

The Geographical Study of Sex Ratio in Solapur District. :- With Special Reference to Micro- Tahsil Level Analysis

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Abstract :

An attempt is made to study on sex ratio of Solapur district at tahsil level. Sex ratio is determinant of equity of male and female persons in society. This study is based on secondary data which is collected from census & Government documents. Changing in sex ratio at tahsil level is a common in Maharashtra state & India due to migration towards to urban centers in search of getting employment opportunities. As well as declining sex ratio day by day in India poses a serious problem in society where social evils on females takes place. Solapur district is not a exceptional to that social problems. Solapur district is situated in Maharashtra state that shows both industrial, urbanization and agricultural development.

The Solapur district is one of the most important district of Maharashtra state both in terms of population and area. It lies entirely in the Bhima basin and located in between 17°10' North to 18°32' North latitudes and 74°42' North to 76°15' East longitude. The total geographical area of Solapur district is 14895 Km² according to 2011 census. The region under studies constitutes 4.88 % area and 4.51 % population of Maharashtra state. It ranks fourth in terms of area and seventh in term of population among the district of Maharashtra. The total sex ratio was 935 f/1000m person in 1991; 935 f/1000m person in 2001 and 939 f/1000m person in 2011. This study is based on secondary data which is collected from census & Government documents.

Key Words :- Sex Ratio, tahsil village group, rural Sex ratio, urban sex ratio

INTRODUCTION :

The ratio of total female persons to 1000 male persons in a given area, is known as a sex ratio. There is a greater variation maintaining the sex ratio among the different communities in India due to the socio-economic varies between them. Franklin (1956) rightly observes that sex ratio was an index of economy prevailing in an area and was useful tool for regional analysis. The knowledge of sex ratio is essential for understanding the employment and consumption patterns, and social needs etc of a community. Prior to the advent of the skills of reading and writing, society could be classified as being in the pre-literate culture stage. Literacy is essential for eradicating poverty and mental isolation, for cultivation peaceful and friendly international relations and for permitting the free play of demographic processes (Chandana, 1980). Illiteracy, on the other hands, takes away from man his dignity, perpetuates ignorance, poverty and mental isolation, deters peaceful and friendly international relations and free democratic processes and hampers social advancement, economic growth and political maturity. The literacy influences other such attributes of population as fertility, mortality, mobility, occupations etc. No wonder, the trends in literacy are considered as in index of the pace at which the socio-economic transformation of a society is taking place. Indian literacy is characterized with sharp differences between the literacy rate of males and females, of rural and urban areas; and of various population subgroups.

Rational of Study :-

In India, according to a Youth in India report brought out by the ministry of statistics and programme implementation, the sex ratio is declining steadily. From 939 women to 1,000 men in 2011 it is projected to fall to 898 by 2031. The consequences of a falling sex ratio are bad evils to human cultural society. The shortage of women in society has led to a sharp rise in violence against them. That's why the tendency of son preference, people don't won't girls all the more as they feel that it is difficult to keep them safe. As per Report of the Centre for Social Research in Haryana, fear of violence is a cause for female foeticide. With the advances in technology, sex determination has become easier very early on in pregnancy with fatal consequences for the girl child.

Objectives :-

The main aim of this study is as ;

- 1) To analyze tahsil –wise total sex ratio and its changes in Solapur district during 1991 to 2011
- 2) To compare urban and rural level sex ratio in Solapur district during 1991 to 2011.

Hypothesis :-

- 1) Equal Sex ratio brings equity in male-female society and it is depends upon various socio—cultural factors like traditions of old generation .
- 2) Equal sex ratio means equal proportional share of male and female literacy rate, equal opportunity to female in male dominated society, awareness in family planning and their health status.

Research Methodology :-

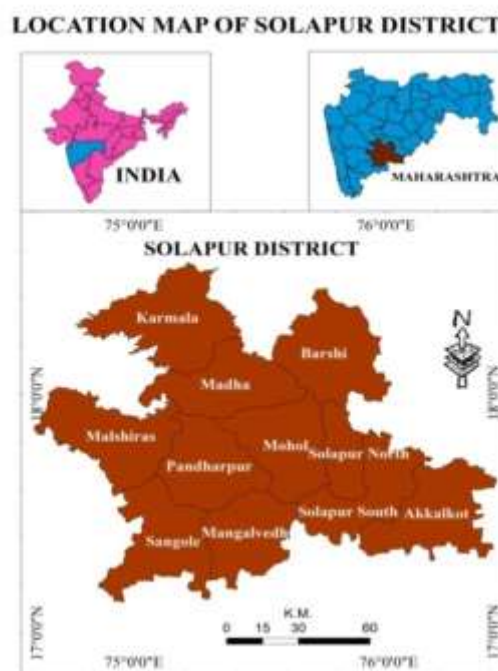
The present paper is primarily based on secondary data. The data on decadal year for the census year have been collected. Considering a urban as a unit for the Solapur District of Maharashtra , the have been collected of Socio economic review book, Statistical Abstract of Solapur District . The data pertaining to the period from 1991 to 2011 . The numerical measurement of sex composition of a population is expresses in terms of sex ratio. This ratio is calculated differently indifferent countries. In India, the sex ratio is calculated in terms of number of females per thousand males. Here tertiary sex ratio is considered & it is calculated as under:

$$R = \frac{\text{Female Population (P f)}}{\text{Male Population (P m)}} \times 1000$$

To the detail study of all tahsil in Solapur district are categorized according to the revenue group of tahsil described as per government known as Tadwal (18), Jeur (21), Akkalkot (19), Chapalgaon (20), Waghdari (15), Maindargi(21), Dudhani (23) villages in included Akkalkot tahsil ; Ropale Kavhe (21), Kurdu (15), Temburni (22), Modnimb (11), Laul (13), Madha (14), Darphal (19) villages included in Madha tahsil ; Ketur /Pomalwadi (20), Korti (17), Karmala -Rural (28), Arjun nagar (17), Jeur (20), Kem (18) villages included in Karmala tahsil ; Sethphal (16), Mohol (15), Narkhed (15), Sawaleshwar (18), Takali Sikandar (12), Wagholi(26) villages included in Mohol tahsil ; Agalgaon (20), Pangari (21), Nari (Bhendewadi) (14), Pangaon(13), Barshi (13), Surdi(18), Upale Dumala (12), Vairag (12), Gaudgaon (14) villages included in Barshi tahsil ; Patvardhan Kuroli (15), Karkamb (19), Bhalwani (15), Pandharpur (08), Tungat(12), Kasegaon(14), Pulu (17) villages included in Pandharpur tahsil ; Mahud (17), Sangewadi (15), Sangole (12), Nazare (13), Kola (16), Hatid (14), Javala (15) villages included in Sangola tahsil; Marapur (10), Mangalweda (15), Maravade (14), Andhalgaon (12), Bhose (14), Huljanti (16) villages included in Mangalwedha tahsil ; Boramani (11), Musti(08), Valsang (15), Hotagi (18), Mandrup (19), Vinchur (19) villages included in Solapur South tahsil; Dahigaon (13), Natepute (14), Sadashivnagar (13), Malshiras, (17) Akluj (18), Mahalung (14) Velhapur (12) , Piliv (13) villages included in Malshiras tahsil ; Wadala (12), Mardi (15), Solapur (02), Thire (06), Shelga (06) villages included in Solapur North tahsil of Solapur district.

Limitations :- Out of 11 tahsils of Solapur district, Barshi, Mangalwedha, Solapur South, Malshiras and Solapur North tahsil's village groups villages are excluded and included to another village groups. Therefore, aforesaid village groups are not taking into consideration of 1991 census data.

Study Area:



The Solapur district is one of the most important district of Maharashtra state both in terms of population and area . It lies entirely in the Bhima basin and located in between 17°10' North to 18°32' North latitudes and 74°42' North to 76°15' East longitude. The total geographical area of Solapur district is 14895 Km² according to 2011 census. The region under studies constitutes 4.88 % area and 4.51 % population of Maharashtra state. It ranks fourth in terms of area and seventh in term of population among the district of Maharashtra.

Analysis and Discussion :-

Tahsilwise Sex Ratio in Solapur District (1991 to 2011)							
Sr. Name	Tahsil Block	Name of Village Circle / Town circle	Total Sex Ratio			Changes in	
			1991	2001	2011	1991-2001	2001-2011
1.	Akkalkot	1) Tadwalh	933	938	939	5	1
		2) Jeur	910	945	946	35	1
		3) Akkalkot	927	921	895	-6	-26
		4) Chapalgaon	951	965	955	14	-10
		5) Waghdari	948	954	977	6	23
		6) Maindargi	961	959	946	-2	-13
		7) Dudhani	941	940	921	-1	-19
		Akkalkot Rural Tahsil	938	947	941	9	-6
		1) Akkalkot	959	1002	1001	43	-1
		2) Maindargi	1013	1015	1002	2	-13
		3) Dudhani	964	1013	959	49	-54
		Urban tahsil	971	976	988	5	12
		Total Akkalkot tahsil	945	953	951	8	-2
2	Madha	1) Ropale Kavhe	922	917	896	-5	-21
		2) Kurdu	907	918	905	11	-13
		3) Tembhorni	926	925	911	-1	-14
		4) Modnimb	927	924	918	-3	-6
		5) Laul	925	913	903	-12	-10
		6) Madha	923	923	919	0	-4
		7) Darfal	936	917	911	-19	-6
		Madha Ruralised tahsil	923	920	909	-3	-11
		1) Kurduwadi town	937	936	956	-1	20
		Urbanised tahsil	937	936	956	-1	20
		Total Madha tahsil	927	922	912	-5	-10
3	Karmala	1) Pomalwadi	977	932	926	-45	-6
		2) Korti	943	923	917	-20	-6
		3) Karmala(R)	934	933	912	-1	-21
		4) Arjunnagar	937	926	921	-11	-5
		5) Jeur	912	917	909	5	-8
		6) Kem	919	919	911	0	-8
		Karmala Ruralised tahsil	934	924	915	-10	-9

		Karmala town	926	934	949	8	15
		Urbanised Tahsil	926	934	949	8	15
		Total Karmala Tahsil	933	925	918	-8	-7
4	Mohol	1) Sethphal	935	925	909	-10	-16
		2) Mohol	915	916	936	1	20
		3) Narkhed	945	925	917	-20	-8
		4) Sawaleshwar	920	920	916	0	-4
		5) Takali Sikandar	935	918	909	-17	-9
		6) Wagoli	915	921	921	6	0
		Mohol Ruralised tahsil	927	920	919	-7	-1
		Urbanised Tahsil	0	0	0	0	0
		Total Mohol tahsil	927	920	919	-7	-1
5	Barshi	1) Agalgaon	NA	904	903		-1
		2) Pangri	NA	923	909		-14
		3) Nari (Bhendewadi)	NA	931	874		-57
		4) Pangaon	NA	922	902		-20
		5) Barshi	NA	932	911		-21
		6) Surdi	NA	933	921		-12
		7) Upale Dumala	NA	945	931		-14
		8) Vairag	NA	897	914		17
		9) Gaudgaon	NA	913	916		3
		Barshi Ruralised tahsil	945	921	910	-24	-11
		Barshi town	936	946	953	10	7
		Urbanised Tahsil	936	946	953	10	7
		Total Barshi tahsil	943	929	923	-14	-6
6	Pandharpur	1) Patvardhan Kuroli	932	919	916	-13	-3
		2) Karkamb	899	908	906	9	-2
		3) Bhalwani	933	903	913	-30	10
		4) Pandharpur	925	910	924	-15	14
		5) Tungat	926	921	906	-5	-15
		6) Kasegaon	917	911	911	-6	0
		7) Puluji	930	915	905	-15	-10
		Pandharpur Rural tahsil	921	879	911	-42	32
		1) Pandharpur town	945	933	953	-12	20
		Urban tahsil	945	933	953	-12	20
		Total Pandharpur tahsil	946	891	920	-55	29
7	Sangola	1) Mahud	922	942	919	20	-23
		2) Sangewadi	913	911	918	-2	7

		3) Sangole	940	918	909	-22	-9
		4) Nazare	962	957	956	-5	-1
		5) Kola	933	942	958	9	16
		6) Hatid	971	957	959	-14	2
		7) Javala	974	928	937	-46	9
		Sangola Ruralised tahsil	945	937	936	-8	-1
		1) Sangola town	932	930	937	-2	7
		Urbanised Tahsil	932	930	937	-2	7
		Total Sangola tahsil	944	936	936	-8	0
8	Mangalwedha	1) Marapur	NA	916	934		-18
		2) Mangalvedhe	NA	934	927		-7
		3) Maravade	NA	901	920		19
		4) Andhalgaon	NA	907	905		-2
		5) Bhoose	NA	911	920		9
		6) Huljanti	NA	915	893		-22
		Mangalwedha Ruralised tahsil	915	915	917	0	2
		1) Mangalwedha town	919	929	965	10	36
		Urbanised Tahsil	919	929	965	10	36
		Total Mangalwedha tahsil	916	917	922	+1	5
9	Solapur South	1) Boramani	NA	935	930		-5
		2) Musti	NA	934	942		8
		3) Valsang	NA	946	975		29
		4) Hotagi	NA	937	927		-10
		5) Mandrup	NA	927	939		12
		6) Vinchur	NA	923	936		13
		Solapur (S) Ruralised tahsil	930	933	944	3	11
		Urbanised Tahsil	0	0	0	0	0
		Solapur (S) Total tahsil	930	933	944	+3	11
10	Malshiras	1) Dahigaon	NA	945	941		-4
		2) Natepute	NA	948	931		-17
		3) Sadashivnagar	NA	923	932		9
		4) Malshiras	NA	923	920		-3
		5) Akluj	NA	918	918		0
		6) Mahalung	NA	914	924		10
		7) Velapur	NA	911	918		7
		8) Piliv	NA	912	928		16
		Malshiras Ruralised tahsil	924	923	925	-1	2
		1) Akluj CT	NA	0	979		979

		2) Sangramnagar CT	NA	0	967		967
		3) Natepute CT	NA	0	935		935
		Urbanised Tahsil	NA	0	967		967
		Total Malshiras tahsil	924	923	931	-1	8
11	Solapur North	1) Wadala	NA	938	936		-2
		2) Mardi	NA	900	912		12
		3) Solapur	NA	941	911		-30
		4) Thire	NA	920	890		-30
		5) Shelga	NA	913	899		-14
		Solapur(N) Ruralised tahsil	925	925	914	0	-9
		1)Solapur Agglomeration	946	962	978	16	16
		Urbanized Tahsil	946	962	978	16	16
		Total Solapur (N) tahsil	942	959	971	17	12
Solapur District			935	935	939	0	+4

*NA- Not Analysis due to limitations

Analysis and Discussion :-

The average total sex ratio of Solapur district was 935 *f/1000m person* in 1991 and 2001 and 939 *f/1000m person* in 2011. In census of 1991, medium sex ratio is found in Solapur North, Barshi, Akkalkot, Sangola tahsil i.e. 941 to 950 *f/1000m person* ; medium lower sex ratio in Solapur South, Mohol, Pandharpur , Madha tahsil i.e. 926 to 940 *f/1000m person* ; lower sex ratio in Mangalwedha, Malshiras, Madha tahsil i.e. 901 to 925 *f/1000m person* in the district. In 2001, medium higher sex ratio is found in Solapur North, Akkalkot, tahsil i.e. 951 to 970 *f/1000m person* ; medium lower sex ratio in Solapur South, Barshi, Sangola, Karmala tahsil i.e. 926 to 940 *f/1000m person* ; lower sex ratio in Mohol, Mangalwedha, Pandharpur, Malshiras, Madha tahsil i.e. 901 to 925 *f/1000m person* in the district. In 2011, higher sex ratio is in Solapur North tahsil i.e. > 971 *f/1000m person*; medium higher sex ratio is found in Akkalkot, Mangalwedha, Malshiras tahsil i.e. 951 to 970 *f/1000m person* ; lower sex ratio in Barshi, Mohol, Mangalwedha, Pandharpur, Karmala, Madha tahsil i.e. 901 to 925 *f/1000m person* in the district.

As per census of 1991, the average sex ratio of Solapur district was 935 *f/1000m person* in which higher sex ratio was found in Pomalwadi of Karmala tahsil; Hatid, Jawala village circle of Sangola tahsil i.e. > 970 *f/1000m person* in district. **Medium higher sex ratio** is in Chapalgaon, Maindargi village circle of Akkalkot tahsil; Nazare village group in Sangola tahsil i.e. 951 to 970 *f/1000m person* in district. **Medium sex ratio** is found in Waghdari, Dudani village group of Akkalkot tahsil ; Korti village group of Karmala tahsil; Narkhed village group of Mohol tahsil i.e., 941 to 950 *f/1000m person* in district. **Medium lower sex ratio** is found in Tadwalh, Akkalkot village group of Akkalkot tahsil; Tembhorni., Modnimb, Dharpal village group of Madha tahsil; Karmala, Arjun nagar village group of Karmala tahsil; Sethphal, Takali Sikandar village group of Mohol tahsil; Patwardhan (K), Balhwani, Tungat, Puluji village group of Pandharpur tahsil; Sangola , Kola village group of Sangola tahsil i.e. 926 to 940 *f/1000m person* in district. **Lower sex ratio** is found in Jeur village group of Akkalkot tahsil; Ropale(K), Kurdu, Laul, Madha village group of Madha tahsil, Jeur, Kem village group of Karmala tahsil; Mohol, Sawaleshawar, Wagoli village group of Mohol tahsil; Pandharpur, Kasegaon village group of Pandharpur tahsil Mahud, Sangewadi village group of Sangola tahsil i.e. 901 to 925 *f/1000m person* in district. **Worst sex ratio** is found in Karkamb village group of Pandharpur tahsil; Vairag village group of Barshi tahsil i.e. 900 *f/1000m person* in district.

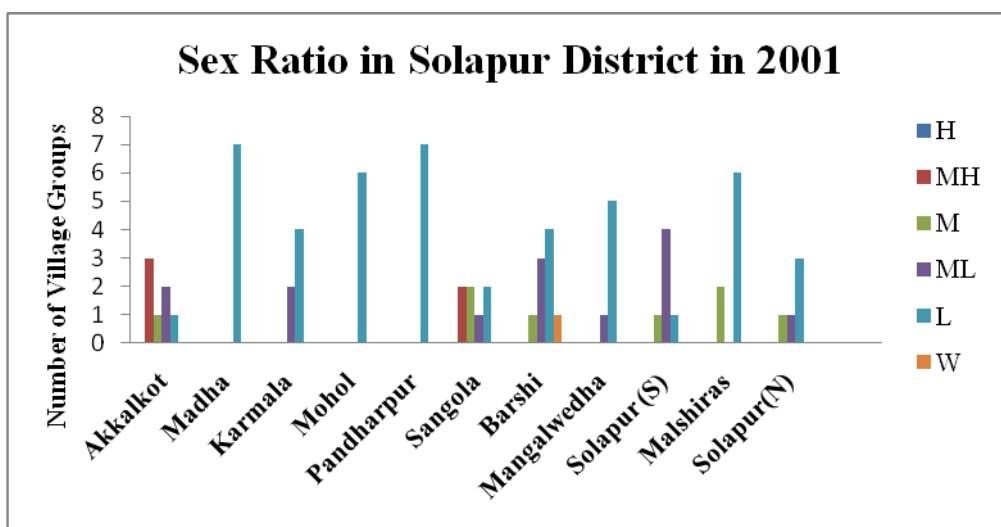
As per census of 2001 , the average sex ratio of Solapur district was 935 *f/1000m person* in which **higher sex ratio** was found in Valsang of Solapur South tahsil i.e. >970 *f/1000m person* in district. **Medium higher** sex ratio is in Chapalgaon, Maindargi, Waghdari village circle of Akkalkot tahsil; Nazare, Hatid village group in Sangola tahsil i.e. 951 to 970 *f/1000m person* in district. **Medium sex ratio** is found in Jeur village group of Akkalkot tahsil ; Muhud, Kola village group of Sangola tahsil; Upale Dumala village group of Barshi tahsil ; Mangalwedha, Andhalgaon village group of Mangalwedha; Valsang village group of Solapur South tahsil ; Dahigaon, Natepute village group of Malshiras village group ; Solapur village group of Solapur North tahsil i.e., 941 to 950 *f/1000m person* in district. **Medium lower sex ratio** is found in Tadwalh, Dudhani village group of Akkalkot tahsil; Karmala, Pomalwadi village group of Karmala tahsil;, Jawala village group of Sangola tahsil ; Nari(B), Barshi, Surdi village group of Barshi tahsil; Andhalgaon, Mangalwedha t village group of Mangalwedha tahsil ; Baramani, Musti, Hotagi, Mandrup village group of Solapur South tahsil; Wadala village group of Solapur North tahsil i.e. 926 to 940 *f/1000m person* in district. **Lower Sex Ratio** is found in Akkalkot village group of Akkalkot tahsil ; Ropale (K), Kurdu, Tembhorni,

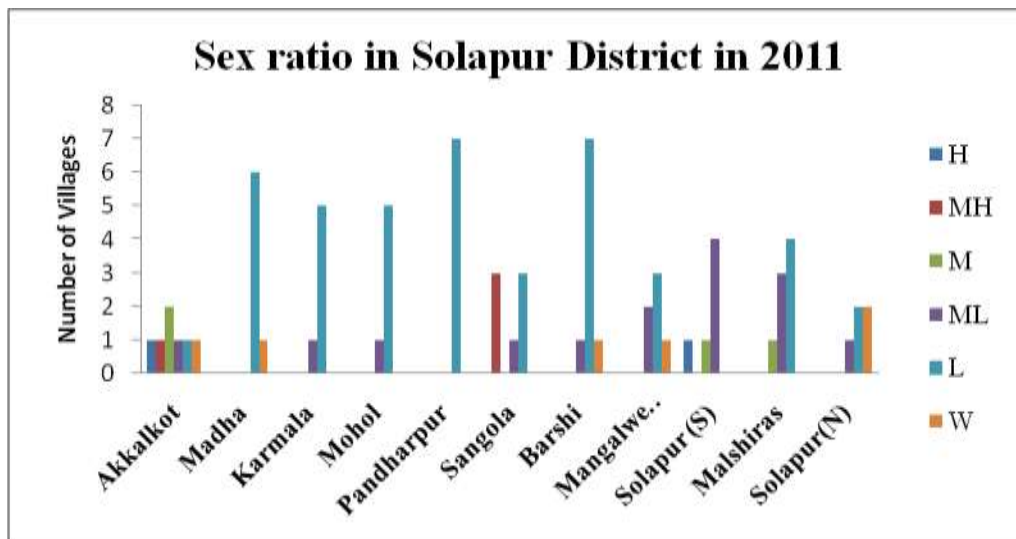
Madha, Modnimb, Dharpal, Lahul village group of Madha tahsil; Kort, Arjunagar, Jeur, Kame village group of Karmala tahsil; Sethaphal, Mohol, Narkhed, Wagoli, Sawaleshawar, Takali(S) village group of Mohol tahsil; Patwardhan(K), Tungat, Karkamb, Kasegaon, Bhalwani, Pulus, Pandharpur, Tungat village group of Pandharpur tahsil ; Sangewadi, Sangola village group of Sangola tahsil; Agalgaon, Pangari, Pangaon, Surdi, Gaudgaon, Vairag village group of Barshi tahsil; Marapur, Bhoose, Marvade, Andhalgaon, Huljanti village group of Mangalwedha tahsil; Vinchur village group of Solapur South tahsil; Sadashivnagar, Malshiras, Velhapur, Akluj, Piliv, Mahalung village group of Malshiras tahsil ; Mardi, Thire, Shelga village group of Solapur North tahsil i.e. 901 to 925 *f/1000m person* in district. **Worst sex ratio** is found in Nari(B) village group of Barshi tahsil i.e. < 900 *f/1000m person* in district.

As per census of 2011 , the average sex ratio of Solapur district was 939 *f/1000m person* in which **higher sex ratio** was found in Waghdari village group of Akkalkot tahsil; Musti village group of Solapur South tahsil i.e. >970 *f/1000m person* in district. **Medium higher sex ratio** is in Chapalgaon village circle of Akkalkot tahsil; Nazare, Hatid village group in Sangola tahsil i.e. 951 to 970 *f/1000m person* in district. **Medium sex ratio** is found in Jeur, Maindargi village group of Akkalkot tahsil ; Valsang village group of Solapur South tahsil ; Dahigaon village group of Malshiras tahsil i.e 941 to 950 *f/1000m person* in district. **Medium lower sex ratio** is found in Tadwalh village group of Akkalkot tahsil; Pomalwadi village group of Karmala tahsil,, Jawala village group of Sangola tahsil ; Upale Dumala village group of Barshi tahsil; Marapur, Mangalwedha village group of Mangalwedha tahsil ; Baramani, Hotagi, Mandrup, Vinchur village group of Solapur South tahsil; Natepute, Sadashivnagar, Piliv village group of Malshiras tahsil : Wadala village group of Solapur North tahsil i.e. 926 to 940 *f/1000m person* in district. **Lower Sex Ratio** is found in Dudhani village group of Akkalkot tahsil ; Kurdu, Tembhurni, Madha, Modnimb, Dharpal, Lahul village group of Madha tahsil; Korti, Karmala, Arjunagar, Jeur, Kame village group of Karmala tahsil; Sethaphal, Narkhed, Sawaleshwar, Wagoli, Takali(S) village group of Mohol tahsil; Patwardhan(K), Tungat, Karkamb, Kasegaon, Bhalwani, Pulus, Pandharpur, Tungat village group of Pandharpur tahsil ;Mahud, Sangewadi, Sangola village group of Sangola tahsil; Agalgaon, Pangari, Pangaon, Vairag, Barshi, Surdi, Gaudgaon village group of Barshi tahsil; Bhoose, Marvade, Andhalgaon, village group of Mangalwedha tahsil; Malshiras, Velhapur, Akluj, Mahalung village group of Malshiras tahsil ; Mardi, Solapur village group of Solapur North tahsil i.e. 901 to 925 *f/1000m person* in district. **Worst sex ratio** is found in Akkalkot village group of Akkalkot tahsil; Roplae (K) village group of Madha tahsil; Nari (B) village group of Barshi tahsil; Huljanti village group of Mangalwedha tahsil ; Thire , Shelga village group of Solapur North tahsil i.e. < 900 *f/1000m person* in district.

The urban sex ratio of Solapur district was recorded about 945 *f/1000 m persons* in 1991 & about 957 *f/1000 m persons* 2001 and about 972 *f/1000 m persons* in 2011. The sex ratio is varies tahsil to tahsil in the district.

In 1991, higher urban sex ratio is found in Akkalkot tahsil i.e. > 971 *f/1000 m persons*; medium urban sex ratio is found in Solapur North, Pandharpur tahsil i.e. 941 to 950 *f/1000 m persons*; medium lower urban child sex ratio in Barshi, Sangola, Karmala, Madha tahsil i.e 926 to 940 *f/1000 m persons*; Lower urban sex ratio is in Mangalwedha tahsil i.e. 901 to 925 *f/1000 m persons* in the district. In 2001, higher urban sex ratio is found in Akkalkot tahsil i.e. > 971 *f/1000 m persons*; medium higher sex ratio is in Solapur North tahsil i.e. 951 to 970 *f/1000 m persons*; medium urban sex ratio is found in Barshi tahsil i.e. 941 to 950 *f/1000 m persons*; medium lower urban child sex ratio in Mangalwedha, Pandharpur, Sangola, Karmala, Madha tahsil i.e 926 to 940 *f/1000 m persons* in the district. In 2011, higher urban sex ratio is found in Solapur North, Akkalkot tahsil i.e. > 971 *f/1000 m persons*; medium higher sex ratio is in Barshi, Pandharpur, Mangalwedha, Madha tahsil i.e. 951 to 970 *f/1000 m persons*; medium lower urban sex ratio in Sangola tahsil i.e 926 to 940 *f/1000 m persons* in the district.





Conclusion :-

- 1) As per census 2001, out of total 74 village groups of Solapur district, no any village group is included in worst sex ratio while about 05 village groups are included in worst sex group in 2011. This is a serious social problem of declining sex ratio within district.
- 2) As per census 2001, out of total 74 village groups of Solapur district, no any village group is included in Higher sex ratio while about 02 village groups are entered in higher sex group in 2011.
- 3) About 61 village groups in 2001 and 62 village groups in 2011 are included in Worst, Lower, Medium lower Sex ratio of district. That is a serious problem to society and gender equity programmes.
- 4) Very few village groups about 14 group in 2001 and about 10 group in 2011 are included in Medium, Medium high and High sex groups of district.
- 5) Declining sex ratio within district poses a marital condition of society.

Suggestion and Recommendation

- 1) Keeping equal sex ratio is a responsibility of all individuals and families in society.
- 2) Old customs and traditions towards born of only son preference should be removed from the mind of society and family by awareness of 'Save Girl Child Abhiyan'.
- 3) Give the attention towards women health, education as like of men.
- 4) Develop the rural region in terms of employment opportunities for ceasing of male migration towards the urban centre.

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