

## Correlation between Literacy and Sex Ratio in Haryana.

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**ABSTRACT:** *This paper is an attempt to analyze the correlation between literacy rate and sex ratio in Haryana. Literacy plays a very important role in upliftment of sex ratio. It is one of the most important indicator of social development. Literacy and education is universally recognized as a major components of human development. As such, certain minimum level of literacy seems to be essential for a population to a break out the vicious of poverty.(1) The knowledge of literacy and sex ratio is essential for understanding the condition of woman in society. (2). A decline in sex ratio is suggestive of the neglect of girl child, sex selective abortion and traditional attitudes of society. The analysis of literacy and sex ratio is of an immense significant. We found that there is a negative moderate correlation between literacy and sex ratio in Haryana.*

**Key Words:** *: Literacy, Sex ratio, education, correlation, social development.*

### Introduction:-

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.” The concept of literacy which varies from country to country, generally refers to minimum level of literacy skill. According to census of India, “A person aged more six years and who can both read and write with understanding in any language has taken as a literate.” The census of India defined the literacy rate as a proportion of literates to total population in age group seven years and above. Literacy reflects the socio-economic and cultural set up of a nation, ethnic group and social community. (Majid Hussian, 2008 page no. 12, 58). The influence of literacy can be observed on fertility rate, child mortality rate and size of family.

Sex ratio is the proportion between male and female population. Sex ratio may be defined as the number of female population per thousands of male population. An important social indicator to measure the extent of prevailing equity between male and females in society at a given point of time. The literacy rate and sex ratio are the most significant components of the Human Development index. The area which is higher in literacy rate and sex ratio that region would higher in Human Development Index. The separate data for males and females are important for various types of planning and analysis of various population attributes. Present sex composition of child population determined the future vital events such as marriage rate, labour force, age structure, birth and death, migration etc. It also describes the present situation with respect to status of girl child, gender discriminations infanticides and feticides.

### Study Area:-

Haryana state is one of the prosperous states of India. It lies between 27°39'N to 30°35'N latitudes and 74°28'E to 77°36'E longitudes in the north- western part of India. As per census the total population of Haryana is 2.53 Crore (1.35 Crore males and 1.18 crore females) which accounts 2% of the total population of India. Haryana is the 16<sup>th</sup> largest state of India and cover an area of 44,212 Sq. km with a population density of 573 persons. The sex ratio recorded 879 females per thousand males which is lowest in national average. Haryana State has 75.55% literacy rate with differential of 84.06% male literacy and 65.94% female literacy.

**Location Map of Study Area**



Concentrating the physical features, Haryana is bordered by the Shiwalik Hills in the northeast. In the east, the perennial river Yamuna makes boundary between Haryana and Uttar Pradesh. In the North, the seasonal river Ghaggar forms part of the boundary between Punjab and Haryana. The dry semi-arid region in the southeast and the west is penetrated by the Aravalis ranges, which finds extension in part of Gurugram, Rewari, Mahendragarh, Bhiwani and Jhajjar Districts.

**Objectives:-**

To analyze the correlation between literacy and sex ratio in the Haryana.

**Data Base and Methodology:-**

Present study is based on secondary date collected from census of India 2011. Two variable i.e. literacy and sex ratio of Haryana have been taken for the study. The spearman’s rank correlation method is used for analysis the correlation between literacy and sex ratio.

**Spearman’s Method:**

$$r_s = 1 - \frac{6 \sum D^2}{n(n^2 - 1)}$$

Where D is the difference between ranks of two variables, N is the total number of observations, Spearman’s correlation coefficient is a statistical measure of the strength of a monotonic relationship between paired data. In a sample it is denoted by and is by design constrained as follows.

$$-1 \leq r_s \leq 1$$

Correlation is an effect size and so we can verbally describe the strength of the correlation using the following guide for the absolute value of:

- (1)..20-.39 “weak”
- (2)..40-.59 “moderate”
- (3)..60-.79 “strong”

**Spatial pattern of Sex Ratio:-**

Haryana has a 877 number of females per thousand males population in 2011. But the district level sex ratio varies from district to district ranges from 854 to 907. All 21 districts are categorized into three groups as follow:-

- (A) **High Sex Ratio (890-910):** The districts which have the sex ratio above 890 are included into high sex ratio category. High sex ratio was recorded in the district of Mewat, Rewari, Mahendergarh, Sirsa and Fatehabad.
- (B) **Moderate Sex Ratio (870-890):** The districts which have the sex ratio from 870 to 890 numbers of females per thousand of males are included in the moderate category. Moderate sex ratio is found in Ambala, Yamuna Nagar, Kurukshetra, Kaithal, Karnal, Hisar, Bhiwani, Faridabad and Palwal Districts.
- (C) **Low Sex Ratio (850-870):** The districts which have the sex ratio from 850 to 870 are included into low category. Low sex ratio recorded in the districts of Panchkula, Rohtak, Jhajjar, Jind and Panipat, Sonipat, Gurugram districts.

**Spatial pattern of Literacy Rate:-**

Haryana as a whole has is 76.6% literacy rate in 2011. But the districts level literacy differs from districts to districts. District level literacy varies from district to district from 54.08% (Mewat) to 84.7% (Gurugram) district. All 21 districts are categorized into four group as follows.

- (a) **Very High Literacy Rate (77 and above):** Very high literacy rate was recorded in the districts of Ambala, Yamuna Nagar, Sonipat, Rohtak, Jhajjar, Mahendergarh, Rewari, Gurugram, Faridabad and Panchkula.
- (b) **High Literacy Rate (70 to 77):** High literacy rate was recorded in the district of Kurukshetra, Karnal, Jind, Hisar, Bhiwani, Kaithal and Panipat etc.
- (c) **Moderate Literacy Rate (63 to 70):** Moderate literacy rate is in Fatehabad, Sirsa, Palwal.
- (d) **Low Literacy Rate (Below 63):** Low literacy rate is in Mewat district.

**Correlation between Literacy Rate and sex Ratio:**

The spearman's rank correlation method is used for the calculation literacy and sex ratio in Districts of Haryana. It is clear that there is a negative moderate correlation i.e.  $r=-$

**Correlation between literacy and Sex ratio 2011.**

| Districts    | Sex Ratio | Literacy Rate | Rank X | Rank Y | D(X-Y) | D <sup>2</sup> |
|--------------|-----------|---------------|--------|--------|--------|----------------|
| Ambala       | 885       | 81.75         | 9      | 3      | 6      | 36             |
| Yamuna Nagar | 877       | 77.99         | 12     | 9      | 3      | 9              |
| Kurukshetra  | 888       | 76.31         | 6      | 11     | -5     | 25             |
| Kaithal      | 881       | 69.15         | 10     | 18     | -8     | 64             |
| Karnal       | 887       | 74.73         | 7      | 14     | -7     | 49             |
| Panipat      | 864       | 75.94         | 17     | 12     | 5      | 25             |
| Sonipat      | 856       | 79.19         | 19     | 8      | 11     | 121            |
| Jind         | 871       | 71.44         | 15     | 16     | -1     | 1              |
| Fatehabad    | 902       | 67.92         | 2      | 20     | -18    | 324            |
| Sirsa        | 897       | 68.82         | 4      | 19     | -15    | 225            |
| Hisar        | 872       | 72.89         | 14     | 15     | -1     | 1              |
| Bhiwani      | 886       | 75.21         | 8      | 13     | -5     | 25             |
| Rohtak       | 867       | 80.22         | 16     | 7      | 9      | 81             |
| Jhajjar      | 862       | 80.65         | 18     | 6      | 12     | 144            |
| Mahendergarh | 895       | 77.72         | 5      | 10     | -5     | 25             |
| Rewari       | 898       | 80.99         | 3      | 5      | -2     | 4              |
| Gurugram     | 854       | 84.7          | 20     | 1      | 19     | 361            |
| Mewat        | 907       | 54.08         | 1      | 21     | -20    | 400            |
| Faridabad    | 873       | 81.75         | 13     | 4      | 9      | 81             |
| Palwal       | 880       | 69.32         | 11     | 17     | -6     | 36             |
| Panchkula    | 873       | 81.88         | 13     | 2      | 11     | 121            |
|              |           |               |        |        |        | 2158           |

**Source:-**

Registrar General and Census Commissioner, Computed from Census of India, 2011.  
Now we put the value in the formula-

$$r_s = 1 - \frac{6 \sum D^2}{n(n^2 - 1)}$$

$$= 1 - \frac{6 \times 2158}{9261 - 21}$$

$$= 1 - \frac{12,948}{9240}$$

$$= 1 - 1.4012$$

$$= - .40$$

-.40 between the literacy and sex ratio in Districts of Haryana.

#### Major Findings:

- (1) Literacy rate is higher than national average (74.4).
- (2) Sex ratio is lower than national average (940/1000).
- (3) Sex ratio and literacy rate correlation has negative moderate correlation between each other (r=-0.40).

#### Conclusion :

The spearman's rank correlation method has been used for the calculation of correlation between literacy and sex ratio. The district wise study reveals that a very weak negative correlation has found between these two aspect. It means high literacy and low sex ratio.

#### References :-

1. Aktar, Nasim (2013) : Correlation between literacy and sex ratio in West Bengal: A geographical analysis, review of research, vol. 2, issue 4.
2. Kumar, Sandeep; Kumar, Anil and Singh, Manjit (2015): Geographical variation in child sex ratio trends overtime in Haryana, International Journal of advanced research and technical research, vol-1, issue 5.
3. Majumdar, P.K. (2013) : Indian Demography: Changing demographic scenario in India, Rawat Publications, Jaipur.
4. <http://www.censusinindia.gov.in>
5. Yadav, Neeraj (2015): Correlation between literacy and sex ratio in Rajasthan: A geographical analysis: IJEDR, vol. 3, issue 4.