

Correlation between literacy and sex ratio in Rajasthan: A geographical analysis

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Abstract- This paper is an attempts to analysis the correlation between literacy and sex ratio in Rajasthan. Literacy is one of the most important indicator of social development. Literacy and education is universally recognized as a major component of human development[1]. As such , certain minimum level of literacy seems to be essential for a population to a break out the vicious of poverty[1]. Literacy affected on migration and sex ratio. The knowledge of literacy and sex ratio is essential for the understanding the condition of women in society[2]. A decline sex ratio is suggestive of the neglect of girl children, sex selective abortions and traditional attributes of the society. Thus, the analysis of literacy and sex ratio is immense significant. This paper revealed that there is negative correlation between literacy and sex ratio in Rajasthan.

I. INTRODUCTION

Literacy is refers to the ability to read for knowledge, write coherently and think critically about the written word. The population commission of united states defines "the ability of both read and write a simple message with understanding in any language a sufficient basis for classifying a person as literate". According to census of India "a person aged more than 6 years and who can both read and write with understanding in any language has taken as a literate". The census of India defines the literacy rate as a proportion of literates to total population in age group 7 years and above. literacy is essential for eradicating poverty and mental isolation for cultivating peaceful and friendly international relations and promoting the free play of demographic processes[3].sex ratio is the ratio of males to females in a population. An important social indicator to measure the extent of prevailing equity between males and females in a society at a given point of time [4]. This has much to do with the interplay of sex differential in mortality , sex selective migration , sex ratio at birth and at time the sex differential in abortion and in population enumeration[4]. It is also influence marital status, manpower, the gross national product , planning regarding educational and medical services , housing etc. as well as socio cultural factors together influence the overall demographic composition of population .

II. REVIEW OF LITERATURE

Jadhav , Santosh , Ratnaparbha (2014) found that there were wide disparities in literacy rate and sex ratio of Pune district . correlation between literacy and sex ratio found in low degree and positive angle. Sugana (2011) found that education of women is the most powerful tool of change of position in society and education brought a reduction of women is the most powerful tool of change of position in society and education brought a reduction inequalities and function as a means of improving their status with the family[5]. kumar, Monu(2013) revealed that correlation between female literacy and child sex ratio ($r=-0.46$) found in moderate degree and negative correlation. Sule and Barkade (2012) concluded that there were wide disparities in literacy and sex ratio of Solapur district. Correlation between literacy and sex ratio found in moderate degree and positive angle i.e $p=0.33$. It means high literacy rate and high sex ratio. Singh , Sandeep et . al (2013) revealed that after independence , literacy rate of India is increased but there is wide disparities between male and female literacy rate and sex ratio is decreased from 1901 to 2011. Correlation between male literacy and sex ratio, female literacy rate and sex ratio found in negative correlation.

III. STUDY AREA

Rajasthan state is one of the prosperous states of India. It lies between $23^{\circ}3'$ north to $30^{\circ}12'$ northern latitude and $69^{\circ}30'$ east to $78^{\circ}17'$ eastern longitude. it occupies a geographical area of about 3,42,239 sq.km . On the northern side of it Punjab and northern –east of Haryana , Delhi and south of Gujarat and western of Pakistan ,Uttar pardesh are on east and south west of Madhya pardesh . According to 2011 census ,its population is 68548437 out of which 35550997 males and 32997440 females. The density is 200 persons per square kilometer . The sex ratio recorded 928 females per thousand males which is lowest in national average sex ratio . Rajasthan state has 66.11% literacy rate with differential of 79.19% male literacy and 52.12% female literacy.

Objectives-

- To study the spatial pattern of literacy rate in Rajasthan state.
- To study the spatial pattern of sex ratio in Rajasthan state.
- To analyze the correlation between spatial pattern of literacy and sex ratio in the study.

IV. DATABASE AND METHODOLOGY

Present study is based on the secondary sources of data .to fulfill the objectives data regarding literacy and sex ratio of Rajasthan is obtained from census of India , Statistical abstract of Rajasthan. The collected data are processed to analyze the spatial pattern of literacy rate and sex ratio in Rajasthan. Arc GIS 9.3 software used for preparing the map and to show the spatial pattern of sex ratio and literacy in Rajasthan. The districts of Rajasthan are grouped into five categories very high , high, moderate, low, very low on the basis of simple statistical method. The Spearman's rank order method is used for analysis the correlation between literacy and sex ratio.

Spatial pattern of sex ratio

Rajasthan as a whole has 926 number of females per thousand of males per thousand of males population in 2011. But the district level sex ratio varies from district to district ranges from 845 to 990 . All 33 districts are categorized into five groups as follows:

Very High sex ratio

The districts which have the sex ratio above 965 are included into high category. High sex ratio was recorded in the districts of Banswara, Dungarpur ,Pratapgarh, chittorgarh , Bhilwara, Pali, Rajasmand.

High sex ratio

The districts which have the sex ratio ranges 935 to 965 a are included into high category. High sex ratio was recorded in the districts of Udaipur, Jalor, Jhunjhunun, Sikar, Nagaur, Ajmer, Tonk, jhalawar.

Moderate sex ratio

The districts which have the sex ratio ranges 905 to 935 a are included into moderate category. Moderate sex ratio was recorded in the districts of Sirohi, Churu, Baran, Bundi.

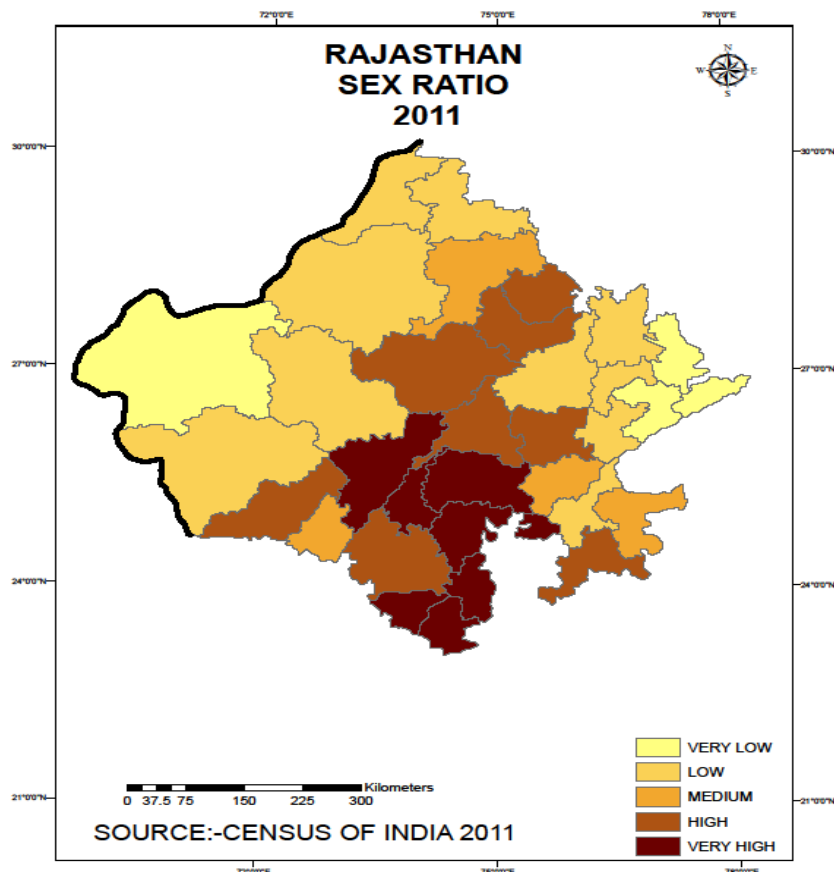
Low sex ratio

The districts which have the sex ratio ranges 935 to 965 a are included into low category. low sex ratio was recorded in the districts of Ganganager , Hanumangarh ,Bikaner , Swai madhopur, Kota, Bundi ,Jaipur, Dausa, Alwar, jodhpur.

Very Low sex ratio

The districts which have the sex ratio ranges 935 to 965 a are included into low category. Low sex ratio was recorded in the districts of Jaisalmer, Dhaulpur ,Karuli, Bharatpur .the following are the reasons for low sex ratio in Rajasthan-

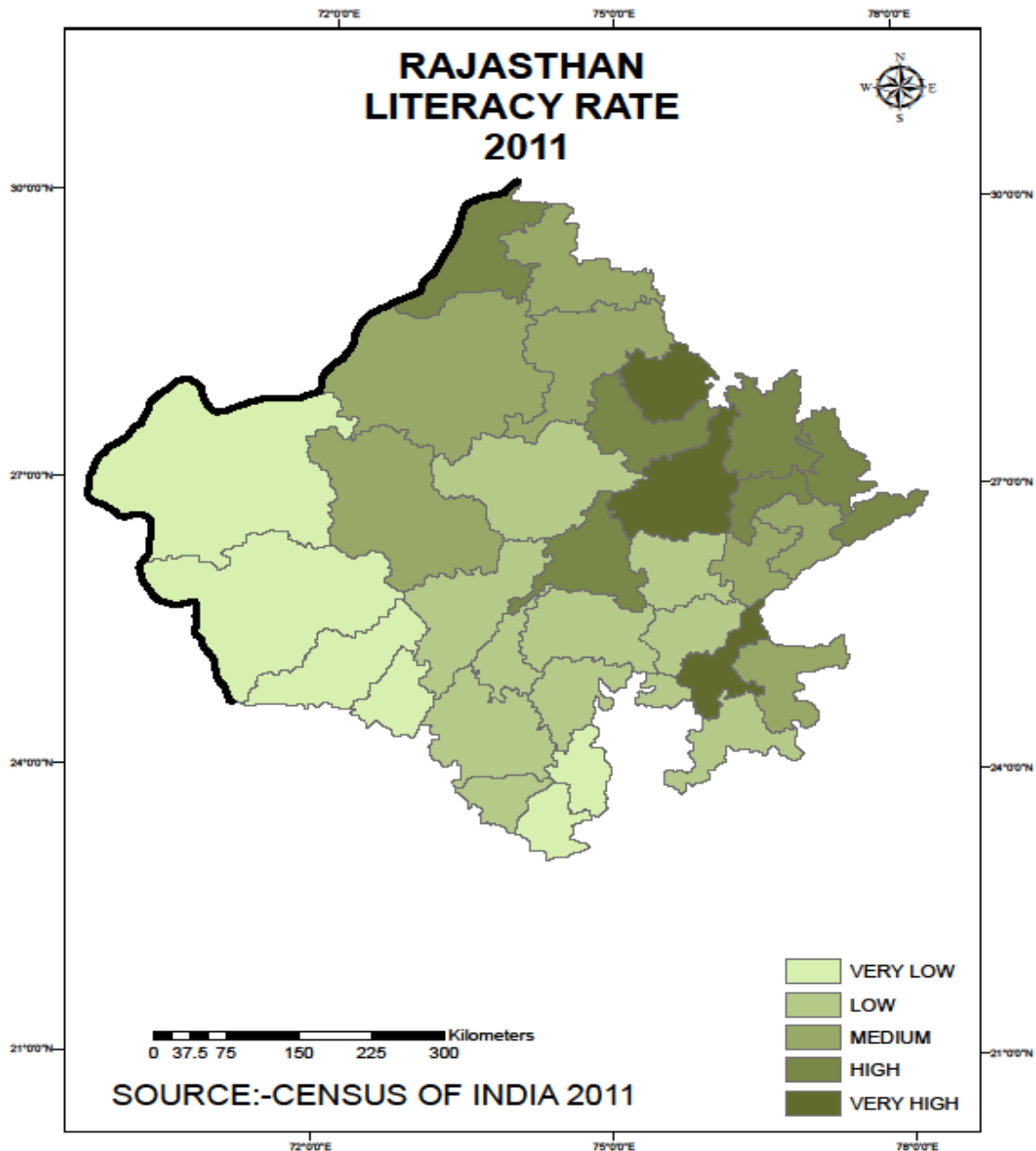
- 1) Neglect girl child
- 2) High maternal mortality
- 3) Sex selective
- 4) Female Infanticide



Spatial pattern of literacy rate

Rajasthan as a whole has is 66.11% literacy rate in 2011. But the districts level literacy differs from district to district.

1. very high literacy rate - High literacy was recorded in the districts of Kota, Jaipur, Jhunjhunun. Due to high number of educational facilities , high urbanization , development of transport and communication and so on.
2. High literacy rate-The districts which have above mean plus one standard deviation are included the category. High literacy was recorded in the districts of Ajmer, Sikar, Alwar , Bharatpur, Dhaulpur, Dausa, Ganganager.
3. Moderate literacy rate-Moderate literacy was recorded in the districts of Hanumangarh, churu, Bikaner, jodhpur, Baran, Karauli, swai madhopur.
4. Low literacy rate-Low literacy was recorded in the districts of Jaisalmer, Barmer ,Jalor, Sirohi, Partapgarh, Banswara.
5. Very low literacy rate-Low literacy was recorded in the districts of Dungarpur, Chittaurgarh , Udaipur ,Bhilwara, Pali, Rajasmand, Nagaur,Tonk, Bundi , Jhalawarpment of transport and communication and so on.



DISTRICTS	LITERACY RATE(X)	SEX RATIO(Y)	RANK(X)	RANK (Y)	D	D2
GANGANAGER	70.25	887	8	29	-21	-441
HANUMANGARH	68.37	906	11	22.5	-11.5	-132.25
BIKANER	65.92	903	17	25	-8	-64
CHURU	67.46	938	12	16.5	-4.5	-20.25
JHUNJHUNNUN	74.72	950	3	10.5	-7.5	-56.25
ALWAR	71.68	894	5	27.5	-22.5	-506.25
BHARATPUR	71.16	877	6	30	-24	-576
DHAULPUR	70.14	845	9	33	-24	-576
KARALI	67.34	858	14	31	-17	-289
SWAI MADHOPUR	66.19	894	16	27.5	-11.5	-132.25
DAUSA	69.17	904	10	24	14	-196
JAIPUR	76.44	909	2	21	-19	-361
SIKAR	72.98	944	4	15	-11	-121
NAGPUR	64.08	948	18	13	5	25
JODHPUR	67.09	915	15	20	-5	-25
JAISALMER	58.04	849	28	32	-4	-16
BARMER	57.49	900	29	26	-7	-49
JALOR	55.58	951	33	9	24	576
SIROHI	56.02	938	32	16.5	15.5	240.25
PALI	63.23	950	20	10.5	9.5	90.25
AJMER	70.46	987	7	3	4	16
TONK	62.46	949	24	12	12	144
BUNDI	62.31	922	25	19	6	36
BHILWARA	62.71	969	22	7	15	225
RAJASMAND	63.31	988	19	2	17	289
DUNGARPUR	60.78	990	27	1	26	676
BANSWARA	57.2	979	30	5	25	625
CHITTAURGARH	62.51	970	23	6	17	289
KOTA	77.48	906	1	22.5	-21.5	-462.25
BARAN	67.38	926	13	18	-5	-25
JHALAWAR	62.13	945	26	14	12	144
UDAIPUR	62.74	958	21	8	13	169
PARTAPGARH	56.3	982	31	4	27	729

Source - Census of India, 2011

Correlation between literacy and Sex Ratio - The spearman's rank difference method is used for the calculation of literacy and sex ratio in Rajasthan state. It is observed that there is rather moderate and positive correlation i.e $r=0.37$ Between the literacy and sex ratio in Rajasthan state.

V. CONCLUSION

There were wide disparities in the literacy and sex ratio in Rajasthan in 2011. The highest literacy was found in Kota district (77.48%) and lowest literacy in Jalor (55.58%). The highest sex ratio is found in Dungarpur district (990) and lowest in Dhaulpur district (845). But the correlation between literacy and sex ratio found in low degree and negative angle i.e $p= -0.37$. It means high literacy and low sex ratio.

VI. REFERENCES

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