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# Correlation between sex –ratio and literacy rate of the urban centers in district Pilibhit

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Received: 04.11.2018; Revised: 09.11.2018.. Accepted: 29.11.18

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**Abstract:** Literacy and sex ratio is an important element of cultural and biological composition of population. Generally literacy is defined as the ability to read and write. Sex ratio is defined as the number of females per thousand males. It depends on rate of birth, death and migration. The sex ratio is found less due to negligence of girl child, early marriage, preference for male child etc.,. Sex ratio in our country since long period had remained unfavorable to females. The main objectives of the present paper are to study the correlation between the literacy and sex ratio of urban centers in District Pilibhit. The present work is based on secondary sources of data and collected from census of India 2011. The two variables i.e. literacy and sex ratio of urban centers in District Pilibhit has been taken into consideration for the study. The data is processed and calculated correlation between literacy and sex ratio by using Spearman's rank correlation method.

**Keywords:** Correlation, Sex-Ratio, Literacy, Pilibhit, Urban Centers

## Introduction

Literacy and Sex Ratio are two important demographic characteristics of population. Literacy involves in cultural composition and sex ratio is discussed under biological composition (Ghosh, 1985.). Literacy means the ability to read and write with certain understanding. The United Nations Educational, Scientific and Cultural Organization (UNESCO) defines literacy as the "ability to identify, understand, interpret, create, communicate and compute, using printed and written materials associated with varying contexts.

Sex ratio means the ratio between males and females in the total population. It is defined as the number of females per thousand males in a population. It affects on labour supply, age of marriage, population growth, status of women etc. It is an important attribute of demography and is influenced by birth, death and migration.

## Objectives

- (i) To study the change of literacy rate and sex ratio in the study area.
- (ii) To examine correlation between literacy and sex ratio in the study area.

## Methodology

The study is based on secondary data regarding literacy rate and sex ratio of town areas of district Pilibhit which obtained by census of India 1991-2011. The methodology adopted to achieve the aim is Spearman's correlation relationship between literacy rate and sex ratio.





The district Pilibhit is the north-eastern part of Rohilkhand division which is situated in the sub Himalayan belt on the boundary of Nepal. It lies between the parallels of 28°6' and 28°53' north latitude and the meridians of 79°57' and 80°27' east longitude. On the north are the district Udham Singh Nagar and the territory of Nepal, on the south lies the Shahjahanpur district, on the east the district is flanked for a short distance by district Kheri and for the remaining distance by the Shahjahanpur district and on the west the district of Bareilly. The District Pilibhit had an area of 3,504 sq km. According to the 2011 census Pilibhit district has a population of 2,037,225. and sex ratio of 889 females for every 1000 males, with literacy rate of 63.58%.

**Table no.1 Town wise Literacy Rate District Pilibhit 1991-2011**

Town	2011	2001	1991
Puranpur (NPP)	69.64	62.6	52.91
Kalinagar (NP)	53.64	42.06	26.95
Bilsanda (NP)	70.3	62.44	58.1
Bisalpur (NPP)	61.64	55.88	49.92
Barkhera (NP)	63.52	49.75	37.48
Barha (CT)	70.18	-	-
Pakriya Naugwan Mustqil (CT)	55.43	-	-
Pilibhit (NPP)	72.72	68.61	57.41
Jahanabad (NP)	51.69	44.39	25.32
Nyoria Husainpur (NP)	36.08	33.95	20.74
Gulariya Bhindara (NP)	66.99	68.83	60.14

**Change of sex ratio:** Sex ratio means number of females population per thousand of male population. sex ratio is one of the important indicator of socio economic development. In 2011, District Pilibhit(urban) has sex ratio of 897 females per 1000 males. but town wise sex ratio varies from town to town. According to 1991 the highest sex ratio recorded in Jahanabad 901 and lowest sex ratio is found in Gulriya Bhindara 700. The highest sex ratio is found in Nyoria Husainpur 934 and lowest is found in Barkhera 856 in 2011. The study (1991-2011) reveals that the sex ratio of urban centers in Pilibhit district is increased except Jahanabad town.

**Table no.2 Town wise Sex Ratio of District Pilibhit 1991-2011**

Town	2011	2001	1991
Puranpur (NPP)	912	910	880
Kalinagar (NP)	892	891	885
Bilsanda (NP)	883	882	856
Bisalpur (NPP)	893	868	853
Barkhera (NP)	856	841	823
Barha (CT)	926	-	-
Pakriya Naugwan Mustqil (CT)	902	-	-
Pilibhit (NPP)	892	886	879
Jahanabad (NP)	888	906	901
Nyoria Husainpur (NP)	934	921	895
Gulariya Bhindara (NP)	911	807	700

**Correlation Analysis:** The correlation is a statistical tool which studies the relationship between the two variables in (Table-3). In the present study, Spearman's Rank correlation method is used to measure the relationship between literacy rate and sex ratio.



**Table no.3 Correlation between Sex Ratio and Literacy**

	<b>L R</b>	<b>Rank</b>	<b>Sex Ratio</b>	<b>Rank</b>	<b>D=X-Y</b>	<b>D<sup>2</sup></b>
Puranpur (NPP)	70	4	912	3	1	1
Kalinagar (NP)	54	9	892	7.5	1.5	2.25
Bilsanda (NP)	70	2	883	9	-7	49
Bisalpur (NPP)	62	7	892	6	1	1
Barkhera (NP)	64	6	856	10	-4	16
Barha (CT)	70	3	926	2	1	1
Pakriya Naugwan Mustqil (CT)	55	8	902	5	3	9
Pilibhit (NPP)	73	1	892	7.5	-6.5	42.25
Jahanabad (NP)	52	10	888	8	2	4
Nyoria Husainpur (NP)	36	11	934	1	10	100
Gulariya Bhindara (NP)	67	5	911	4	1	1
						226.5

$r = -0.02$

The study reveals that there is negative correlation (-0.02) between literacy and sex ratio. This means that both the variables – literacy and sex ratio are independent of each other. Sex ratio and literacy rate have moved opposite direction in town areas of district Pilibhit.

**Major findings are:**

- Literacy rate is lower than national average (84.98)
- Sex ratio of pilibhit town is lower than national average (929/1000).
- Sex ratio and literacy rate have negative correlation between each other ( $r=-0.02$ )

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