

## “Demographic Characteristics of Karnataka – A Spatial Analysis”

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### Abstract

Demographic Characteristics i.e. Literacy & Sex Ratio play important role in the development process so that in the present study this indicators have been selected to analyse its pattern at district levels and their relationship for overall development of Karnataka. Education is recognised as a major component of human development in the world. Literacy and sex ratio are most important indicators of development in any particular area. Literacy is an index of human development and quality of human life. It affects birth rates on the one hand and also indicates the level of economic development, living standards, status of women and technological development etc. Sex ratio of a population refers to the balance between male and female in any population. It can be expressed either in the form of proportion of a particular sex in the population or as ratio between male and female. About 56% of Karnataka population recorded as a literate in 1991 which has increased 63.74% in 2001 and in 2011 it reached up to 75.60% which shows increasing trend in literacy in Karnataka. Karnataka has sex ratio in 2011 was 964 against nation average of 940 in 2011 which is more than national Average. In the present study literacy and sex ratio has been undertaken to find out their relationship by applying Spearman's Rank Correlation method.

**KEYWORDS** – Literacy, Sex ratio, Correlation, Development, Demographic.

### Introduction

Literacy is defined as percentage of literate persons (excluding the population in the age group 0-6 years) while the crude literacy rate is the percentage of literate population to total population in a specific area. Literacy is defined as the ability to read and write the person's name and to form simple sentences, higher literacy levels in a state denote rising socio economic development and universal literacy is a crucial step towards achieving overall progress. India has made a remarkable progress as far as literacy is concerned. In 1991 India's literacy was 52.2% and 2001 it was 64.8% and in 2011 it has gone up to 74%. The male literacy has increased from 27% to 82% in last 60 years, literacy being one of the most important indicators of social development also essential for eradicating poverty, reduction of mortality, curbing population growth, achieving gender equality and ensuring sustainable development, peace and democracy. “Literacy for all” is the vision and slogan of India for which government has initiated various plans for implementing and achieving “Literacy Mission” as far Karnataka State is concern it has 23<sup>rd</sup> rank in literacy in India. About 75.36% people are literate as per census 2011. In 1991 it was 56.0% and 2001 66%. There is a great variation in literacy at district level in Karnataka i.e. 88.62% literacy which is highest in Dakshina Kannada suburban district and lowest 52.36% in Yadgir. Sex composition is also important demographic component for human development. It is

generally expressed in terms of sex ratio i.e. number of females per 1000 males. All over the world the male populations are more than female population. Sex composition is considered as an important indicator of inequality between males and females in society. The sex ratio in Karnataka is 964 female per 1000 males as per census 2011, as against Nation 940 but great variation has been observed at district level i.e. highest in Udupi district (1093 Females per 1000 Male) and lowest in Bangalore (908 female per 1000 male)

### **Study Area**

Karnataka is a state in South West India. It was formed on 1<sup>st</sup> November 1956, with the passage of the State Reorganization Act. Originally known as the State of Mysore, it was renamed Karnataka in 1973. The capital and the largest city is Bangalore. Karnataka is bordered by the Arabian Sea and the Laccadive Sea to the west, Goa to the North West, Maharashtra to the north, Telangana to the North East, Andhra Pradesh to the east, Tamil Nadu to the South East and Kerala to the South West. The State covers an area of 191,976 square kilometers or 5.83 percent of the total geographical area of India. It is the seventh largest Indian State by area. With 61,130,704 inhabitants at the 2011 census, Karnataka is the 8<sup>th</sup> largest State by Population, comprising 30 districts. Kannada is the most widely spoken and official language of the State.

### **Objectives**

The main objective is to study the pattern of Literacy and sex ratio in Karnataka at district level and to find out the correlation between these two variables and their role in demographic development.

### **Database and methodology**

The present work is completely based on primary and secondary data. The secondary data is taken from Census of India, Karnataka state, 2011. Variables like literacy and sex ratio are taken under consideration. Data regarding literacy and sex ratio is obtained from census of India, Karnataka, 2011. Further the collected data is processed to analyze the literacy rate and sex ratio in Karnataka. Then, the correlation between two variables viz. literacy and sex ratio is analyzed by using the Spearman's Rank Correlation method. The formula for computing Spearman's rank correlation is as follows:-

$$P=1 - 6\sum d^2/n^3 - n$$

Where, n is the total number of observations, and d is the difference in the ranks of the two variables in the i<sup>th</sup> observation.

### **Literacy in Karnataka**

Karnataka has witnessed remarkable progress in literacy. In 1991 the literacy rate was 56.0%, in 2001 (63.78%) and in 2011 Literacy has gone up to 75.60%. Literacy rate for females are traditionally lower than the literacy rate for males and this indicator of development stands as the corner stone in progress. There is wide variation in literacy percentage in different districts of Karnataka i.e. Dakshina kannada districts highest

literacy (88.62%) and lowest in Yadgir (52.36%).Karnataka has 23<sup>rd</sup> rank in literacy among all states of India.

Literacy is one of the most important indicators of development so that sincere efforts are to be made by Government and people to eradicate illiteracy from the areas which have low percentage of literacy.

**Table No. 1: Literacy Rate and Sex Ratio in Karnataka 2011.**

District Name	Sex Ratio	Literacy Rate
Bagalkot	984	69.39
Bangalore	908	88.48
Bangalore Rural	945	78.29
Belgaum	969	73.94
Bellary	978	67.85
Bidar	952	71.01
Bijapur	954	67.2
Chamarajanagar	989	61.12
Chikkaballapura	968	70.08
Chikmagalur	1005	79.24
Chitradurga	969	73.82
Dakshina Kannada	1018	88.62
Davanagere	967	76.3
Dharwad	967	80.3
Gadag	978	75.18
Gulbarga	962	65.65
Hassan	1005	75.89
Haveri	951	77.6
Kodagu	1019	82.52
Kolar	976	74.33
Koppal	983	67.28

<b>District Name</b>	<b>Sex Ratio</b>	<b>Literacy Rate</b>
Mandya	989	70.14
Mysore	982	72.56
Raichur	992	60.46
Ramanagara	976	69.2
Shimoga	995	80.5
Tumkur	979	74.32
Udupi	1093	86.29
Uttara Kannada	975	84.03
Yadgir	984	52.36

Source: Census of India Karnataka 2011

### **Sex Ratio in Karnataka**

Ratio between male and female also play vital role in development of our society in many ways. It affects the labour supply through marriage and fecundity. One observes high degree of association between high sex ratio and socio economic development, particularly in those areas where sex selective migration is absent. The gender ratio in Karnataka is 964 females per 1000 males, which is more than the national average of 940.

Sex Ratio in Karnataka varies from district to district i.e. five districts of Karnataka have noticed very high sex ratio, more than 1000 females per 1000 males and lowest is 908 in Bangalore. Urban areas have generally low sex ration means males are more due to their migration from rural areas to urban centers leaving behind their families for livelihood.

### **Correlation between Literacy Rate & Sex ratio**

Correlation simply means relationship between two variables viz., Independent variable and dependent variable. The factor which is supposed to be the cause is known as the independent variable and the one which is supposed to be the effect is known as the dependent variable. In the present study literacy is considered as the independent variable whereas sex ratio is considered as the dependent variable. Thus, the variations in dependent variable may be explained in term of variations in the independent variables. Spearman's Rank Correlation is another measure of the relationship between two variables using the ranked data. For a rank correlation the data may be collected either in ranked form of actual quantitative values may be converted into ranked form.

In the present study spearman's rank correlation method is used to find out the correlation between literacy and Sex ratio in Karnataka. It is observed that there is positive correlation between literacy and sex ratio i.e. +0.070, In other words we can say that if there is increased in one variable like literacy rate also results increased in sex ratio which can be observed from

Table No. 2

## Correlation ship between Literacy &amp; Sex ratio in Karnataka 2011

Sr.No.	District Name	Sex Ratio	Literacy Rate	R <sub>1</sub>	R <sub>2</sub>	d	d <sup>2</sup>
1	Bagalkot	984	69.39	22	11	11	121
2	Bangalore	908	88.48	2	30	28	784
3	Bangalore Rural	945	78.29	9	29	20	400
4	Belgaum	969	73.94	16	21	5	25
5	Bellary	978	67.85	24	16	8	64
6	Bidar	952	71.01	19	27	8	64
7	Bijapur	954	67.2	26	26	0	0
8	Chamarajanagar	989	61.12	28	9	19	361
9	Chikkaballapura	968	70.08	21	22	1	1
10	Chikmagalur	1005	79.24	8	4	4	16
11	Chitradurga	969	73.82	17	20	3	9
12	Dakshina Kannada	1018	88.62	1	3	2	4
13	Davanagere	967	76.3	11	23	12	144
14	Dharwad	967	80.3	7	24	17	289
15	Gadag	978	75.18	13	15	2	4
16	Gulbarga	962	65.65	27	25	2	4
17	Hassan	1005	75.89	12	5	7	49
18	Haveri	951	77.6	10	28	18	324
19	Kodagu	1019	82.52	5	2	3	9
20	Kolar	976	74.33	14	18	4	16

Sr.No.	District Name	Sex Ratio	Literacy Rate	R <sub>1</sub>	R <sub>2</sub>	d	d <sup>2</sup>
21	Koppal	983	67.28	25	12	13	169
22	Mandya	989	70.14	20	8	12	144
23	Mysore	982	72.56	18	13	5	25
24	Raichur	992	60.46	29	7	22	484
25	Ramanagara	976	69.2	23	17	6	36
26	Shimoga	995	80.5	6	5	1	1
27	Tumkur	979	74.32	15	14	1	1
28	Udupi	1093	86.29	3	1	2	4
29	Uttara Kannada	975	84.03	4	19	15	225
30	Yadgir	984	52.36	30	10	20	400
	<b>Total</b>						$\sum d^2$ 4177

Source: Computed by Author.

$$P = 1 - 6 \sum d^2 / n^3 - n$$

$$P = 1 - 6 * 4177 / (30)^3 - 30$$

$$P = 1 - 25062 / 27000 - 30$$

$$P = 1 - 25062 / 26970$$

$$P = 1 - 0.929$$

$$P = +0.070.$$

### Conclusion:

Literacy and sex ratio both are considered as important indicators of demographic development in any region. In Karnataka the total literacy in 1991 was 56.0 % while female 44.30 % and male 67.30 % but it has increased in 2001 i.e.66.64 % while female literacy 56.90% and male literacy 76.10%, In 2011 it has gone further up to 75.60 % it shows that there is increasing trend of literacy in Karnataka. As far as sex ratio of Karnataka is concerned, in 2011 it was 964 females per 1000 males which is more than the national average of 940. The Literacy & Sex Ratio have positive relation in Karnataka. It means increased in one variable result increased in other variable i.e. Literacy & Sex Ratio.

Sincere efforts are to be made at all levels to increase the Sex Ratio and Literacy for overall development and betterment of the society.

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