

## “Examining the relationship between literacy rates and sex ratios in Haryana”

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*This research makes an effort to examine the relationship between the sex ratio in Haryana and the literacy rate. The improvement of the sex ratio is greatly aided by increased literacy. To put it simply, it is a leading indication of societal progress. The importance of education and literacy in a person's personal and societal growth is acknowledged by everyone. Therefore, it seems that a community can't escape the vicious cycle of poverty until they have a certain minimum level of literacy. (1) To comprehend the social status of women, one must be knowledgeable about the literacy rate and the sex ratio. (2). A decrease in the sex ratio may indicate societal views towards girls, sex selective abortion, or societal neglect. There is tremendous significance in analysing the literacy and sex ratio. We observed a somewhat negative association between the sex ratio and literacy rate in Haryana.*

*Education, sex ratio, literacy, correlation, and social growth are some of the key words.*

### Introduction

"The ability of both read and write a simple message with understanding in any language a sufficient basis for classifying a person as literate," said the United said Population Commission. Literacy is defined differently in different countries, although in most cases it means having a certain degree of reading and writing ability. An individual is considered literate in India if they are at least six years old and can read and write clearly in any language, according to the country's census. According to India's census, the literacy rate is the percentage of the population that can read and write, divided by the total population of people aged seven and up. A country, ethnic group, or social community's literacy rate is indicative of its socioeconomic and cultural makeup. (Majid Hussian, 2008). Family size, infant mortality rate, and fertility rate are all indicators of how literate population is. A population's sex ratio indicates the percentage of males to females. The sex ratio is the percentage of females to males in a given population. An essential sociological indicator for gauging the level of gender equality in a culture at a certain moment in time. The two most important parts of the Human Development Index, after the literacy rate, are the sex ratio. A higher Human Development Index would be seen in regions with greater literacy rates and sex ratios. There are several kinds of planning and analysis that benefit from having male and female data separately. Important future events like marriage rate, labour force, age structure, birth and death rates, migration, etc. were determined by the present sex composition of the kid population. Also included are the current state of affairs regarding infanticides, feticides, gender discrimination, and the condition of female children.



Location Map of Study Area

In terms of geographical characteristics, the Shiwalik Hills form Haryana's northeastern boundary. The eastern states of Haryana and Uttar Pradesh are bordered by the perennial Yamuna River. Part of the northern border between Punjab and Haryana is formed by the seasonal river Ghaggar. The Aravalis hills cut across a portion of the Gurugram, Rewari, Mahendergarh, Bhiwani, and Jhajjar districts, penetrating the semi-arid, dry southwest and western regions.

**Purpose:-**To examine the relationship between gender ratio and literacy rate in Haryana.

**Database and Methodology: -**

This study is based on secondary data collected from the 2011 Indian census. We utilised the state's literacy rate and the sex ratio in Haryana for this study. The association between gender ratio and literacy rate is examined using spearman's rank test.

**Spearman's Method:**

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

When N is the total number of observations and D is the difference in ranks of two variables, Spearman's correlation coefficient is a statistical measure of the strength of a monotonic relationship between paired data. Its sample-based definition and theoretical scope are as follows.

where  $-1 < r_s < 1$

Since correlation is an effect size, we can use the following formula to express the magnitude of the correlation when we talk about it:

(1) "weak" (.20 to .39)

(2) "moderate" (.40-.59)

(3) "strong" (.60-.79)

In 2011, there were 877 females for every thousand men in Haryana, according to the state's spatial sex ratio. The gender ratio, however, varies from 854 to 907 at the district level. The following three categories apply to all twenty-one districts:-

Districts with a sex ratio over 890 are in the high sex ratio group (890-910) because of this. All had high sex ratios.

- Mahendergarh
- Sirsa
- Mewat
- Rewari
- Fatehabad

Districts that have a female-to-male population ratio of 870 to 890 inhabitants are included in the category of districts with an intermediate sex ratio. Among the districts that have a relatively low gender ratio are those that are mentioned below.

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In the cities of Karnal, Hisar, Kurukshetra, Ambala, Yamuna Nagar, Faridabad, Kaithal, Bhiwani, and Palwal, the following locations are also included:

(C) Districts with a sex ratio between 850 and 870 are considered to have a low sex ratio. Some districts have a low sex ratio, including

- Panchkula
- Rohtak
- Jind
- Sonapat
- Jhajjar
- Gurugram

A total of 76.6% of the population of Haryana was literate in 2011. Districts, however, have varying levels of literacy. From 54.08% in the Mewat district to 84.7 % in the Gurgaon district, the literacy rate varies greatly among districts. The twenty-one districts are divided into four groups, as shown below.

1. The literacy rates of Ambala, Yamuna Nagar, Rohtak, Jhajjar, Mahendergarh, Rewari, Gurugram, Faridabad, and Panchkula are all above the national average (77 percent).
2. A High Literacy Rate (70–77%): The Kurukshetra district in Karnal reported a high literacy rate. Among them are Jind, Hisar, Bhiwani, Kaithal, and Panipat.
3. The literacy rates of Fatehabad, Sirsa, and Palwal are moderate, ranging from ( 63- 70 )percent.
4. Mewat district has a poor literacy rate, which is below 63 percent.

To determine the literacy and sex ratio in Haryana's districts, researchers apply spearman's rank correlation formula. A somewhat unfavourable association is clearly seen.

- SR : Sex Ratio
- LR : Literacy Rate

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

#### **Source:-**

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

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

$$= 1 - 6 \times 2158/9261 - 21$$

$$= 1 - 12948/9240$$

$$= 1 - 1.4012$$

$$= - 0.40$$

= -0.40 between the literacy and sex ratio in Districts of Haryana

### **Major Findings:**

1. This area has a higher literacy rate than the rest of the country (74.4).
2. At 940 per 1000, the sex ratio is lower than the national average.
3. There is a moderate negative association ( $r=-0.40$ ) between the literacy rate and the sex ratio.

### **conclusion**

The spearman's rank correlation approach was used to compute the association between literacy and sex ratio. The research conducted at the district level indicates a very weak negative association between these two aspects. It signifies a high level of literacy and a low ratio of males to females.

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