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IMPACT ASSESSMENT OF GENDER INEQUALITY IN BANGALORE METROPOLITAN REGION OF KARNATAKA

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ABSTRACT

Gender inequality is a common issue in a vast country like India which exist in the form of socially constructed, predefined gender roles that has deep cultural and historical roots from the past. India struggles with gender inequality issues beyond just equal economic growth and access to educational resource opportunities. Despite a high growth rate and plentiful Government measures to encourage gender equality, the gender gap in India still exists. The present paper study about the trends of sex ration in Bangalore Metropolitan Region from the year 1901-2011. It also studies about the Spatial pattern of literacy rate, correlation between patterns of urbanization and sex ration in the region. In this process, the paper not only discusses the extent and variation of sex ratio but also its correlation with literacy rate and urbanization to see the levels of sex ratio in all the taluks of the region and even to know the causes and consequences of the problem.

KEY WORDS : *"Gender inequality, sex ratio, literacy rate, urbanization".*

1. INTRODUCTION:

'Gender' is a socio-cultural term referring socially defined roles and behaviours assigned to 'males' and 'females' in a given society; whereas, the term 'sex' is a biological and physiological phenomenon which defines man and woman. In its social, historical and cultural aspects, gender is a relationship between man and women where men are considered superior to women in purpose of strength, health and even in rank. Women are traditionally considered by the society as weaker sex. The patriarchal society is common in India and even in world is the root cause of gender inequality.

According to the famous sociologists Sylvia Walby, patriarchy is "a system of social structure and practices in which men dominate, oppress and exploit women". Over the span of more than 100 years, the deficit of women has progressively increased as evident from the sex ratio of the population (Visaria, 1972; Visaria, 2002).

Historically women have no right for education, jobs and even to go out of their house to earn their livelihood but after independence the scenario in India have changed drastically. Science and technology and education has opened a new hope and scope for women in the society. Gender Inequality may be defined as discrimination against women based on their sex Therefore, gender may be understood as a man-made concept, while 'sex' is natural or biological characteristics of human beings.

Amartya Sen estimated that there were nearly 100 million women missing in the world around 2000 and nearly a third of them were missing in India (Sen, 2003). In Bangalore Metropolitan Region the sex ratio

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in 1901 was 990 females per thousand males which continuously declined to 924 in the year 2011. On the other hand, the child sex ratio in different taluks of the metropolitan region is seen to fluctuate every decade. Among all the taluks in the region, Channapatna has highest sex ratio i.e. 1004 females per thousand males. It is the only taluk in the region where female exceeds more than male whereas Anekal (835) has the least sex ratio. It is also observed that the literacy rate and most urbanized taluk is Bangalore City (88.7%)

2. STUDY AREA:

The Bangalore Metropolitan Region (BMR) is constituted by three districts namely Bangalore Urban, Bangalore Rural and Ramanagara (Ramanagaram is a newly created district carved out from Bangalore Rural district that includes Ramanagaram, Channapattana, Magadi and Kanakapura taluks. It is one of a handful of urban agglomerations in the World to be situated above the 3000 feet above Mean Sea Level. Bangalore Urban district comprises four taluks Nelamangala, Dodballapura, Devanahalli, and Hoskote. The District is ranked as one of the top Five Technology Clusters in the world. Bangalore rural district is located in the south eastern part of State of Karnataka. The district is having scope for industrial growth and development. Ramanagara district is located approximately 50 km southwest of Bangalore has four taluks viz. Ramanagaram, Channapattana, Kanakapura and Magadi.

The three districts in the Bangalore Metropolitan Region are further divided into thirteen Taluks of which Bangalore East is newly formed. The Bangalore Metropolitan region has vast areas under reserved forests especially in the South and the South -West. Also, the topography of the region has strong valley formations. The sphere of influence of Bangalore Metropolitan region shows that, within a radius of 25 km from the center of the city, the area falls in the Bangalore Metropolitan Area, if radius of 50 km from the center of the city, the area falls in Tamil Nadu State. It has constraints for further increasing the jurisdiction towards South –East direction.
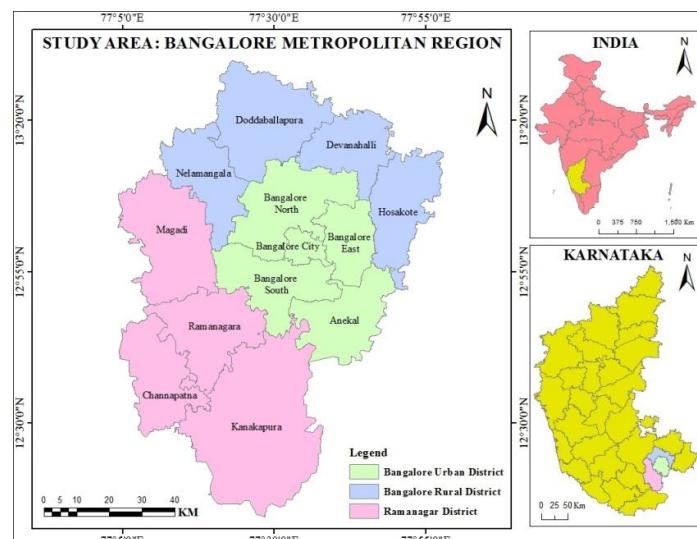
Map 1

3. OBJECTIVES:
1. To analyze the Trends of overall Sex Ratio
2. To assess the spatial pattern of existing general sex ratio and child sex ratio.
3. To analyze the level of association between Literacy and Urbanization with Sex Ratio

4. PURPOSE OF THE STUDY:

Gender equality and urbanization are crucial not only for the survival of cities, but for the realization of global commitments and targets. Gender inequality is a burning issue since ages in India. In a most urbanized city like Bangalore it is very necessary to study about the co-relation between the literacy of its population and sex ratio as well as the urbanization and sex ratio. It is also necessary to find out the child sex ratio for the age group between 0-6 years for the future growth and development of the region. This paper documents about the sex ratio and child across thirteen taluks of the region. Even in the domain where female disadvantage is the most extreme, in national legislatures, inequality has been eroding in recent years. The sex ratio, literacy rate and urbanization in the taluk varies in all the taluks of the region. Bangalore city is the IT hub of India which attracts lot of employment opportunities among the youth from all over the world and the fastest growing city in India. So, in order to know about the situation of gender imbalance in the city and its correlation with the other parameters of the region it is very necessary to make a study on the current situation about the trends, patterns and gender balance in Bangalore Metropolitan region .

5. RESEARCH METHODS:

The paper is based on secondary data obtained from Census of India from the year 1901-2011. The data collected are processed to analyses the trends of overall sex ratio in the Bangalore Metropolitan Region and also to analyze the level of association between Literacy and Urbanization with Sex Ratio. The decadal change in the Child sex ratio is also calculated in all the taluks to find out the changes that is happening in the recent past. Spearman's Rank Difference method is used for analyzes the correlation between literacy and sex ratio and urbanization and sex ratio.

6. RESULTS AND DISCUSSION (FINDINGS):
6.1 Trends of overall Sex Ratio:

Sex ratio definition, the proportional distribution of the sexes in a population aggregate, expressed as the number of males per 100 females. The table below shows the sex ratio of India, Karnataka as well as Bangalore Metropolitan region from the year 1901-2011. The sex ratio of overall India shows a decline. In1901 the sex ratio of India was 972 whereas in Bangalore Metropolitan Region it was 990. The sex ratio in Karnataka shows an average change in last 10 decades. In the year 1971, the sex ratio in Bangalore Metropolitan Region declined to 908 females per 1000 males whereas it again rose to 924 females per 1000 males. Thus, it can be seen that Bangalore Metropolitan region has more fluctuation of sex ratio compared to Karnataka and overall India.

Table-1: Sex Ratio in Bangalore Metropolitan Region (1901-2011)

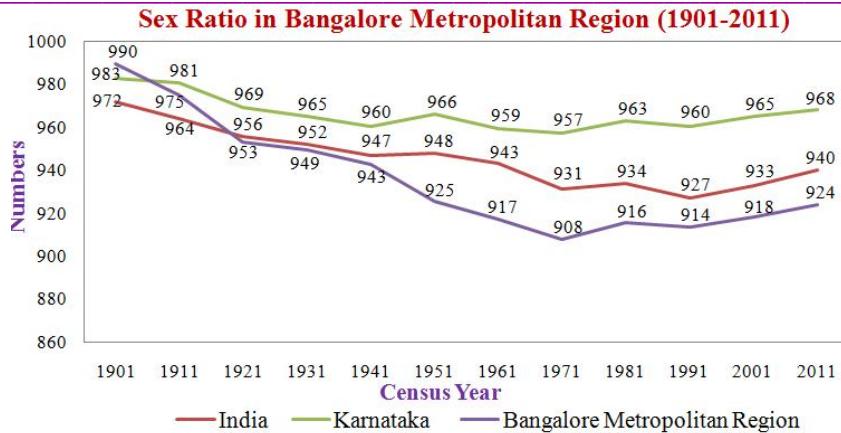| Census Year	India	Karnataka	Bangalore Metropolitan Region
1901	972	983	990
1911	964	981	975
1921	956	969	953
1931	952	965	949
1941	947	960	943
1951	948	966	925
1961	943	959	917
1971	931	957	908
1981	934	963	916
1991	927	960	914
2001	933	965	918
2011	940	968	924

Source: Census of India 1901 to 2011

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Figure 1

6.2 Spatial Pattern of Sex Ratio:

The table below shows the spatial pattern of sex ratio of each taluks in Bangalore Metropolitan Region from the year 1991-2011. As per decadal changes in percentage, it can be seen that Anekal has 48% negative decline of sex ratio in between 2001-2011 and -15% in between 1991-2001. In the year 1991-2001, Bangalore South, Devanahalli, Hosakote, Nelamangala,taluks showed negative decline in Sex Ratio whereas Bangalore North, Bangalore City, Doddaballapura, Channapatna, Kanakapura, Magadi and Ramnagara showed positive growth of sex ratio. Chanapatna(30%) growth of sex ratio in between 1991-2001 followed by Kanakapura(20%), Magadi(18%) and Ramanagara(17%). In between 2001-2011, Bangalore South, Anekal, Devanahalli, Hosakote and Magadi showed negative decline in sex ratio. Doddaballapura showed no decadal change in between 2001-2011 while Kanakapura(24%) showed positive change in sex ratio in between 2001-2011 followed by Channapatna(16%) and Bangalore North(12%). Bangalore City and Devanahalli showed a slight change in sex ratio in both the decades.

Table-2: Taluks wise Sex Ratio in Bangalore Metropolitan Region (1901-2011)

Taluks	1991	2001	2011	% of decadal changes	
				1991-2001	2001-2011
Anekal	898	883	835	-15	-48
Bangalore North	878	883	895	5	12
Bangalore South	900	890	879	-10	-11
Bangalore East	-	902	911	-	8
Bangalore City	913	917	923	4	6
Devanahalli	948	945	944	-3	-1
Doddaballapura	947	951	951	4	0
Hosakote	939	931	930	-8	-1
Nelamangala	961	955	962	-7	7
Channapatna	957	988	1004	30	16
Kanakapura	921	941	965	20	24
Magadi	971	988	987	17	-1
Ramanagara	934	952	954	18	2

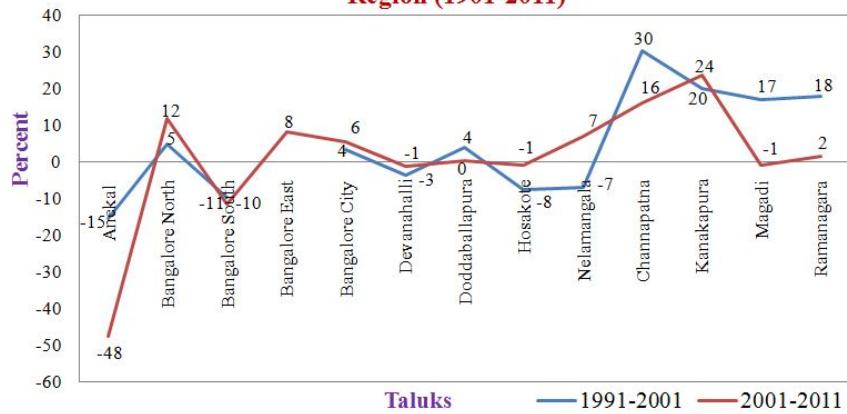***Source:*** *Census of India 1991 to 2011*
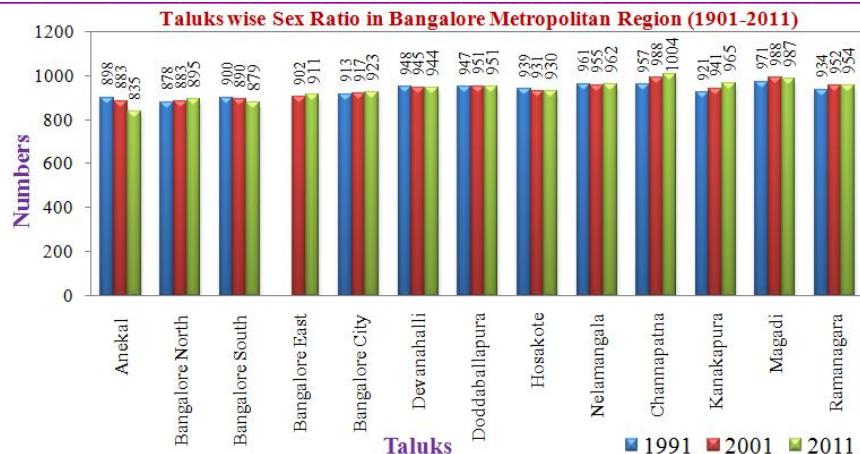
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Figure 2

Figure 3

6.3 Spatial Pattern of Child Sex Ratio:

In India, the Child Sex Ratio is defined as the number of females per thousand males in the age group 0–6 years in a human population. The table below shows the Child Sex Ratio of each Taluk of Bangalore Metropolitan Region of last two decades. It can be seen that in between 1991-2011, there is more negative decline in sex ratio in almost all the taluks of the region whereas in between 2001-2011, there is positive growth in CSR. The child sex ratio has been declining faster than overall sex ratio. The decline in the child sex ratio in between 1991-2001 Census is a major cause of disturbance among the planners, demographers and researchers. Lower sex ratio among children is indicative of more males than females among child population which may lead to demographic imbalance over time if the trend continues in future. Hoskote showed highest decline of sex ratio i.e. 997 to 929, followed by Doddaballapura(-35%), Bangalore City(-18%), Kanakapura(-16%). Bangalore South (25%) has seen highest positive change in the decade in CSR. Whereas in between the next decade, 2001-2011, Bangalore East (40%) followed by Kanakapura(34%), Devanahalli(28%), Anekal(22%), Doddaballapura(15%), Magadi(14%), Channaptana(12%), Ramanagara, Hosakote showed positive change in CSR. Whereas Bangalore City and Nelamangala showed no change in CSR in the recent decade.

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Taluks	1991	2001	2011	% of decadal changes	
				1991-2001	2001-2011
Anekal	955	945	967	-10	22
Bangalore North	954	946	943	-9	-3
Bangalore South	922	947	928	25	-18
Bangalore East		936	976		40
Bangalore City	961	942	942	-18	0
Devanahalli	955	942	970	-14	28
Doddaballapura	978	942	957	-35	15
Hosakote	997	929	931	-68	1
Nelamangala	958	946	946	-12	0
Channapatna	957	946	957	-11	12
Kanakapura	938	922	956	-16	34
Magadi	945	964	978	20	14
Ramanagara	937	958	963	21	5
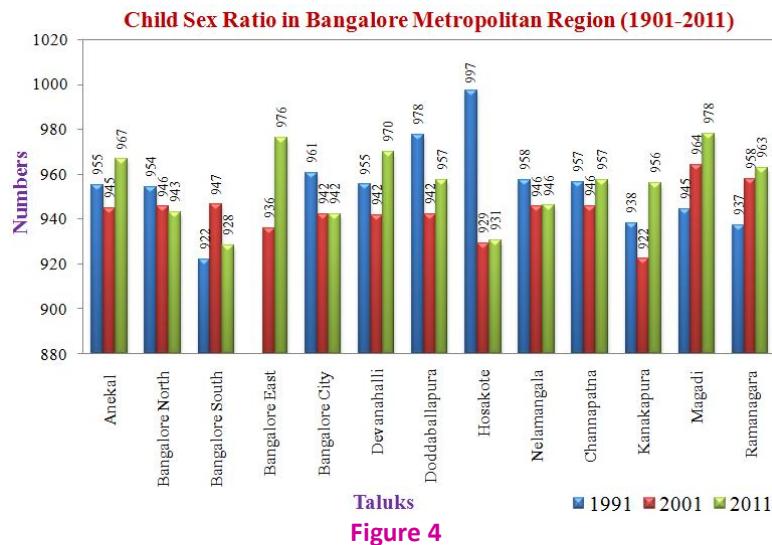
Table-3: Child Sex Ratio in Bangalore Metropolitan Region (1991-2011)

Source: Census of India 1991 to 2011
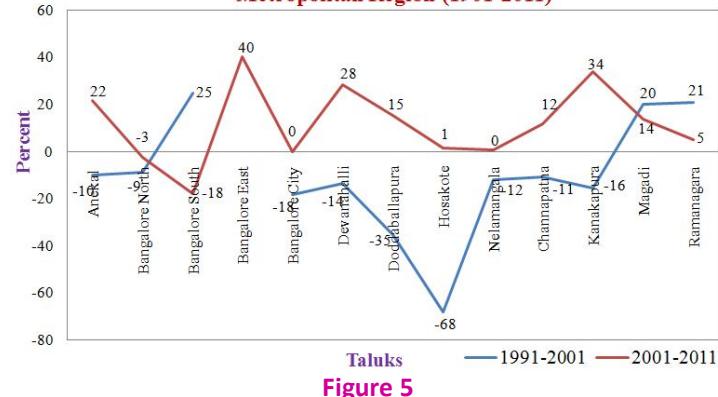

Figure 4

Figure 5

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6.4 Correlation between Literacy and Sex Ratio:

Literacy and sex ratio are two important components for social and economic development of a country. Literacy affects many attributes of population such as fertility, mortality, sex ratio, dependency ratio etc. A decline or low number of female populations in the total population is strongly suggestive of the neglect of girl children, sex selective abortions and traditional attitudes of the society. Thus, the analysis of literacy and sex ratio is immense significant. The table below shows the correlation between spatial pattern of literacy rate and sex ratio of Bangalore Metropolitan Region of 2011. Bangalore City, Bangalore North and Anekal has highest literacy rate i.e. 88.7%, 80.8% and 80.7% respectively. Bangalore South, Bangalore East, Devenahalli, Doddaballapura, Hosakote, Nelamangala has also same percentage of literacy rate whereas Kanakapura has lowest literacy rate among all other taluks. Among sex ratio Channapatna has the highest among all other taluks i.e. 1004 females per 1000 males while the literacy rate in the taluk is 70.3% which is average and Anekal which has 80.7% literacy rate has lowest sex ratio (835).

Table-4: Co-Relation between Spatial Pattern of Literacy Rate and Sex Ratio Bangalore Metropolitan Region from 2011

Taluks	Literacy Rate	Rank	Sex Ratio	Rank	D	D2
Anekal	80.7	11	835	1	10	100
Bangalore North	80.8	12	895	3	9	81
Bangalore South	78.4	8	879	2	6	36
Bangalore East	79.4	10	911	4	6	36
Bangalore City	88.7	13	923	5	8	64
Devanahalli	76.8	5	944	7	-2	4
Doddaballapura	78.0	6.5	951	8	-1.5	2.25
Hosakote	78.0	6.5	930	6	0.5	0.25
Nelamangala	78.9	9	962	10	-1	1
Channapatna	70.3	2.5	1004	13	-10.5	110.25
Kanakapura	64.8	1	965	11	-10	100
Magadi	70.3	2.5	987	12	-9.5	90.25
Ramanagara	73.2	4	954	9	-5	25

*Source: Census of India 2011*
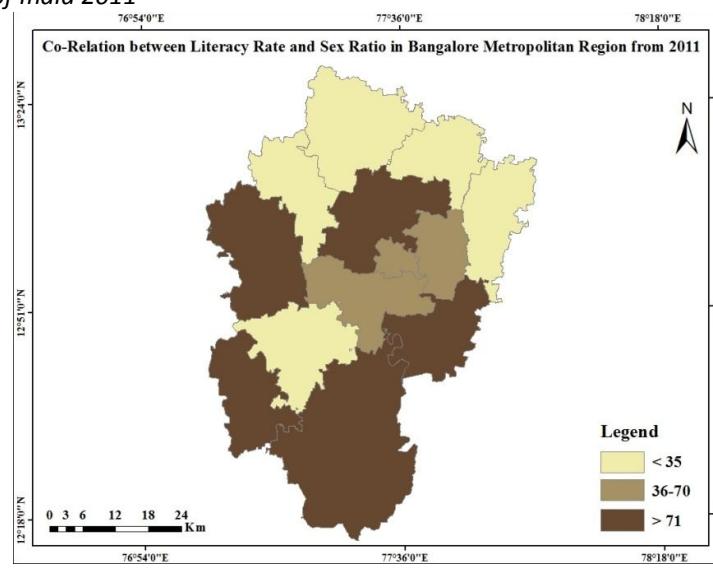
Map 2

6.5 Correlation between Urbanization and Sex Ratio:

The table below shows the correlation between patterns of Urbanization and Sex Ratio Bangalore Metropolitan Region from 2011. While studying the relationship between urbanization and se ratio in Bangalore Context, it is found that most of the parts in the taluks are urbanized in context to India. Bangalore City is cent percent urbanized taluk in the district followed by Ramanagara (39.4%), Doddaballapura(33.7%), Anekal(31.9%) above 30%. Whereas Bangalore East (7.9%) is the least urbanized within the other taluks. In comparison to urbanization Anekal with 31.9% have least sex ratio (835) whereas Chanapatna has highest sex ratio in the district (1004 females per 1000 males) of which 27.5% of the taluk is urbanized. The Spearman's Rank Difference method is used for the calculation of the correlation of Urbanization and Sex Ratio of Bangalore Metropolitan Region. It is observed that most of the taluks have in the district showed negative co-relation. The map below showed that Kanakapura, Magadi, Anekal, Bangalore City have high correlation whereas Bangalore South, Nelamangala, Channapatna have moderate correlation and Bangalore North, Bangalore East, Devanahalli, Doddaballapura, Hosakote and Ramanagara showed low correlation in the District.

Table-5: Co-Relation between Pattern of Urbanization and Sex Ratio Bangalore Metropolitan Region from 2011

Taluks	Urbanization	Rank	Sex Ratio	Rank	D	D2
Anekal	31.9	10	835	1	9	81
Bangalore North	23.3	6	895	3	3	9
Bangalore South	24.7	7	879	2	5	25
Bangalore East	7.9	1	911	4	-3	9
Bangalore City	100.0	13	923	5	8	64
Devanahalli	30.0	9	944	7	2	4
Doddaballapura	33.7	11	951	8	3	9
Hosakote	21.0	4	930	6	-2	4
Nelamangala	22.7	5	962	10	-5	25
Channapatna	27.5	8	1004	13	-5	25
Kanakapura	15.4	2	965	11	-9	81
Magadi	18.0	3	987	12	-9	81
Ramanagara	39.4	12	954	9	3	9

Source: Census of India 2011
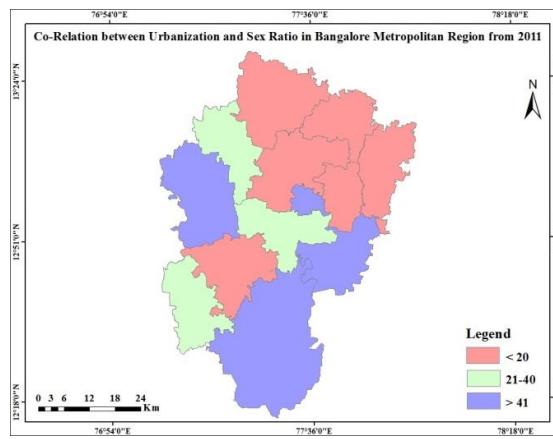
Map 3

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7. CONCLUSION:

The foregoing analysis shows that gender inequality in each taluks of Bangalore Metropolitan Region. The paper also studied about the trends of overall sex ratio. Spatial pattern of sex ratio and child sex ratio and level of association of literacy and urbanization with sex ratio. It was found that the sex ratio in the region declined gradually after independence. It was found that the sex ratio was highest in Channapatna (1004) and lowest in Anekal(835). Whereas the child sex ratio is average in all the taluks. Magadi (978) has highest sex ratio and Hosakote (931) has lowest sex ratio. With the help of Spearman's Rank Difference method Channapatna, Kanakapura, Anekal and Magadi showed highest correlation between literacy and sex ratio whereas Doddaballapura, Hosakote, Nelamangala and Davenahalli showed low correlation. And for Co-Relation between Pattern of Urbanization and Sex Ratio it showed that Kanakapura, Magadi, Anekal, Bangalore City have high correlation and Bangalore North, Bangalore East, Devanahalli, Doddaballapura, Hosakote and Ramanagara showed low correlation in the District.

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