



The Geographical Study Of Population And Literacy In Satara District (Maharashtra)

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Abstract

Population and literacy are two significant correlated demographic factors. Literacy plays a very important role in population. This paper is an attempt to analyze the 'Application of GIS for study of Correlation between Population and literacy in Satara District'. The literacy is one of the very significant qualitative indicator of social development associated to the economic development. Even today education is the most intrinsic instrument for changing the socio-economic status of an individual and society as a whole. Literacy affected on various attributes of the population such as fertility, mortality, migration and also sex ratio. The knowledge of population is essential for the understanding the socio-condition of society. A increased or maximum population is strongly suggestive of the neglect of girl children, minimum education level, less mortality and traditional attitudes of the society. Thus, the analysis of Population and literacy is immense important. Spearman's Rank Difference method is used for analyzes the correlation of literacy & population ratio. The study reveals that correlation between population and literacy is $r = 0.45$. It is a moderate positive correlation.

Key words: Literacy, Population, Education, Spatial Pattern, Correlation, Satara

Introduction

Literacy refers to the ability to read for knowledge, write coherently and think critically about the written word. Literacy is one of the most important indicators of social development. Literacy is the heart of basic education for all. It is essential for poverty reduction, mortality, curbing population growth, achieving gender equality and ensuring sustainable development, peace and democracy. 'Literacy has been defined as the ability both to read and write with understanding in any language of children who are above six years of age'. The gap between male and female literacy is a sensitive indicator of social discrimination. The gender gap in education occurs when there are systematic differences in schooling levels between men and women. It is a useful measure for providing evidence of the inequalities that exist between the sexes in terms of access to school. The construction of gender roles in any society is influenced by several factors, most of which are largely independent of the sources of poverty or growth. Indicators frequently used to measure gender equality include life expectancy, education, and earnings. India, like other developing contraries, has always been characterized by its sharps inequalities, rooted in centuries by its evolution, of cast, gender and residence. The inequalities in literacy existing among male-female are most drastic in nature. The inequalities in literacy among male-female are result

of our countries old discriminatory social order and there natural adaptations (M.B. Singh, 2011).

Population provides the basic resource to industries as well as agriculture in various forms. The land use gets modify based on the needs of people. Population growth and literacy are the most important factors in bringing about recommended agricultural changes in an agrarian society (Gaikwad, 2005).

According to 2011 census, the population of Maharashtra is 11.24 Crores. Among the districts , Thane records the highest population of 11,054,131 and Sindhudurg has the lowest population of 848,868. In Satara District, about 3,003,922 population was recorded. Among the tahsils, the highest Population found in Karad tahsil and lowest in Mahabaleshwar i.e. 584085 and 72830 respectively.

Study Area

The Satara district selected for the study the correlation between Population and literacy. The area under study encompasses the south-western part of Maharashtra with its own identity and typical set of characteristics. Satara district is situated in Sahyadri Mountain and located on 17^{05'} to 18^{011'}North latitude and 73^{033'} to 74^{054'}East longitude. There are various landforms like Krishna River, Mahadeo and Bamnoli hill ranges, Sitabai and Aagashive are some other hills in the district. The total population of Satara district is 30, 03,922

persons according to 2011 Census. Also, there have seen 82.87 percent average literacy rate, 89.42 percent male literacy rate and 76.31 percent female literacy rate. The total area is covered by Satara district is 10,484.0 Sq. k.m, its elevation is 742 m (2,434 ft) from the sea level. This area receives 473

mm to 6209 mm of normal annual rainfall. Satara district has eleven talukas and 1739 villages. Eleven tehsils are Satara, Wai, Khandala, Koregaon, Phaltan, Man, Khatav, Karad, Jaoli, Mahabaleshwar, Patan. The area under study is one of the drought-prone comprises regions of the state of Maharashtra.



Fig. no. 1

Objectives

The major objectives of this paper are as under:

1. To study the spatial pattern of population in the study region.
2. To examine the spatial variation of literacy rate in the study region.
3. To analyze the correlation between spatial pattern of Population and literacy in the study region.

Database And Methodology

The paper is based on secondary data sources. To fulfill the objectives data regarding Population and literacy of Satara District is obtained from census of Maharashtra (2011), statistical

Formula:-

Rank Order Spearman's Method

$$r = 1 - \frac{6 \sum d^2}{n^2 - N}$$

Spatial Pattern of Literacy Rate

Satara district as a whole has 82.87 percent literacy in 2011. But the taluk level literacy differs from taluks to taluks ranges from 64.02 per cent to 73.34 per cent. All 11 taluks of Satara district are divided into three categories as following: (in Fig. 2)

High Literacy Rate

The taluks which have above mean plus one standard deviation are included in this category. The taluks have the literacy rate above 73.34 per cent are included in high category. High literacy rate was recorded in the taluk of Satara, Koregaon, Wai, Khandala, Karad and Mahabaleshwar due to high number of educational institutions, availability of

abstract of Satara District. The collected data are processed to analyze the pattern of literacy rate and population in Satara District. Arc Gis 9.3 software used for preparing the map and to show the spatial pattern of population and literacy in Satara district. The taluks of Satara District are grouped into three categories i.e. high, medium and low literacy on the basis of simple statistical method. To analyze spatial pattern of population, the same technique is applied for calculation. The Spearman's Rank Difference method is used for analyzes the correlation between Population and literacy.

educational facilities, high urbanization, development of transport and communication and so on.

Moderate Literacy Rate

The taluks which have literacy rate ranges from 64.02 to 73.34 per cent are included in this category. Moderate literacy was recorded in the districts of Jaoli, Phaltan Khatav and Patan taluk. In these taluks, moderate literacy was found due to lack of educational infrastructure.

Low Literacy Rate

The taluks which have literacy rate below 64.02 per cent are included in low category. Low literacy rate was found in the taluks of Man. In these taluk low literacy was recorded due to lack of educational institution, poverty, migration, drought area and low student teacher ratio.

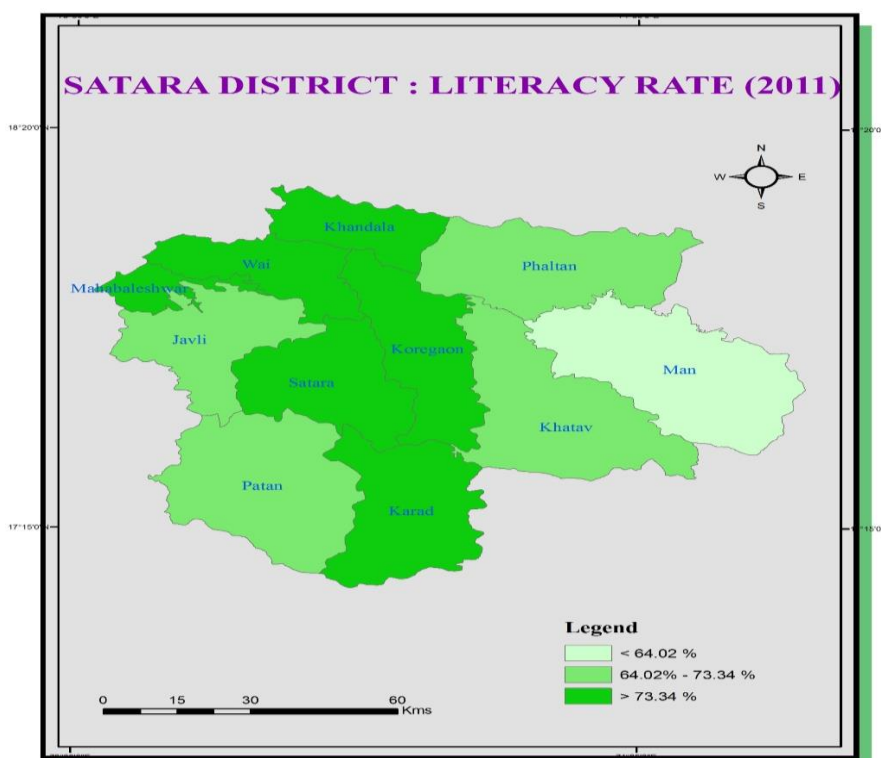


Fig. no. 2
Table No.1

Literacy Rate and Population in Satara District, 2011

Sr. No.	Tahsils	Total Population	Literacy Rate
1	Wai	200269	76.25
2	Satara	502049	79.69
3	Phaltan	342667	72.32
4	Patan	299509	68.88
5	Man	225634	64.02
6	Mahabaleshwar	72830	75.48
7	Koregaon	257500	76.5
8	Khatav	275274	72.11
9	Khandala	137418	76.08
10	Karad	584085	75.54
11	Jaoli	106506	73.34
Satara		3003741	74.10

(Source: Census of India, 2011)

Spatial Pattern of Population

According to census of 2011, Satara District has 3003741 population. But the tahsils level population is varies from tahsils to tahsils ranges from 72830 to 584085. All 11 tahsils are categorized into three groups as follows: (in Fig. 3)

High Population

The tahsils which have the population above 342667 number of persons are included into high category. High population was recorded in the tahsils of Karad and Satara.

There are the some reasons for high population in Satara District i. e. Better education facilities, maximum availability of employment, attraction of people, maximum immigration, neglected of girl child, minimum mortality, highly hospitality etc.

Moderate Population

The tahsils which have population ranges from 137418 – 342667 number of persons are included in the moderate category. Moderate ratio was recorded in tahsils of Wai, Koregaon, Phaltan, Khatav, Man, Patan etc.

Low Population

The tahsils which have the population below 137418 are included in this group. Low population was recorded in the tahsils of Khandala, Mahabaleshwar and Jawali.

There are the some reasons for low Population in Satara district i. e. Minimum education level and facilities, maximum migration, maximum mortality, less hospitality, female infanticide etc.

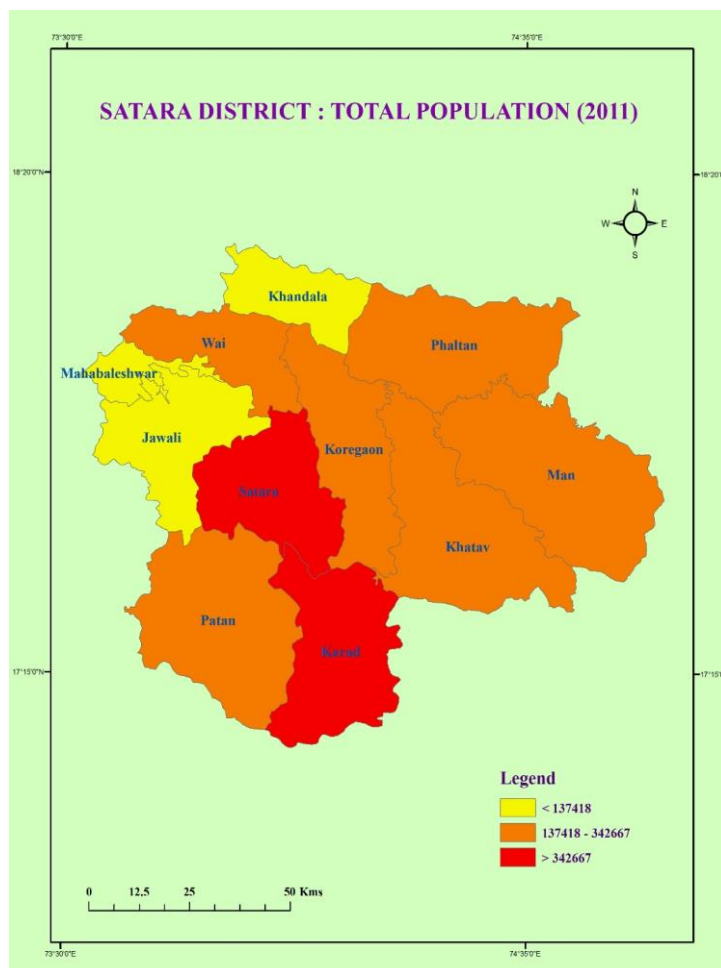


Fig. no. 3

Correlation between Population and literacy

The Spearman's Rank Difference method is used for the calculation of the correlation of Population and literacy in Satara District. It is observed that there is rather moderate positive correlation i.e. $p = -0.45$ between the Population and literacy in Satara District.

Conclusion

There are wide disparities in the Population and literacy of Satara District in 2011. The highest literacy was found in Satara tahsil and lowest in Man tahsil. The highest population was found in Karad tahsils whereas lowest in Mahabaleshwar tahsil of Satara District. But the correlation between Population and literacy found in $r = 0.45$. It is a moderate positive correlation. It means low literacy rate, low population and but it was not indicated a high literacy, high population. Actually, Mountain area is not better for settlement, hence, Mahabaleshwar tahsil is recorded low population with low literacy rate, and plain or plateau area i. e. Karad tahsil noted high population with moderate literacy rate.

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