, Balai(911) 'Katia, Patharia(901).
- d) **Below 900 sex ratio**:- In this group total 16 caste involved which was Chenna Dasar, Holaya Dasar, Holey Dasari(894), 'Bahna, Bahana(892), 'Mala Sale, Netkani(881) 'Ager(859), Mala(859) ,Kori(823), 'Nadia, Hadi(800), 'Halleer(789), Tirgar, Tirbanda(778), 'Pasi(707), Mala Hannai(688), 'Mukri(688) 'Halsar, Haslar, Hulasvar, Halasvar(663), 'Turi(586), 'Shenva, Chenva, Sedma, Ravat(584), 'Bindla(506).

According to census-2011 Maharashtra state recorded 929 sex ratio and Sc's recorded 962 which is higher than all Castes.

### 2.3 Literacy rate among 59 SC's

Table 1B

S no.	Name of caste	Literacy rate			S no.	Name of caste	Literacy rate		
		Persons	Male	Female			Persons	Male	Female
1	Ager	74	76.76	70.77	31	Khatik, Chikwa, Chikvi	78.17	81.92	74.22
2	Anamuk	85.29	91.43	78.79	32	Kolupulvandlu	84.85	75	94.12
3	Aray Mala	82.86	85.55	80.23	33	Kori	78.36	83.26	72.41
4	Arwa Mala	85.88	86.94	84.88	34	Lingader	76.75	82.05	71.11
5	Bahna, Bahana	72.38	75.68	68.69	35	Madgi	63.44	70.7	56.07
6	Bakad, Bant	83.69	84.17	83.16	36	Madiga	71.33	76.61	65.77
7	Balahi, Balai	69.84	76.99	61.99	37	Mahar, Mehra, Taral, Dhegu Megu	71.83	78.08	65.37
8	Basor, Burud, Bansor, Bansodi, Basod	75.31	80.18	70.4	38	Mahyavanshi, Dhed, Vankar, Maru Vankar	84.62	86.73	82.5
9	Beda Jangam, Budga Jangam	69.95	75.62	64.11	39	Mala	76.04	80.57	70.76

10	Bedar	57.41	65.06	49.54	40	Mala Dasari	73.23	78.61	67.33
11	Bhambi, Bhambhi, Asadaru, Asodi, Chamadia, Chamar, Chamari, Chambhar, Chamgar, Haralayya, Harali, Khalpa, Machigar, Mochigar, Madar, Madig, Mochi, Telegu Mochi, Kamati Mochi, Ranigar, Rohidas Nona, Ramnami, Rohit, Samgar, Samagara, Satnami, Surjyabanshi, Surjyaramnami, Charmakar, Pardeshi Chamar	72.47	78.46	66.08	41	Mala Hannai	62.96	56.25	72.73
12	Bhangi, Mehtar, Olgana, Rukhi, Malkana, Halalkhor, Lalbegi, Balmiki, Korar, Zadmalli, Hela	73.17	78.52	67.77	42	Mala Jangam	73.61	78.56	68.67
13	Bindla	62.72	73.01	42.38	43	Mala Masti	76.47	100	55.56
14	Byagara	47.23	54.31	39.56	44	Mala Sale, Netkani	64.31	70.63	57.14
15	Chalvadi, Channayya	63.4	70.07	56.66	45	Mala Sanyasi	73.91	78.26	69.57
16	Chenna Dasar, Holaya Dasar, Holey Dasari	60.69	68.85	51.57	46	Mang, Matang, Minimadig, Dankhni Mang, Mang Mahashi, Madari, Garudi, Radhe Mang	61.91	69.4	54.15
17	Dakkal, Dokkalwar	61.16	69.41	52.94	47	Mang Garodi, Mang Garudi	45.03	53.86	36.27
18	Dhor, Kakkayya, Kankayya, Dohor	75.18	80.21	70	48	Manne	74.15	80.26	67.59
19	Dom, Dumar	76.31	80.29	72.31	49	Mashti	78.26	86.11	69.7
20	Ellamalvar, Yellammalawandlu	73.53	79.19	67.46	50	Meghval, Menghvar	81	85.14	76.96
21	Ganda, Gandhi	67.18	75.95	58.5	51	Mitha Ayyalvar	89.47	84.21	94.74
22	Garoda, Garo	57.07	65.12	49	52	Mukri	81.48	84.38	77.27
23	Ghasi, Ghasia	70.09	74.58	65.4	53	Nadia, Hadi	75.68	78.92	71.62
24	Halleer	76.47	82.46	68.89	54	Pasi	73.09	79.8	63.6
25	Halsar, Haslar, Hulasvar, Halasvar	73.65	77.53	67.8	55	Sansi	49.49	53.28	45.75
26	Holar, Valhar	60.57	68.84	51.97	56	Shenva, Chenva, Sedma, Ravat	70.89	75.99	62.17
27	Holaya, Holer, Holey, Holiya	55.64	63.39	47.97	57	Sindhollu, Chindollu	87.62	89.47	85.69
28	Kaikadi (in Akola, Amravati, Bhandara, Buldana, Nagpur, Wardha and Yavatmal districts and Chandrapur district, other than Rajura tahsil)a	67.03	72.95	60.8	58	Tirgar, Tirbanda	70	66.67	74.29
29	Katia, Patharia	72.48	77.51	66.9	59	Turi	62.86	66.02	57.46
30	Khargar, Kanera, Mirdha	70.05	78	61.59		<b>All Scheduled Caste</b>	<b>69.94</b>	<b>76.35</b>	<b>63.29</b>

Source: Census of india-2011

According to Census-2011 the castes like Mitha Ayyalvar, Sindhollu, Chindollu, Arwa Mala, Anamuk, Kolupulvandlu, Mahyavanshi, Dhed, Vankar, Maru Vankar, Aray Mala, Mukri, Meghval, Menghvar recorded higher literacy rate which is more than 80%. And the caste Sansi, Byagara, Mang Garodi, Mang Garudi recorded very low literacy rate which is less than 50%.

As compare with male and female literacy rate in Maharashtra SC's Mala Masti (100%) and Anamuk (91.43%) caste male population recorded highest literacy rate , Sindhollu, Chindollu, Arwa Mala, Mahyavanshi, Dhed, Vankar, Maru Vankar, Aray Mala, Meghval, Menghvar, Mukri, Mitha Ayyalvar, Bakad, Bant, Kori, Halleer, Lingader, Khatik, Chikwa, Chikvi, Mala, Dom,

Dumar, Manne, Dhor, Kakkayya, Kankayya, Dohor, Basor, Burud, Bansor, Bansodi, Basod caste male population recorded more than 80% literacy rate.

According to census in Female literacy rate Mitha Ayyalvar, Kolupulvandlu recorded more than 90% literacy rate. Sindhollu, Chindollu, Arwa Mala, Bakad, Bant, Mahyavanshi, Dhed, Vankar, Maru Vankar, Aray Mala these caste female recorded above 80% literacy rate. But in Bedar, Garoda, Garo, Holaya, Holer, Holey, Holiya, Sansi, Bindla, Byagara, Mang Garodi, Mang Garudi caste the female literacy rate is very low. In that Byagara 39.56% and Mang garudi 36.27% caste female recorded literacy was very low which shows critical situation of these females as compare with other caste females.

As per census Maharashtra state recorded 82.34% literacy rate. And SC's recorded 69.94 literacy rate which shows that SC's has lower rate of literacy rate. These community needs more educational policies from government to uplift there social and economical condition.

### **3. CORRELATION BETWEEN SEX RATIO AND LITERACY OF SC'S IN MAHARASHTRA**

Present study is based on secondary data collected from census of india. Here we apply two variables 1. Sex ratio 2.literacy rate. A Spearman correlation coefficient was used to analyze these relationship. Spearman's rho measures the strength of association between two variables. As such, the Spearman correlation coefficient is similar to the Pearson correlation coefficient. All bivariate correlation analyses express the strength of association between two variables in a single value between -1 and +1. This value is called the correlation coefficient. A positive correlation coefficient indicates a positive relationship between the two variables (as values of one variable increase, values of the other variable also increase) while a negative correlation coefficient expresses a negative relationship (as values of one variable increase, values of the other variable decrease). A correlation coefficient of zero indicates that no relationship exists between the variables. However, correlation coefficients like Spearman and Pearson assume a linear relationship between variables. Even if the correlation coefficient is zero, a non-linear relationship might exist. Compared to the Pearson correlation coefficient, the Spearman correlation does not require continuous-level data (interval or ratio), because it uses ranks instead of assumptions about the distributions of the two variables. This allows us to analyze the association between variables of ordinal measurement levels. Moreover, the Spearman correlation does not assume that the variables are normally distributed.

The Formula for Spearman correlation coefficient was

$$r_s = 1 - \frac{6 \sum D^2}{n(n^2 - 1)}$$

Where D is the difference between ranks of two variables, n is the total number of observations.

Spearman's correlation coefficient Spearman's correlation coefficient is a statistical measure of the strength of a monotonic relationship between paired data. In a sample it is denoted by and is by design constrained as follows  $-1 < r_s < 1$

- 0.00-0.19 "very weak"
- 20-.39 "weak"
- .40-.59 "moderate"
- .60-.79 "strong"

Then by using above formula the  $r_s$  is 0.74.Hence it is conclude that there is a strong positive relation between literacy and sex ratio.

### **4. CONCLUSION**

- Among all SC's Mahar community recorded higher population within all SC's.
- Mang,Mahar,Bhambi,Bhangi these 5 caste cover total 94% population among all SC's.
- The caste which has low populations contain higher sex ratio.
- SC's literacy rate was low compare with state literacy rate.Female Literacy was low as compare with male literacy.
- In Mang Garudi community male as well as female literacy shows lower literacy rate compare with other communities.
- Spearman correlation coefficient shows there is strong relationship between literacy an sex ratio.

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