



Relationship Between Educational Attainment and Indicators of Social Development in Punjab

KEYWORDS

Literacy rate, IMR, Birth Rate, Death Rate, Gender Ratio, Population Growth

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ABSTRACT Education is considered to be an engine of growth of a nation. It is the medium for bringing the needed changes in any society. Educated People are the wealth of any nation. Physical capital of a nation is of use only in the presence of human capital. On the basis of empirical evidences of association between education and socio-economic development, this paper theorizes that education is instrumental in the socio-economic development. Specifically, this paper examines the relationship between of educational attainment and gender ratio, gender ratio (0-6), population growth rate, birth rate, death rate, child/infant mortality rate in the state. The analysis is based upon data on entire state on above listed variables gathered from the secondary sources. Data have been analyzed by employing Pearson Correlation method.

The results show that literacy rate is positively associated with gender ratio, is negatively related with Birth rate, death rate, population growth rate, IMR and gender ratio (0-6). Expect gender ratio (0-6), association of literacy rate with other variables show a positive impact on social development of state.

Introduction

Education is taken as an engine for bringing about necessary changes in any society. Even the poorest countries have been realizing the need to make impressive investments in education over the last several decades. Educated People contribute in the economic growth of any country. Now, expenditure on education is taken as an investment¹ in mankind² and called 'Human Wealth' & 'Human Capital'. The physical capital of any economy is of no use if there is lack of human capital. Without trained and skilled workers, most sophisticated technology or machinery will be of no use. Education and development of a country depends on each other. Without the other one cannot exist (Natarajan 1990, Vaizey 1962). Socio-economic development of the state is closely integrated with education. The UNDP's Human Development Report (1990) says, "the real wealth of a nation is its people. And the purpose of development is to create an enabling environment for people to enjoy long, healthy and creative lives. This simple but powerful truth is too often forgotten in the pursuit of material and financial wealth³".

It is prime mover of growth and development of an economy and is widely described as an agent of economic and social transformation. Both, the economists and the educationists have shown interests to study the relationship between economic development and education. It has been observed that, by and large, developed countries perform better on educational indicators and also enjoy better social status.

Objectives

Major objective of this paper is to examine the relationship of educational attainment in term of literacy and various indicators of social development in Punjab. The specific objectives of this study are listed as below:

1. To examine the association of literacy rate with gender ratio ;
2. To analyze the relationship between education in terms of literacy and the population growth rate;
3. To study the relationship between literacy and child/

infant mortality rate;

4. To explore the relationship between literacy and birth rate and
5. To explore the relationship between literacy and death rate;

Data Base and Methodology

The Sample and Period of the Study

To fulfill the objectives of this study, we required information of the entire state on various variables such as literacy rate, gender ratio, gender ratio (0-6), population growth rate, birth rate, death rate, infant mortality etc. Data on these variables are collected from the secondary sources. We have collect data from 1971 onward.

Data Collection

Data on above listed variables have been collected from secondary sources such as Statistical Abstract of Punjab, Census of India, NSSO, etc.

Data Analysis

To explore the relationships between literacy and various components of social developments, data have been analysed by employing Pearson Correlation.

Variables

Literacy Rate: Literacy is taken as an indicator of the level of educational awakening in a state. Literacy rate of population is defined as the percentage of literates to the total population aged 7 years and above. Literacy rate of Punjab was 34.12 in 1971 and rose to 75.8 in 2011.

Gender Ratio: Gender ratio has been defined as the number of females per 1000 males. Gender ration in Punjab has increased during the period of four decades from 865 in 1971 to 895 in 2011.

Gender Ratio (0-6): Gender-ratio (0-6 years) has been defined as the number of females in age group 0-6 years per 1000 males in the same age-group in the population. It is the matter of serious concern that gender ratio in 0-6 year's age-group has decreased from 901 in 1971 to 846

in 2011. The reason thereof may be the socio-economic and cultural facets of the society. Male child is preferred to female child in Punjab. Although, government has banned sex determination tests but such tests available at affordable prices in Punjab.

Further; in Indian culture, more preference is given to boys over girls. Sons are preferred to girls; as they are supposed to support their parents, when they are aged. The prevalence of dowry and harassment causes neglect of female infants and condition is very pitiable in poor families.

Population Growth Rate: Population growth rate is the rate of increase in population. Population growth rate in Punjab has decreased significantly from 21.70 in 1971 to 13.89 in 2011. Although, it increased in 1981 but again it fell down.

Birth Rate: birth rate is the number of live births per 1,000 people per year. There is a phenomenal fall (50 percent) in birth rate from 1971 to 2011.

Death Rate: Crude death rate is the total number of deaths per year per 1,000 people. Death rate also reveals a falling trend. It was 10.6 in 1971 and in 2011 it fell down to 6.8 percent.

Infant Mortality Rate (IMR): IMR shows the number of children dying, before celebrating their first birthday, per thousand live births. Many researchers have taken this variable to show the social outcome of education (Appiah and McMahan 2002, Brar 2002). It is quite satisfactory that there is a fall of above 69 percent in IMR over the period of 40 years. (Data on all the variables are given in Table 1)

Table 1
Birth Rate, Death Rate and Infant Mortality Rate

Years	Lit-eracy Rate	Gen-der Ratio	Gen-der Ratio (0-6)	Popu-lation growth rate	Birth Rate	Death Rate	IMR
1971	34.12	865	901	21.70	32	10.6	97
1981	43.37	879	908	23.89	30.3	9.4	81
1991	58.51	882	875	20.81	27.7	7.8	53
2001	69.95	876	798	20.10	21.2	7	51
2011	75.8	895	846	13.89	16.2	6.8	30

Source: Statistical Abstracts of Punjab.

Findings

We have computed Pearson correlation to estimate the direction and extent of correlation between education in terms of literacy rate with various components of social development. The results are contained in Table 2. The results are discussed as below.

Table 2
Correlations Results

	Lit-eracy	Gen-der Ratio	Gen-der Ratio (0-6)	Pop. growth rate	Birth Rate	Death Rate	IMR
Pearson Correlation	1	.774	-.829	-.777	-.951*	-.988**	-.976**
Sig. (2-tailed)		.125	.082	.122	.013	.002	.004
N	5	5	5	5	5	5	5

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

* . Correlation is significant at the 0.05 level (2-tailed).

Literacy and Gender ratio: Literacy rate is positively associated with gender ratio. The results show a strong positive relation between two meaning thereby gender ratio has increased with increase in educational attainment.

Literacy and Gender ratio (0-6): The results show an unfavorable situation. There is a negative relation between literacy and gender ratio (0-6). It means that high literacy rates go with low gender ratio (0-6) and vice versa. This fact is validated by the fertility data of Census 2001, which reveals that the more educated the mother; the more the chances that she will go for female feticide. In Punjab, the girl-boy ratio is 845:1000 in case of illiterate mothers and 745:1000 when the mothers are literate (Jerath 2005).

Literacy and Population Growth Rate: Although, The population terms of absolute numbers may tend to increase during last 40 years but the rate of population growth has slowed down with educational progress. The results of our correlation analysis show a strong adverse relationship of population growth rate and literacy rate.

Literacy and Birth Rate: Literacy is negatively and significantly associated with birth rate. The extent of correlation of literacy and birth rate is $-.951^*$ which is significant at 0.05 level of significance.

Literacy and Death Rate: Statistically significant negative relation is revealed between literacy rate and death rate. Results show a strong negative correlation, which means that higher literacy rate goes with lower death rate.

Literacy and Infant Mortality Rate: The extents of correlation of Literacy and Infant Mortality Rate are statistically significant at lower level of significance. Educational growth improves health, increases longevity, reduce infant mortality. These shows with education, people become of the various health programmes of the State (e.g. National Immunization Programme) and hence, are expected to act positively to do away with various causes of infant mortality.

Summary of Findings and Conclusions

The main findings of this paper can be summarized as below:

- Literacy rate has found to be positively associated (.774) with gender ratio. Meaning thereby gender ratio has increased with increase in educational attainment.
- There is a negative relation (-.829) between literacy and gender ratio (0-6). It means that high literacy rates go with low gender ratio (0-6) and vice versa. This fact is validated by the fertility data of Census 2001, which reveals that the more educated the mother; the more the chances that she will go for female feticide.
- The rate of population growth has slowed down with educational progress. The results of our correlation analysis show a strong adverse relationship (-.777) of population growth rate and literacy rate.
- Literacy is negatively and significantly associated with birth rate. The extent of correlation of literacy and birth rate is (-.951*) which is significant at 0.05 level of significance.
- Statistically significant negative relation (-.988**) is revealed between literacy rate and death rate. Results show a strong negative correlation, which means that higher literacy rate goes with lower death rate.

- As expected, the extents of correlation of literacy and infant mortality rate are statistically significant (-.976**) at lower level of significance (0.01). Educational growth improves health, increases longevity, reduce infant mortality.

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