

## Impact of Female Literacy on Child Sex Ratio in Rajasthan

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### Abstract

*Education is milestone for women. The growth of women's education in Rajasthan is slow. Education also brings a reduction in inequalities and improves the quality of life. Literacy is a part of education. Here the focus is on Literacy rate and its impact on the child sex ratio in Rajasthan child sex composition of a population refers to the balance between child 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 a ratio between the population of two sexes. As is obvious, the first one gives the number of child males per hundred child females or number of child male per thousand child females in the population and is the most widely used measure of sex ratio the world over. According to census 2011 female literacy 61.15 percent maximum literacy in Junjhunu district i.e. however, child sex ratio is 837 and low literacy is in 38.73 percent but sex ratio is High i.e. 895 compare to other district. The paper is an attempt to examine the determinants of declining child sex ratio in Rajasthan. A key result we obtained in spearman rank correlation method, suggest that one percentage point increase in male literacy has reducing effect on the juvenile sex ratio by on an average 0.14 percent in the districts of Rajasthan during 2001-2011.*

**Key Words :** *Female Literacy, Child Sex Ratio.*

### Introduction

The present paper studies the inter-district disparities in female literacy rate and child ratio in the state of Rajasthan. In this study, focus is upon how female literacy rate effects the child sex ratio specially in case districts of Rajasthan. Literacy and level of education are basic indicators of the level of development achieved by a society. Higher levels of education and female literacy lead to greater awareness and also contribute in Improvement of economic and social conditions. This though focuses upon the Literacy of Women specially Rajasthan. The growth of women's education in Rajasthan is slow education also brings reduction

inequalities and improve the quality of life. Literacy is a part of education here the focus is on female literacy rate and its impact on the child sex ratio in Rajasthan. Sex composition of a population refers to the balance between child 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 a ratio between the population of two sexes. As it obvious, the first one gives the number of child males per thousand child females in the population and is the most widely used measure of child sex ratio the world over.

## Objectives

The main objectives of present papers are :-

- To study spatial patterns of female literacy rate and child sex ratio in Rajasthan.
- To examine correlation between female literacy and child sex ratio in the study area.
- To suggest some remedial measures to improve the child sex ratio.

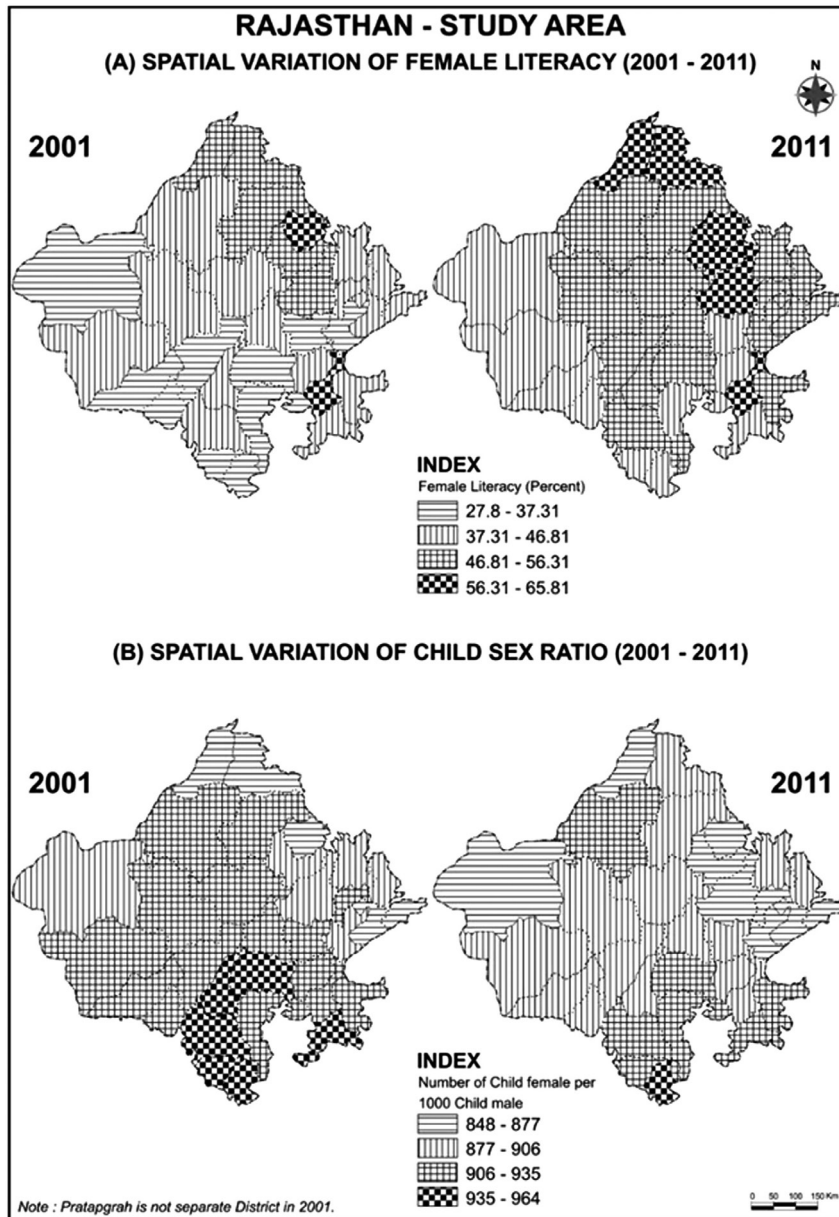


Figure 1.

## Study Area

Rajasthan perceived as the desert state of India has widely contrasting topography. Geographically, no other region can claim greater diversity than Rajasthan a region of lofty hills and rolling sand dunes, of scorching heat and freezing cold, of fertile plains in the east and sparsely populated areas of Jaisalmer in the west it is the largest state in the country presenting a Kaleido scope of ecosystem. Rajasthan is one of the 27 states of India and shares its geographical boundaries with the states of Punjab, Haryana, Uttar Pradesh, Madhya Pradesh and Gujarat. Its north western and western regions, comprising 11 districts covering 61 percent of the total area and 40 percent population of the state, form the "Great Indian thar desert". The arid and semi arid regions of Rajasthan covering the entire Rajasthan state. Lies approximately between 23°3' N latitude and between 69°30'E to 78°17'E longitude on the globe, occupying an area of about 3,42,239 Sq. Km. Rajasthan can be broadly, divided into four physiographic units : (a) Western and north western desert or thar and (b) Aravali and Hilly Range (c) Eastern Plains region and (d) South-Eastern, Plateau. The district land forms west / north west and east / South east to The Aravali range results in a unique climatic setup, soils and vegetation the southern and eastern Rajasthan are relatively more fertile areas and forms the Basin of Chambal river with its tributaries Banas, Kalisand and Parbati. The western region is a desert with only one river Luni, arising south west of Ajmer.

## Data Sources and Methodology

The data for the present study have been taken from secondary sources. The data regarding female literacy and child sex ratio of Rajasthan is obtained from census of India (2011) and Statistical Abstract of Rajasthan for various issues. The collected data are processed to analyze the pattern of female literacy rate and child sex ratio in Rajasthan. Both qualitative and quantitative methods have been applied for the data analysis. The most important among them are the choropleth method used for the preparation of maps. The districts of state are grouped into four categories i.e. very low, low, medium and high literacy on the basis of simple statistical method. To analyze spatial pattern of child sex ratio, the same technique is applied for calculation. Spearman's Rank difference method is used for analysis. The correlation between female literacy and child sex ratio. It is a statistical measure of the strength of a monotonic relationship between paired data. With the help of which the data analysed and obtained results are spatially represented in the form of maps.

## Spatial Variation Female of Literacy

The average female literacy rate of 52.66 percent within itself with regional disparities in literacy from one part of the state to another. According to the 2011 census, more than 57.57 per cent district of the state are still struggling hard to catch up with the state average. The district of Kota with 66.32 per cent literacy has the distinction of being the most literate district of the state.

At the other end of the scale, Sirohi district of state with only 40.12 percent literacy rate is the least literate district figure ( ) shows that north eastern part of the state where the literacy rates are high, stands out in marked contrast to control and north western part where the low literacy rate found. High literacy rates are characteristic of areas with a high degree of exposure to external influence, i.e. the northeastern part of Rajasthan, which bounded by the states Punjab and Haryana and these have higher literacy than Rajasthan. In these areas, there are high degree of urbanization and high standard living. If the state divided vertically into two halves most of the districts with very low and low literacy rates are in the western part of the state and those with moderate and high (46.81 to 65.81 percent).

#### **A) Areas of High Literacy**

Out of 33 districts, 6 district have more than 18 percent literacy in 2011, compare to 2. The district with high literacy rate are widely scattered in north-eastern parts of state as Shri Ganganagar, Junjhunu, Jaipur, Kota, Hanumangarh and Alwar.

#### **B) Areas of Moderate Literacy**

Areas belonging to this category have a literacy rate of 46.81 to 56.31 per cent, in all 17 districts are included in this category. They have occupied central mainly western compact zones of the state. In these areas, moderate rates of literacy are associated with agriculture in the context of feudal landlords. The western border region also constitutes the large belt of moderate literacy. It includes the district Bikaner (53.77%), Churu (54.25%),

Bharatpur (54.63%), Karoli (49.80%), Doshi (52.33%) etc.

#### **(C) Areas of Low and Very Low Literacy**

This category include areas having less than 46.81 percent literacy rate, covering 11 districts in 2001 Compare to negligible current year. Jalore district with a literacy rate of 38.73 percent is the district with lowest literacy rate in Rajasthan. WWith few exceptions, the low literacy is the characteristic of the areas with low proportion of urban population. A strong prejudice against female literacy, general poverty necessitates participation of every family member in the economic development, poor resource potential of the region in both agricultural and non-agricultural sector, restricting the scope of development activities. Physiographic handicaps in the form of arid and arid climate, rugged terrain, deep underground water table and poor quality of sub social water and limited development of irrigational facilities all have contributed to the region's economic backwardness. Extremely granted to women in Rajput society of Rajasthan has tempered the region's social progress.

#### **Spatial Variation of Child Sex Ratio**

The sex ratio in the state is linked with the status of female literacy, age of marriage, incidences of female foeticide and infanticide as well as female work participation rate in 2001 the child sex ratio in the state was 909, which was well below the national figure of 1. The gap widened in 2011 when the state child sex ratio is 888 and the national figure was.

In case of administrative districts the position of presidency administrative districts has always been leading while Junjhunu district has lagged behind. Among the districts under presidency administrative district, Banswara and Pratapgarh has recorded a favorable child sex ratio while Sikar and Dhaulpur are the districts which had recorded low sex ratio among the districts Bhilwara, Bikaner, Dungerpur, Chittorgarh, Bara, Jhalawar, Udaipur and Pratapgarh are the districts which have recorded declining child sex ratio in 2011 in comparison to that of 2001 (Fig. 1).

The sex ratio has been quite high among scheduled tribe population residing either in the rural areas or in the urban areas. This is mainly due to the equal status granted to women in the tribal society. The incidences of foeticide as well as infanticide are low in a tribal society when compared with the progressive society of modern India. The child sex ratio at birth is also high among tribal families. The child sex ratio has been lowest in case of general caste population both in the rural as well as urban areas during the period 2001-11. There has been declining child sex ratio observed in a number of districts within the state. The district fall in child sex ratio has been recorded in all the district except especially in Banswara. Majority of the districts of Rajasthan has also registered declining child sex ratio with highest decrease observed in Jhunjhunu district where the figure in 2001 was 863 which has dropped to 837 in 2011. Hanumangarh and Jaisalmer district has recorded a positive rise in child sex ratio 872 and 869 in 2001 to 870 and 874 in 2011 respectively.

### **Female Literacy Rate and Child Sex Ratio**

Table 1 shows the data of female literacy rate and child sex ratio in Rajasthan. Data shows that there is disparity in the level of literacy and child sex Ratio between rural and urban area and also among the districts of Rajasthan. The female literacy rate is higher in urban area compared to rural area but in case of sex ratio, opposite trend is seen. The sex ratio is higher in rural area compared to urban area across the district of Rajasthan.

According to census of India 2011, India has recorded female literacy rate of 65.46 percent with the rural areas reporting female literacy rate of 58.75 per cent and the urban areas registering 79.92 per cent female literacy rates resulting in an absolute difference of nearly 21.17 percentage points. Whereas Rajasthan has reported female literacy rate of 52.66 percent with rural area reporting female literacy rate of 46.25 percent and the urban area registering 71.53 percent female literacy rate, resulting in an absolute difference of nearly 25.28 percentage points. The pronounced difference in the rural-urban distribution proves that significant efforts need to be undertaken to improve the literacy status in the rural areas.

The highest female literacy is observed in Kota district of Rajasthan at 66.32 percent followed by Jaipur at 64.63 percent and Jhunjhunu at 61.15 percent. The lowest literacy rate is observed in Jalore at 38.73 percent. Overall female literacy rate, in India is lower than female literacy rate in Rajasthan at in case of child sex ratio, India's child sex ratio (0-6 years) in 2011 stands at 943 (female against 1000 males),

which is more than Rajasthan's child sex ratio 888. Jhunjhunu district has reported the lowest child sex ratio i.e. 837 girls for every 1000 boys whereas the highest child sex ratio is observed in the Banswara district of Rajasthan of Rajasthan i.e. 934.

According to census 2011, Jhunjhunu district has reported the lowest child sex ratio i.e. 837 girls for every 1000 boys but high female literacy rate i.e. 61.15 percent. This shows the perfect inverse relationship between child sex ratio and female literacy rate in junhunu district of Rajasthan. High female literacy rate in Junjhunu leads to lowest child sex ratio. This fact throws light on the demonstrates that we have a herculean task ahead. Junjhunu and Kota despite being the most literate districts and have a poorest child sex ratio as compared to other district. One of the major reasons for the poorest child sex ratio given by experts is the attitude toward the girl child and the large no. of illegal sex determination clinics flourishing across state. Some of the districts that fare poorly in the sex ratio

for children below six years are junjhunu which records 837, Sikar 848, Karoli 852 and Shri Ganganagar 854. In areas that are economically forward, where people can afford modern technology, the child sex ratio is poor.

Thus while limiting families is a growing trend the old preference for a male off spring continues and therefore many families resort to sex determination the social bias and availability of technology has led the sex ratio to decline in such societies. The government thus needs to tackle both the misuse of medical technology and the social bias against girl child to ensure that the child sex ratio improves.

The highest child sex ratio is observed in the Banswara district of Rajasthan i.e. 934 followed by Pratapgarh 933, Bhilwara 933, Udaipur 924, Dungarpur 922 Bara 912, Jhalawar 912 and Chittorgarh 912. The child sex ratio is better in tribal societies where the girl child is considered an asset due to the prevailing social custom.

Table 1 : Status of Rural and Urban Female Literacy Rate and Child Sex Ratio Different District of Rajasthan (2011)

Sr. No.	District	Female Literacy Rate (2011)			Child Sex Ratio (2011)		
		Total	Rural	Urban	Total	>6 Years Rural	Urban
1.	Ganganagar	60.07	55.65	71.78	854	859	841
2.	Hanumangarh	56.91	53.48	70.76	878	875	845
3.	Bikaner	53.77	44.81	70.12	908	902	901
4.	Churu	54.25	51.13	62.00	902	897	893
5.	Jhunjhunu	61.15	59.86	65.54	837	825	852
6.	Alwar	56.78	52.69	75.22	865	864	844
7.	Bhartpur	54.63	50.85	69.43	869	86	840
8.	Dholpur	55.45	53.23	63.51	857	858	837

9.	Karoli	49.80	47.05	60.79	852	842	855
10.	Sawai Madhopur	47.80	42.65	67.80	871	866	862
11.	Dausa	52.33	49.85	69.14	865	861	842
12.	Jaipur	64.63	52.07	75.82	861	865	852
13.	Sikar	58.76	56.75	65.26	848	836	860
14.	Nagaur	48.63	45.92	60.03	897	866	894
15.	Jodhpur	52.57	41.99	71.85	891	889	895
16.	Jaisalmer	40.23	36.06	66.81	874	868	871
17.	Barmer	41.03	38.92	67.45	904	900	891
18.	Jalore	38.73	37.03	57.32	895	891	888
19.	Sorohi	40.12	33.02	67.41	897	895	859
20.	Pali	48.35	43.74	64.55	899	899	876
21.	Ajmer	56.42	41.87	77.48	901	898	8883
22.	Tank	46.01	40.14	65.54	892	887	863
23.	Bundi	47.00	41.56	68.16	894	886	887
24.	Bhilwara	47.93	41.08	73.40	933	921	894
25.	Rajsamand	48.44	43.77	72.95	903	893	880
26.	Dungarpur	46.98	44.75	78.29	922	919	850.
27.	Banswara	43.47	40.47	80.28	934	928	863
28.	Chittorgarh	46.98	40.68	74.80	912	907	881
29.	Kota	66.32	54.23	74.28	899	899	881
30.	Baran	52.48	48.24	68.25	912	906	887
31.	Jhalawar	47.02	42.01	72.84	912	909	888
32.	Udaipur	49.10	40.46	82.02	924	927	872
33.	Pratapgarh	42.40	39.05	77.61	933	929	883

Source : Correlation Coefficient between

- Total Female Literacy rate and Child Sex Ratio = -0.22
- Correlation coefficient between rural female literacy and child sex ratio is = -0.31
- Correlation coefficient between urban female literacy and child sex ratio is = -0.22

The spearman's rank correlation is used to measure the relationship between child sex ratio and female literacy rate the above working shows that the correlation between child sex ratio and female literacy in Rajasthan is  $r = 0.22$  which means there

is a negative relationship between child sex ratio and female literacy rate. Analysis show that there is a inverse relationship between child sex ratio and female literacy have inverse relationship.

### Correlation between female literacy and child sex ratio (2001)

Literacy and Education is a major component of human development. Literacy has its effects on various attributes of the population such as fertility, mortality, migration and also sex ratio. The knowledge of sex ratio is essential for the understanding the condition of women in society. A decline or low number of female population 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 change in child sex ratio and female literacy rates in individual districts however is not uniform

and there is significant regional variation. The spearman's Rank difference method is used for the calculation of the correlation of female literacy and child sex ratio in Rajasthan. It is observed that there is negative correlation i.e.  $r=0.22$  between (total);  $-0.32$  rural female literacy and child sex ratio and  $0.16$  (Urban female literacy and child sex ratio in Rajasthan).

While comparing female literacy and child sex ratio as in figure 1. It is very clear in Rajasthan that where literacy is highest there sex ratio is lowest. For example in Jhunjhunu female literacy rate is high and sex ratio is low, however in Banswara female literacy rate is lowest and sex ratio is highest.

Table 2 : Status of Rural and Urban Female Literacy Rate and Child Sex Ratio Different District of Rajasthan (2001)

Sr. No.	District	Female Literacy Rate (2001)			Child Sex Ratio (2001)		
		Total	Rural	Urban	Total	Rural	Urban
1.	Ganganagar	52.4	47.2	67.8	850	861	814
2.	Hanumangarh	49.6	46.3	62.6	872	876	854
3.	Bikaner	42.4	30.3	64.8	920	921	917
4.	Churu	54.4	52.4	59.1	906	910	898
5.	Jhunjhunu	59.5	59.3	60.5	863	865	852
6.	Alwar	43.3	38.6	70.4	887	894	837
7.	Bhartpur	43.6	39.1	60.9	879	882	864
8.	Dholpur	41.8	38.9	54.2	860	863	839
9.	Karoli	44.4	42.8	53.8	873	871	890
10.	Sawai Madhopur	35.2	29.5	58.4	902	901	906
11.	Dausa	42.3	40.0	61.6	906	908	880
12.	Jaipur	55.5	43.9	67.1	899	911	884
13.	Sikar	56.1	55.3	59.3	885	882	898



14.	Nagaur	39.7	36.8	53.4	915	916	913
15.	Jodhpur	38.6	24.7	64.3	920	926	902
16.	Jaisalmer	32.1	27.3	58.1	869	870	860
17.	Barmer	43.4	42.0	60.2	919	920	896
18.	Jalore	27.8	26.2	47.8	921	922	910
19.	SoroHi	37.1	31.3	64.1	918	931	847
20.	Pali	36.5	31.7	54.7	925	927	914
21.	Ajmer	48.9	32.7	72.1	922	930	906
22.	Tank	32.2	25.7	256.0	927	929	920
23.	Bundi	37.8	32.5	60.0	912	916	888
24.	Bhilwara	33.4	26.2	62.0	949	959	903
25.	Rajsamand	37.7	33.1	68.3	936	939	911
26.	Dungerpur	31.8	28.9	67.8	955	959	877
27.	Banswara	29.2	25.1	76.6	962	967	868
28.	Chittorgarh	36.0	28.9	68.9	926	930	904
29.	Kota	60.4	49.8	69.4	912	922	901
30.	Baran	41.6	37.7	60.3	919	921	910
31.	Jhalawar	40.0	35.3	77.5	947	957	879
32.	Udaipur	44.5	36.3	77.5	947	957	879
33.	Pratapgarh	31.8	27.5	73.5	953	959	876

Source :

- Correlation coefficient between total female literacy rate and child sex ratio is = -0.22
- Correction coefficient between rural female literacy rate and child sex ratio is = 0.32
- Correlation coefficient between urban female literacy and child sex ratio is = -0.165

## Conclusion

The declining sex ratio is actually an undeclared emergency crisis which has its profound and frightening implications upon society and future of mankind. It is shocking that killing of the girl child both before and after birth is still practised in the state despite legal prohibitions and incentive based schemes provided by the

state and union government. Rural society in the country is still entangled in class and caste divide with a deliberate intention that a girl child should not be born. This artificial alteration of demographic structure has implications not only on gender justice but also on the pattern of social violence and human development. Restoration of the gender balance is not only the sole duty

of the government. responsibility there are wide regional disparities in the female literacy rate and child sex ratio of Rajasthan in 2011.

The study shows that correlation between female literacy rate and child sex ratio is negative i.e.  $r = -0.22$ . It means inverse relationship between both the variables. The female literacy rate has been found to be highest in Junjhunu district, which has low child sex ratio. Banswara and Dungerpur most backward region of the state has registered female literacy rate of 43.47 percent and 46.98 percent. However, it has highest child sex ratio of 934 and 922. It is concluded that increased level of female literacy rate is fail to change the thinking of people that is why might be still the case of female feticide is occurred and girl child is still descended. The missing girl inchild is alarming danger symbol of gender in equality in child population and feature total population. The deficit in girl child population leads to serious demographic imbalance and difficult social consequences. Keeping this view the plan and programme of action has to be formulated and implemented in the future to bring a reduction in sex inequalities and functions as a mean of improving their status within the family, society and nation.

## References

1. Banerjee, M. (1977), "The Pattern of Sex Ratio in Singhbhum district, Bihar", *Geographical Review of India*, Vol. 39, pp. 30-38.
2. Krishan, G. and Chandna, R. C. (1973), "Sex Composition of Haryana's Population", *Geographical Review of India*, 35, pp. 113-125.
3. Miller, B.D. (1989), "Changing patterns of Juvenile sex Ratio in Rural India, 1961 to 1971", *Economic and Political Weekly*, pp. 1229-1236.
4. S. Singh and T. Kour, "A Geographical Analysis of Literacy and Sex Ratio in Jammu and Kashmir", *The Deccan Geographer*, Vol. 51 No. 1 and 2, June-December 2013, pp. 75-81.
5. Siddiqui, N.A. and Ahmad Q. M. (1971), "Regional Variation of The Sex-Ratio in the Population of Haryana", *The Geographer*, 18, pp. 99-114.

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