RESEARCH FRONT

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AN ASSESSMENT OF LITERACY ON SEX RATIO IN GAGANBAVDA TAHSIL OF KOLHAPUR DISTRICT

Dr. Anjun Nanaware
Research Guide, Dept. of Geography & research center, Shivaji Mahavidyalaya, Barshi,Dist.- Solapur (MS)
Mr. Navnath Bansode
Research student, Dept. of Geography & research center, Shivaji Mahavidyalaya, Barshi,Dist.- Solapur (MS)

ABSTRACT

According to 2001 Census of India, 'a person aged 7 years and above who can both read and write with understanding in any language has taken as literate'. The study of the structure and characteristics of population is an important aspect of the population Geography. The sex ratio of a population may either be expressed as the number of males per 1000 females or as the number of females per 1000 males. In Indian sex ratio is expressed as the number of females per thousand males. Sex ratio is an important indicator of gender relations within the society and varies from one social group to another sex ratio is an index of the Socio-Economic conditions prevailing in an area and useful tool for regional analysis. Declining of sex ratio is a burning problem in India. The health of human society depends on sex ratio. India, the developing countries are experiencing an extremely rapid decline of sex ratio and it is harmful to health of society. The balance in sex ratio is very important for the healthy atmosphere in society and better development. So present paper attempt to analyze the impact of literacy rate on sex ratio. The paper is based on secondary data. To examine the impact of literacy on sex ratio the Pearson's Coefficient of Correlation, Coefficient of determination and regression technique has been utilized. The study reveals that there is medium positive correlation between percentage of literacy and sex ratio in villages of Gaganbavda Tahsil. It is found that increase of one per cent literacy causes for increase of sex ratio by 6.139 in study region.

Key Wards: Literacy, sex ratio, Correlation, and regression

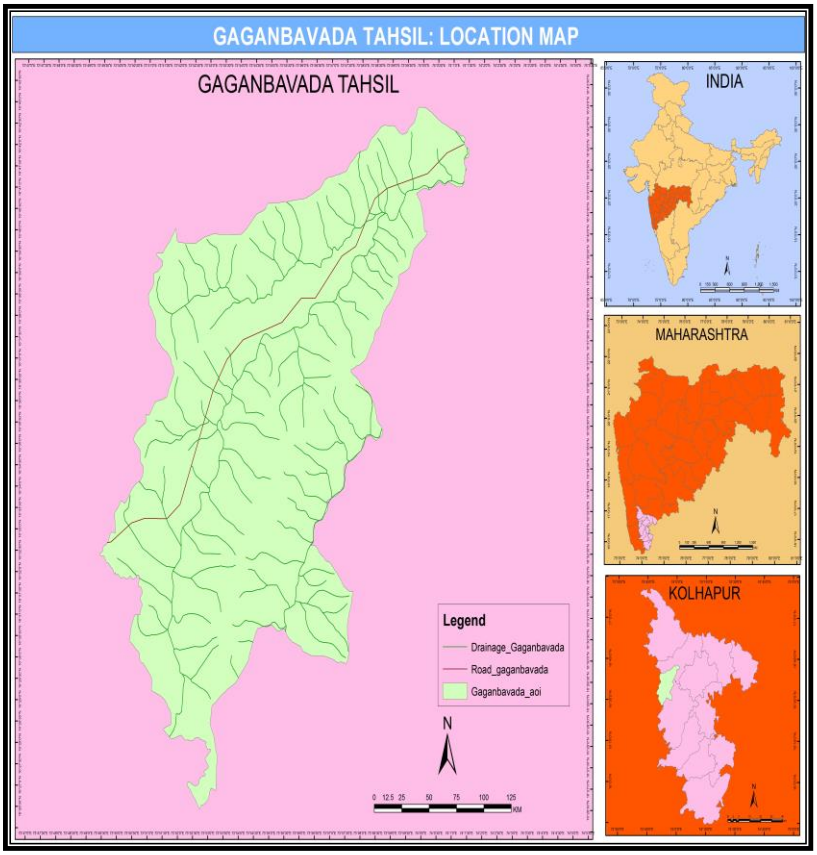
INTRODUCTION

The concept of literacy that varies from country to country, generally refers to the minimum level of literacy skills. The Indian Census has adopted this definition. According to 2001 Census of India, 'a person aged 7 years and above who can both read and write with understanding in any language has taken as literate'. The study of the structure and characteristics of population is an important aspect of the population Geography. The sex ratio of a population may either be expressed as the number of males per 1000 females or as the number of females per 1000 males. In Indian sex ratio is expressed as the number of females per thousand males. There three types of sex ratio primary, secondary and tertiary sex ratio. The sex ratio a population at the time of enumeration is known as tertiary sex ratio. Population geographers are concerned more with the regional variation in the tertiary sex ratio. This tertiary sex ratio is determined by three basic determinants including the sex ratio at birth, the sex ratio at death and sex ratio of the migrants. (R.C. Chandana 2007)

ISSN
(Print) 2320 – 6446, (Online) 2320 – 8341

Sex ratio is an important indicator of gender relations within the society and varies from one social group to another sex ratio is an index of the Socio-Economic conditions prevailing in an area and useful tool for regional analysis (Franklin (1956). Sex ratio is one of the important social indices to measure the prevailing inequality between males and females and regional imbalances in the status of women. (Ramotra & others 2011). The biological fact is that more male babies are born than female babies. More birth of male babies is not significant cause of for the low females per 1000 male, but neglect of females, vitamin deficiency, social tradition, death in reproductive age group are the important cause. There are fewer girls than boys in India and sex ratio has because more skewed toward males in recent decades (Rajesh kumar 2006). Declining of sex ratio is a burning problem in India. The health of human society depends on sex ratio. India, the developing countries are experiencing an extremely rapid decline of sex ratio and it is harmful to health of society. The balance in sex ratio is very important for the healthy atmosphere in society and better development. So present paper attempt to analyze the impact of literacy rate on sex ratio.

THE STUDY AREA



Gaganbavda tahsil is the North West part of Kolhapur district. It lies between 16^0 26' 30" to 16^0 43' 30"North Latitude and 73^0 47' 0" to 74^0 5' 30"East Longitude. It is surrounded by Panhala tahsil to the north, to the west surrounded by Ratnagiri and Sindhudurg district; to south east it is surrounded by Radhanagari tahsil. Gaganbavda tahsil covers an area of 282.3 sq. km. The maximum and minimum temperature ranges between 33^0C and 14^0C with annual average precipitation 707.7 cm. For the administrative purpose the tahsil is divided into 45 villages and as per census of 2011, the population of the study region is 35772 persons.

OBJECTIVES

The main objectives of this paper are as following.

1) To examine the impact of literacy on sex ratio
2) To estimate the rate of change in sex ratio in relation to literacy.

ISSN
(Print) 2320 – 6446, (Online) 2320 – 8341

DATA COLLECTION AND METHODOLOGY

In order to meet these objectives the relevant information and data regarding literacy and birth rate collected and used for the year of 2011 are based on the secondary Sources. Information and data regarding literacy and male -female population is collected from census of India 2011 and SRS Bulletin Register General of India, Vital statistical Division, West Block 1, 2nd floor, R. k. Puram, New Delhi-110066 ISSN 0971-3549

Collected rough data are processed. the sex ratio is calculated by using the formula, $SR= P_f \div P_m \times 100$. To examine the impact of literacy on sex ratio the Pearson's Coefficient of Correlation technique has been utilized. The degree of relationship by considering percentage of literacy as an independent variable 'X' and per hectare yield as dependent variable 'Y' is measured.

The functional form of linear relationship has been measured by using regression equation Y on X i.e. $y = a + bx$. The rate of change in dependent variable has been estimated with the help of 'b' coefficient, which is the line of best fit. Analysis of the study has been made with help of the statistical techniques and on the basis of this results and conclusion are drawn.

PERCENTAGE OF LITERACY AND SEX RATIO

The table-1 indicates that on an average the tahsil as a whole has 70.19 per cent literacy in 2011. The table also indicates that literacy of villages in Gaganbavada tahsil is ranging in between 57.02 percent and 85.38 percent to total population. In Gaganbavda tahsil there is 22.23 percent villages those have more than 75 percent literacy, while 24.44 (11villages) per cent villages have less than 66 per cent of literacy to total population.

The average sex ratio is 896 in the Study area during the 2011, but it is varies from village to village. Sex ratio is ranging from 700 to 1095 in the 2011. On an average sex ratio are high of those villages who have high literacy. But there are some exceptions that have high percentage of literacy but sex ratio is low.

Table-1 **Literacy and Sex ratio in Gaganbavada Tahsil of Kolhapur District** (2011)

Sr No	Name of villages	literacy in %	sex ratio	Sr No	Name of villages	literacy in %	sex ratio
1	Kode Bk	63.62	894	24	Khokurle	72.21	950
2	Kode Kh.	58.53	700	25	Andur	67.38	862
3	Taliye Bk.	72.29	946	26	Dhundavade	62.18	800
4	Shenavade	78.81	863	27	Chaudharwadi	72.51	870
5	Asandoli	68.30	782	28	Kherivade	61.82	792
6	Margewadi	78.70	867	29	Sheloshi	67.92	900
7	Vesarde	73.02	973	30	Palsambe	68.84	922
8	Nivade	74.19	943	31	Vesaraf	61.17	792
9	Sakhari	85.00	1021	32	Sangashi	75.62	947
10	Mhalunge	85.38	886	33	Saitavade.	66.63	914
11	Kirave	70.27	939	34	Pargaonkarwadi	66.28	870
12	Mutakeshwar	76.13	877	35	Jargi	57.02	700
13	Khadule	66.59	918	36	Kadave	68.47	1037
14	Longhe	80.46	986	37	Baveli	64.89	972

ISSN
(Print) 2320 – 6446, (Online) 2320 – 8341

15	Tisangi	82.80	986	38	Garivade	60.88	882
16	Balewadi	70.11	940	39	Borbet	70.53	897
17	Salwan	78.98	876	40	Lakhamapur	62.79	862
18	Wetavde	67.81	885	41	Katali	73.01	936
19	Mandur	62.39	881	42	Gagan Bavda	85.13	1095
20	Patilwadi	66.48	885	43	Jambhulnewadi	69.80	811
21	Mandukali	66.33	864	44	Narveli	71.37	920
22	Padawalwadi	74.68	865	45	Taliye Kh.	58.65	917
23	Asalaj	72.46	902		Average	70.19	896.19

Source: census of Kolhapur District 2011

In the context of objective following findings have come to light.

1) The moderate positive relationship between the percentage of literacy (X) and sex ratio (Y) has been observed in the Gaganbavda tahsil. The coefficient of correlation in this regard is at r = + 0.582935. It indicates that there is a medium positive relationship between the variables 'X' and 'Y'. The degree of linear association between these two variables obtained by using the coefficient of determination (r^2) is found to be at 0.339814, which reveals that the independent variable (X) i.e, the percentage of literacy are explaining 33.98 per cent of the total variations in dependent variable (Y) i.e. the sex ratio in the villges of Gaganbavda tahsil. It is a good explanation because 33.98 per cent of the variations in (Y) sex ratio to be influenced by the variable (X) i.e. percentage of literacy and about 66.12 per cent of the variation is left to be influenced by other variables.

2) The functional form of linear relationship of Y on X found to be at Y = 465.2 + 6.139x. The line of best fit is shown in the Figure-2. The regression coefficient indicates that increase of one per cent in literacy causes for an increase of 6.139 sex ratio of villages of Gaganbavda tahsil.

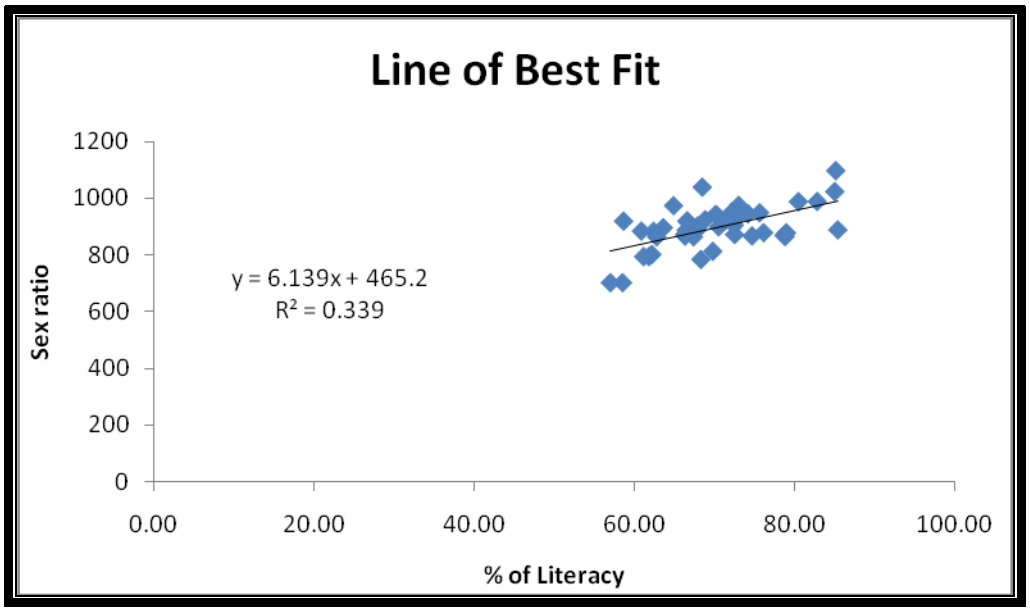


Figure-2

3) In order to understand the degree of fit of regression equation and the accuracy level of predicted values (y) for the villages of Gaganbavda tahsl, the standard error (SE) of estimate

ISSN
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is being done with the equation SE (Y) = SY √1-r2, where SE (Y) is the standard deviation of residuals (Y-y); and 'SY' is the standard deviation of 'Y'.

The confidence interval of the predicted values are worked out at Y = Y ± SE (Y) (The SE (Y) for the present exercise is 62.24 and SY is the 896.19). Thus it is assumed that if the values of 'Y' (Y-y) lie within the range of Zero to ± SE, the prediction could be expected to be accurate. In other words, the role of independent variables in explaining the change in dependent variable can be accepted as correct.

Table -2 Residuals from regression of sex ratio of villages of Gaganbavda Tahsil.

Name of villages	Y	y	Y-y	Name of villages	Y	y	Y-y
Kode Bk	894	855.73	38.29	Khokurle	950	908.51	41.58
Kode Kh.	700	824.53	-124.53	Andur	862	878.83	-16.94
Taliye Bk.	946	908.98	36.64	Dhundavade	800	846.93	-46.93
Shenavade	863	949.02	-85.92	Chaudharwadi	870	910.36	-40.61
Asandoli	782	884.51	-102.51	Kherivade	792	844.70	-52.70
Margewadi	867	948.34	-80.87	Sheloshi	900	882.13	18.14
Vesarde	973	913.44	59.61	Palsambe	922	887.81	34.32
Nivade	943	920.66	22.38	Vesaraf	792	840.75	-48.75
Sakhari	1021	987.02	34.45	Sangashi	947	929.41	17.11
Mhalunge	886	989.33	-103.15	Saitavade.	914	874.25	40.03
Kirave	939	896.56	41.98	Pargaonkarwadi	870	872.07	-2.07
Mutakeshwar	877	932.54	-56.00	Jargi	700	815.23	-115.23
Khadule	918	874.02	44.20	Kadave	1037	885.55	151.49
Longhe	986	959.17	26.54	Baveli	972	863.57	108.12
Tisangi	986	973.51	12.91	Garivade	882	838.92	43.29
Balewadi	940	895.60	44.49	Borbet	897	898.17	-1.11
Salwan	876	950.04	-73.85	Lakhamapur	862	850.67	11.25
Wetavde	885	881.48	3.79	Katali	936	913.42	22.52
Mandur	881	848.23	32.77	Gagan Bavda	1095	987.81	107.17
Patilwadi	885	873.30	11.70	Jambhulnewadi	811	893.68	-82.87
Mandukali	864	872.38	-7.97	Narveli	920	903.33	16.38
Padawalwadi	865	923.66	-58.45	Taliye Kh.	917	825.26	91.81
Asalaj	902	910.02	-7.55	Average			

Source: Complied by Researcher on the basis Census of Mahrashta 2011

In this context it has been observed that the predicted values (given in table- 2) of 34 villages out of 45 villages in the present study lie within the range of ± SE, 9 and within ± SE to ± 2 SE and 02 above± 2 SE. Now the obvious inference is that the 75 per cent of the total number of observation (n is 45) the regression is a good indicator meaning thereby that the variations of sex ratio is the function of the variations of percentage of literacy. In the case of other villages with residuals between > ± SE to ± 2 SE the situation is different because here the regression is a poor indicator. It clearly indicates that these are the villages whom the influence of variables other than the independent one. The variations of sex ratio of villages in the latter case may be due to the variation in social tradition variation in Sex determination and variation in out migration.

ISSN
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CONCLUSIONS

This study reveals that there is moderate positive correlation between percentage of literacy and sex ratio in the villages of Gaganbavda tahsil of Kolhapur District. The coefficient of determination (r^2) is found to be at 0.339814, which reveals that the independent variable (X) i.e, the percentage of literacy are explaining 33.98 per cent of the total variations in dependent variable (Y) i.e. the sex ratio in the villges of Gaganbavda tahsil.The percentage of literacy is found to be more effective than the other variables considering sex ratio. It is found that increase of one per cent of literacy causes for an increase of 6.139 sex ratio of villages in Gaganbavda tahsil. Therefore it is to be stated that the increase in percentage of literacy is helpful to increase in sex ratio. Public awareness should made regarding sex ratio, which is use full to maintain healthy society.

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