

# Literacy Level and Disparities in the Districts of Haryana

Ashish Demla

Department of Economics, Panjab University, Chandigarh (160030), India

**Abstract:** *Human is one of the best assets to invest. Education is a crucial factor in changing social structure. Literacy makes humans well civilized and integrated into the process of globalization, privatization, and modernization. The literacy rate and sex ratio are the two demographic measures of the population. This research paper is an attempt to reveal the study of change in sex ratio & literacy rate in Haryana as per the Census 2011. Sex ratio will easily control through higher literacy levels by spreading awareness among the various sections of the society. But the surprising thing is that there is a moderate negative correlation (-. 689) that occurs between the literacy level and sex ratio. As some places where has a higher sex ratio (907) have lower literacy level (54.08%) like in Mewat, Gurugram which is known as the Cyber City of India are having higher literacy level (84.70%) but with a lower sex ratio (854). With the passage of time, various districts showing a significant change. The research work discussed a very vital aspect specifically about the social ideology of education as well as the birth of a person.*

**Keywords:** Sex Ratio, Literacy, Human Asset, Correlation, Ideology

## 1. Introduction

**Definition:** In general terms, literacy defined as the process in which a person expands another one knowledge through the use of a symbol system for expressing the thought of ideas and for the sake of better development of the mind to understand himself and world affairs too.

**Meaning:** Literacy is the ability of learning and writing with deep understanding. Nowadays, the means of literacy term is confined to formal education only to learn and write. The thing is to need for the morally based knowledge in which the individuals learn numerous things such as social values & beliefs, cooperation, builds character, etc. This variety of factors helps in uplifting the willpower of an individual's which ultimately acts as a boost up in the growth of the economy. The student spent most of the hours in the educational institution such that the teacher played a very crucial role in literate the young ones of our nation. With time, there is a significant improvement in the literacy level, which is 67.91% in 2001 to 75.55% in 2011 in Haryana. The sex ratio also tends to rise from 861 (2001) to 879 (2011) as well as the child sex ratio increases from 819 (2001) to 834 (2011).

## 2. Literature Review

As surfeit scholars briefly wrote about the literacy rate, sex ratio, and inter-regional disparities of Haryana in a descriptive way to gives out many conclusions. Further, it will discuss below:

- Mukesh Kumar & Vinay Kumar (2012), in their article, 'Spatial Pattern and Differential in Literacy' have pointed out that literacy rate is high in Panchkula, Ambala, Rewari, Gurugram, and Faridabad due to the nearest of Chandigarh and Delhi or due to industrial development in these districts [1]. Mewat, Palwal, Sirsa, Fatehabad, Jind, Hissar, and Kaithal have a low literacy level. The rural-urban difference is high in Sirsa, Mewat, and Fatehabad and lowers in Gurgaon and Rewari districts. The discrimination in the literacy level of male-female is high

in the western and southern regions of Haryana and low in eastern.

- Monu Kumar (2013), in their article, ' Correlation Between Female Literacy and Sex Ratio in Haryana ', has revealed the study that the child sex ratio was high in Mewat, Palwal, Sirsa, Fatehabad, and Hissar. Here, the people are mature enough and no discrimination against the girl child. Jhajjar, Mahendragarh, and Rewari have a low sex ratio. Haryana has recorded 66.67 percent female literacy and it clears from the pattern that the districts adjoining to NCR have high literacy [2]. But in the census 2011, the correlation between female literacy level and sex ratio is distracted. The sex ratio has to be found highest in districts that have a low female ratio. Mewat found to be the highest sex ratio with 906 & in Jhajjar, the literacy rate among women gone from 59 to 71 percent along with the sex ratio turns down from 801 to 776.
- Ravinder Jangra & S.P. Kaushik (2016), in their article, ' Level of Female Literacy and Its Differentials in Haryana ', has pointed out the fact that there is an increase in female literacy rate. However, the gap is narrowing down of rural literacy with urban literacy. The high amount of female literates in the eastern region relatively marked by a high degree of development in the infrastructure, education, and recreational facilities. The government needs to have attention on Nuh (Mewat), Palwal, Punaahana, and Ferozpur-Jhirka tehsils of South-West Haryana [3]. So, there is a need to do awareness campaigns, accelerate the development activities, and financial assistance for the weaker sections of the society to uplift the female literacy level.
- Deepak Talwar & Dr. Meenu (2016), in their article, ' An Analysis of Literacy Rate in Haryana '; concludes that the overall population of Haryana is increased by 42.09lakh in 2011 census as compared to 2001 census. The gross sex ratio of Haryana is rising to 877 during the year 2011. District of Mewat and Fatehabad shows a higher sex ratio of more than 900. The literacy rate of Haryana in 2011 is 76.6%, which is slightly higher than the literacy rate of a nation (74.04%) [4]. Comparison of 2001 and 2011 census shows an overall improvement of literacy rate by 8.9%.

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Many policies and programs have launched for qualitative refinement of primary education in Haryana that is Operation Blackboard, Improvement in Science Education, Audio Visual Education [4]. Also, many guidelines have framed to improve education and communication and information technology.

### 3. Study Area

Haryana is one of the 17<sup>th</sup> populous State of India along with acquired an area 44212 sq.km. As per the census 2011, it has an entire population of about 25,351,462 constitutes of 13,494,734 males together with 11,856,728 females. The percentage of literacy rate is 75.55%. It has further included 22 districts, 140 blocks, and 7356 villages. The state borders of Himachal Pradesh and Punjab touches to the north region and Rajasthan to the west and south portion. The eastern boundaries of Haryana touch by Uttar Pradesh and Uttarakhand, which is defined by river Yamuna. Haryana is surrounding by three sides of Delhi, that's why many areas of southern portion come under the NCR (National Capital Region).

Recently in the year 2017-18, the Gross Production of Haryana is Rs.649591.77crore at current prices and Rs.494068.03crore at constant prices of 2011-12. Haryana per capita income is Rs. 211526 in 2017-18 at current prices with Rs. 159892 at a perpetual price of 2011-12. The Gross Value Added of the agriculture & allied sector is of about Rs. 75636.89crore in 2017-18 at a persistent price of 2011-12 [5].

### 4. Objectives

This research paper analysis various purposes which are highlighting below:

- To focus on the disparities regarding the literacy level and sex ratio among the inter-districts of Haryana.
- Change in sex ratio and literacy rate through the Spatio-temporal method

- Correlation between sex ratio and literacy level of Haryana

### 5. Database and Research Methodology

The database is accomplishing through various secondary sources. For studying the demographic position of Haryana, a variety of factors are overview that is the sex ratio, literacy rate, population, etc. Various tools and statistical data take into account for completion of this research which is spotlight below:

- Statistical Abstract Of Haryana
- Census Report 2011
- Google Scholar
- Government Data
- Indian Journals
- Economic Survey

**5.1 Quantitative Methods:** For the analysis of quantitative data, these methods of sex ratio and literacy level is using-

$$\text{Sex Ratio}^* = \frac{\text{Total number of female population}}{\text{Total number of the male population}} \times 1000$$

$$\text{Average Literacy}^{**} = \frac{\text{Literacy population}}{\text{Total number of population} - (0-6 \text{ Age group})} \times 100$$

Note: \* representing females per 1000 males

\*\* To calculate the literacy rate census of India adopted this method in 1991.

For Haryana 2011,

$$\text{Index of sex ratio is} = \frac{11856728 \times 1000}{13494734} = 878.61 \text{ or } 879 \text{ (approx.)}$$

$$\text{Index of literacy rate is} = \frac{16598988}{25351462 - 3380721} \times 100 = 75.55\%$$

### 5.2 Data Interpretation

For the brief interpretation, there are enlisting the list of the districts of Haryana represents the male & female population, the number of literates used for determining sex ratio, and literacy level in Haryana according to the census of 2011.

**Table 1:** District Wise Data of Population and Literates (2011)

Districts	Male Population	Female Population	Total Population	Child Population	Sex Ratio	Literacy Rate (%)	Total Literates
Ambala	598703	529647	1128350	202602	885	81.75	818025
Panchkula	299679	261614	561293	66302	873	81.88	405318
Yamunanagar	646718	567487	1214205	146789	877	77.99	832457
Kurukshetra	510976	453679	964655	116957	888	76.31	646893
Kaithal	571003	503301	1074304	139393	881	69.15	646529
Karnal	797712	707612	1505324	196610	887	74.73	978013
Panipat	646857	558580	1205437	169662	864	75.94	786599
Sonipat	781299	668702	1450001	188262	856	79.12	998316
Rohtak	568479	492725	1061204	129330	867	80.22	747582
Jhajjar	514667	443738	958405	120051	862	80.65	676091
Faridabad	966110	843623	1809733	251955	873	81.70	1272739
Palwal	554497	488211	1042708	177494	880	69.32	599796
Gurgaon	816690	697742	15144322	202602	854	84.70	1111116
Mewat	571162	518101	1089263	248128	907	54.08	454897
Rewari	474335	425997	900332	113893	898	80.99	636947
Mahendragarh	486665	435423	922088	111181	895	77.72	630255
Bhiwani	866672	767773	1634445	212011	886	75.21	1069871
Jind	713006	621146	1334152	168554	871	71.44	832758

Hissar	931562	812369	1743931	215167	872	72.89	1114311
Fatehabad	495360	446651	942011	121024	902	67.92	557578
Sirsa	682582	612607	1295189	157667	897	68.82	782897
Total	13494734	11856728	25351462	3380721	879	75.55	16598988

Source: Census Report of Haryana, 2011 [6].

The analysis of the above table reveals that the population percentage growth of Haryana in 2011 jumps up to 25351462 number of population. Almost 65.47% of the population is literate. Faridabad district concluding the maximum citizens with 966100 males and 843623 females. Panchkula district restrains the least natives with 299679 males and 261614 females. As per census 2011, the child population in Haryana is about 3380721, even though the sex ratio reached 879 with 75.55% of the average literacy level. In Mewat, where is having the maximum number of sex ratio expressly 907 meanwhile there is lowest literacy rate with the 54.08% whereas Gurgaon district has the highest percentage of the literacy level of about 84.07% with least sex ratio especially 854. Rewari district is considering as the best in both the terms of sex ratio(898) and literacy rate (80.99%). Now we have to a comparison of sex ratio and the literacy rate of both the census 2001 & 2011.

**Table 1.2:** Comparison of Sex Ratio and Literacy Rate

District	2001	2011	2001	2011
	Sex Ratio	Sex Ratio	Literacy Rate (%)	Literacy Rate (%)
Gurgaon	850	854	78.50	84.70
Sonipat	839	856	72.80	79.12
Jhajjar	847	862	72.40	80.65
Panipat	829	864	69.20	75.94
Rohtak	847	867	73.70	80.22
Jind	852	871	62.10	71.44
Hissar	851	872	64.80	72.89
Faridabad	826	873	76.30	81.70
Panchkula	823	873	74.00	81.88
Mewat	899	907	43.50	54.08
Fatehabad	884	902	58.00	67.92
Sirsa	882	897	60.60	68.82
Palwal	862	880	59.20	69.32
Kaithal	853	881	59.00	69.15
Bhiwani	879	886	67.40	75.21
Ambala	868	885	75.30	81.75
Yamunanagar	862	877	71.60	77.99
Kurukshetra	866	888	69.90	76.31
Karnal	865	887	67.70	74.73
Rewari	899	898	75.20	80.99
Mahendragarh	918	895	69.90	77.72
Haryana	861	879	67.91	75.55

Source: Census Report 2001 & 2011

From table 1.2 reflects that there is a little increment in the sex ratio of Haryana from 861 in 2001 to 879 in 2011. However, the literacy level surge from 67.91% in 2001 to 75.55% in 2011. The above data reveals the startling thing that region having a lower sex ratio in 2001 still remains creep in 2011 like Gurgaon, Sonipat, Jhajjar, Panipat, and Rohtak. And some spots have less sex ratio moves to the adequate sex ratio especially, Jind, Hissar, Faridabad, and Panchkula in 2011. Kaithal district is the only one who moves from lower to higher sex ratio specifically, 853(2001) to 881 (2011). There are some districts which lie in average sex ratio in 2001 moves to higher sex ratio in 2011 that are Palwal, Ambala, Yamunanagar, Kurukshetra, and Karnal.

Also, districts like Mewat, Fatehabad, Sirsa, Bhiwani, Rewari, and Mahendragarh having a high sex ratio in 2001 still has the highest sex ratio in 2011. In these two districts - Panchkula and Faridabad, the growth of sex ratio are increasing at a rapid rate from 823 (2001) to 873 (2011) & 826 (2001) to 873 (2011) respectively. Mahendragarh is the only district where the sex ratio falls from 918 in 2001 to 895 in 2011 but still higher in comparison to another territory. Now in consideration of literacy rate, districts like Gurgaon, Panchkula, Ambala, Faridabad, Jhajjar, Rewari, and Rohtak are having higher literate in 2001 remains the highest literacy rate in 2011. Exorbitant sex ratio states like Mewat, Fatehabad, and Sirsa having the least literacy ratio in both the census of 2001 and 2011. The Spatio-temporal pattern can actually crystal the comparison of sex ratio and literacy rate.

## 6. Results and Discussion

Present paper study over the tendency of change comes in the sex ratio and the literacy rate. With the duration of time, many districts improve and move to the moderate or higher sex ratio zone aside from there are some districts remain in the same lower category.

### 6.1 Spatial-Temporal Method

For the spatial analysis, the sex ratio of the Haryana region divided into four segments: (i) L-L Zone (ii) L-M Zone (iii) L-H Zone (iv) M-H Zone (v) H-H Zone. Here, L defines lower, M states moderate, H denotes higher.

- **L-L Zone:** Lower sex ratio found a contiguous zone includes Gurgaon, Jhajjar, Rohtak, Sonipat, and Panipat indicates the least sex ratio due to the growth of prenatal diagnostics and also the patriarchal system is vigorous. But due to higher technology, the highest literacy rate found in this region.
- **L-M Zone:** Due to reducing in the patriarchal system, many districts like Jind, Hissar, Faridabad, and Panchkula proclaim creeping growth in terms of sex ratio. But the literacy level remains high due to adopting technology.
- **L-H Zone:** Kaithal is the only district that comes under this section as the mindset of the people changed totally by abolishing the discrimination against the girl child. From the perspective of literacy rate, there is lower stagnant growth.
- **M-H Zone:** There are some districts like Palwal, Ambala, Yamunanagar, Karnal, and Kurukshetra where traditional thinking related to birth and education of a girl eradicated such that the trend of sex ratio and literacy level going through the roof.
- **H-H Zone:** Mewat, Fatehabad, Sirsa, Bhiwani, Rewari and Mahendargarh is known for the highest sex ratio. The actual cause is of the community are highly matured along with no discrimination against girl child takes place. Furthermore, people are less concerned with

scanning technology. There is the least literacy rate due to the less accessible of modern educational institutions except for Rewari and Mahendragarh.

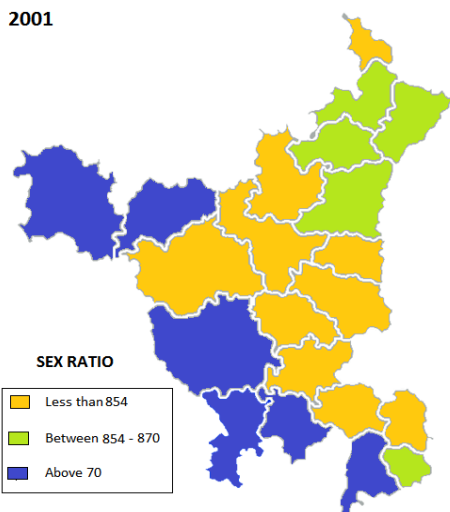


Figure 1

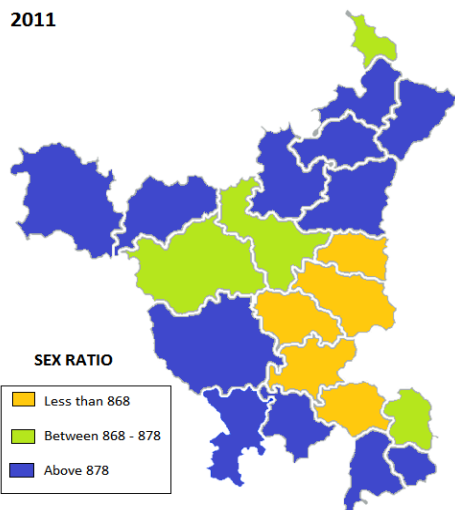


Figure 2

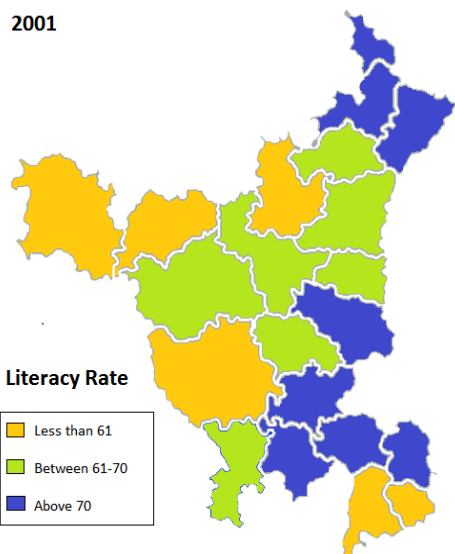


Figure 3

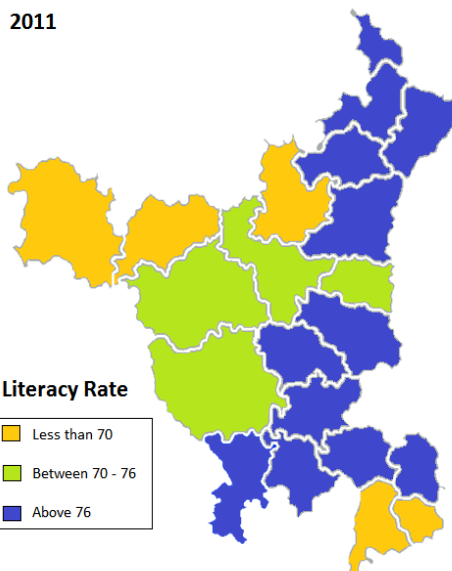


Figure 4

Source:

<https://www.mapsofindia.com/maps/haryana/haryana.htm> and edited by x86 Microsoft Paint.

In light of the above figures, it is crystal clear that regions having the lowest literacy level incurred the highest sex ratio in Mewat, Fatehabad, Palwal, Sirsa, and Kaithal. Whereas, least sex ratio districts found the highest literacy rate likely in Gurgaon, Sonipat, Jhajjar, and Rohtak.

These figures also reveal something new that districts like Kurukshetra and Karnal show some extraordinary efforts in both the aspects of sex ratio and literacy rate resulting that it moves to the blue section. In terms of sex ratio, Kaithal is the only remarkable district which augments from the green to the blue sector. Other than this, there is a little increment of sex ratio in territories like Hissar, Jind, Ambala, Mahendragarh, and Bhiwani.

**Correlation between Literacy Rate and Sex Ratio**

Correlation (r) is a bivariate analysis for measuring the degree of relationship between the two variables. Firstly, the correlation concept propounded by the French astronomer Bravais. After that, the correlation assessment method through the coefficient of correlation given by Karl Pearson in 1890.

Correlations			
		Sex Ratio	Average Literacy
Sex Ratio	Pearson Correlation	1	-.689**
	Sig. (2-tailed)		.001
	N	21	21
Average Literacy	Pearson Correlation	-.689**	1
	Sig. (2-tailed)	.001	
	N	21	21

Table: 2.0\*

\*\* Correlation is significant at the 0.01 level (2-tailed).

\*Source: Calculation with the help of SPSS 22 by the author

Table 2.0 concludes that the correlation ( $r$ ) is  $-0.689$  represents a moderate negative correlation between the sex ratio and average literacy level of Haryana. According to census 2011, there are numerous areas like Sonapat having a higher literacy rate of 79.12% hold the least sex ratio of 856. Sirsa possessing the highest sex ratio of 897 with the lowest literacy rate of 60.60% indicates an inverse relationship between the sex ratio and literacy rate. The  $p$ -value from the above data is .001 defines one in thousand probability of finding the result and is very rare to have occurred and cannot presume about null to be true. So, the null safely is rejected concerning the significance level to be 5% in general cases.

## 7. Conclusion

The present study traced out the brief analysis of sex ratio and a literacy rate of census 2001 & 2011. Many districts like Gurgaon, Jhajjar, and Sonapat lie in NCR region such that there is development in infrastructure and information technology which cause higher literacy level. But the misdeed use of development destroys humanity as such the purpose of prenatal diagnosis is using for the preparation of the well set up surrounding for the baby. Yet, the people use for checking the gender for killing the baby girl child in developed districts leading remain into the lower sex ratio zone. But technology and infrastructure are less developed in backward regions like Mewat, Fatehabad, and Sirsa due to which there is lowering literacy level but fall into the category of highest sex ratio zone. The main reason is of developed technological areas more emphasized over formal education only in addition to, the less developed areas focus on the morally based knowledge requires for surviving in the society as well as it makes an actual difference between Mewat and Gurgaon. From this, we conclude that the government needs a focus on morally based education in developed regions and investing in the educational and modern recreational facilities for uplifting the backward sections.

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## Author Profile



**Ashish Demla**, District – Kaithal, Bachelor in Arts, S.D. College, Panjab University, Chandigarh (160030)