

**GENDER DISCRIMINATION IN EDUCATION:  
A CASE STUDY OF KAPURTHALA DISTRICT IN PUNJAB**

*A Dissertation Submitted to University of Hyderabad in partial fulfillment of the  
Requirements for the Award of the Degree of*

**MASTER OF PHILOSOPHY  
IN  
ECONOMICS  
BY  
KULDEEP SINGH NAGI**



**SCHOOL OF ECONOMICS  
UNIVERSITY OF HYDERABAD  
HYDERABAD-500046, INDIA**

**School of Economics  
University of Hyderabad  
Hyderabad - 500046**



### **DECLARATION**

I hereby declare that the research work embodied in this thesis entitled “**Gender Discrimination in Education: A Case Study of Kapurthala District in Punjab**” carried out by me under the supervision of **Dr. G. Sridevi**, School of Economics, University of Hyderabad, is an original research work and this had not been submitted for any degree either in part or in full to any other university.

**Place:** Hyderabad

**Date:**

Signature of the Candidate

**(KULDEEP SINGH NAGI)**

**Regd. No : 15SEHL15**

**School of Economics  
University of Hyderabad  
Hyderabad - 500046**



## **CERTIFICATE**

This is to certify that the dissertation entitled “**Gender Discrimination in Education: A Case Study of Kapurthala District in Punjab**” was carried out by Mr **KULDEEP SINGH NAGI**, under my supervision and guidance in partial fulfillment of the requirements for the degree of Master of Philosophy in Economics of the University of Hyderabad and further that no part thereof has been submitted before for any other degree here or elsewhere.

DEAN  
Sridevi)  
School of Economics  
Supervisor

(Dr. G.  
Research

Place: Hyderabad

Date:

## ***Acknowledgement***

*I like to convey my heartfelt regard to one and all those who help and guide me in completion of the dissertation. I was extremely fortunate to have mentor and supervisor as Dr. G. Sridevi. She devoted her valuable time and experience to support me at various stages of my dissertation. Let me take some opportunity to thanks my adorable guide.*

*I like express deepest gratitude towards Prof. Bandi Kamaiah, Dean, School of Economics and entire teaching fraternity of school of economics for their precious support and advices.*

*I would like to thank non-teaching staff of school of Economics for their help and cooperation in official paper work. My profound gratitude is to all staffs of IGML to help me out in finding relevant research material.*

*My sincere gratitude to my friends Harshil Sharma, Shahnawaz Alis Shan , Aswani Mallick, Neeharika Joshi, Mousami and Mrityunjay Pandey to helping me in data entry and editing.*

*I would like to thank all my friends and class mates to make my campus stay most adorable period of my life. Last but not least I would like to thank all comrades for being with me and transforming my entire prospect towards society. My Special thanks to Deepak anna and my roommate Panakaj for being with me whenever I feel down.*

*I am solely responsible for any errors and omission in dissertation, no one other than me should be blamed.*

By  
***Kuldeep Singh Nagi***

## List of Table

Name of the table	Page No.
Table 3.1.A: Sex-wise Literacy Rate in Punjab as per the census year 1961 – 2011	28
Table 3.1.B: Rural-Urban Literacy Rates for the census year 1961-2011	29
Table 3.2.A: States and Union Territories Ranked by Literacy Rate – India 2011	30
Table 3.2.B: Total Literacy and Female Literacy by Districts of Punjab, 2011	31
Table No. 3.3.A: Age group/class-wise Gross Enrolment Ratio in India	33
Table No. 3.4.A: Gender Parity Index, Punjab	35
Table 3.5.A: Net Enrolment Ratio: 2005-06 to 2008-09	36
Table No. 3.5.B: School Drop-out Rate in Punjab	37
Table 4.1: Detail of the data collected	40
Table 4.2.A: Mean expenditure on education with respect to gender.	47
Table 4.2.B: Expenditure on private tuition with respect to gender.	48
Table 4.2.C: Mean expenditure on stationeries with respect to gender.	48
Table 4.2.D: Mean expenditures towards school fees with respect to gender	48
Table 4.3.A: How much spent on private tuition with respect to types of school	49
Table 4.3.B How much spent on books, uniform and transportation with respect to type of school	49
Table 4.3.C: How much payed towards school fees with respect to type of school	50
Table 4.4.A: Assumption of OLS	51
Table 4.4.B: Newest autocorrelation test at lag(0)	51
Table 4.4.C: Newest autocorrelation test at lag(1)	51
Table 4.4.D: Newest autocorrelation test at lag(2)	52
Table 4.4.E: Regression analyses	52

## List of Figures

Name of the Figures	Page No.
Figure 1.2.A: Relationship between education and income in the human capital framework	5
Figure 1.2.B: Education as a critical factor in the basic needs framework.	6
Figure 1.2.C: Inter-relationship between education poverty and income poverty.	8
Figure 1.2.D: Education Deprivation at household level	9
Figure 1.2.E: Education deprivation at the societal level	10
Figure 3.1.A: Sex-wise Literacy Rate in Punjab as per the census year 1961 –2011	28
Figure 3.4.A: Gender Parity Index, Punjab	35
Figure 3.5.A: Net Enrolment Ratio: 2005-06 to 2008-09	36
Figure 3.5.B: School Drop-out Rate in Punjab	38
Figure 4.1.A: Percentage of total expenditure with respect to types of school	41
Figure 4.1.B: Percentage of expenditure on school fees with respect to types of school	41
Figure 4.1.C: Percentage of expenditure on private tuition with respect to types of school	42
Figure 4.1.D: Percentage of expenditure on books, uniform, transportation with respect to types of school	42
Figure 4.1.E: Percentage of total expenditure on With respect to gender	43
Figure 4.1.F: Percentage of expenditure on School fees with respect to gender	43
Figure 4.1.G: Percentage of expenditure on private tuition with respect to gender	44
Figure 4.1.H: Percentage of expenditure on books, uniform, transportation with respect to gender	44
Figure 4.1.J: Time spent on homework with respect to mid-day meal	45
Figure 4.1.K: Time spent on private tuition with respect to mid-day meal	46
Figure 4.1.L: Number of days absent from school with respect to mid-day meal	47
Figure 4.4.A: In sample performance	54

## Contents

CHAPTER-I .....	9
Introduction .....	9
1.1 Introduction .....	9
1.2 Theoretical Approaches.....	10
1.2.1 The Human capital approach.....	10
1.2.2 The basic needs approach.....	11
1.2.3 Education poverty and income poverty.....	13
1.3 Broad Objectives .....	19
1.4 Statement of the problem.....	19
1.5 Objective of the Study .....	20
1.6 Research Structure.....	20
1.7 Research Methodology.....	21
1.8 Chapter Scheme.....	23
1.9 Limitations of the Study .....	23
CHAPTER-II.....	24
Literature Review .....	24
2.1 Gender and Education .....	24
2.2 Poverty and Education.....	26
2.3 Education and Economic Growth.....	27
2.4 Education –Invest in Human Resource .....	28
2.5 Discrimination against women .....	29
2.6 Reasons behind Gender Discrimination & Way Forward .....	31
CHAPTER-III .....	33
Introduction .....	33
3.1 Sex-wise literacy rate in rural and urban of the Punjab.....	33
3.3 Class-wise Enrolment Ratio at National level and Punjab level .....	38
3.4 Level of Disparity in education in Punjab .....	40
3.5. Net enrolment rate and Drop-out rate in Punjab as well as in India.....	42
CHAPTER-IV .....	46
Introduction: .....	46
4.1 Graphical analysis on various groups.....	47

4.2 Classification of average expenditure on the basis of gender: .....	53
4.3 Hypothesis Testing (ANOVA) : .....	55
4.4. Assumptions Of Classical Linear Regression Model (CLRM) : .....	57
Conclusion:.....	60
CHAPTER-V.....	69
Conclusion.....	69
5.1 Suggestions.....	69
5.2 Measure Finding.....	72

## **CHAPTER-I**

### **Introduction**

#### **1.1 Introduction**

A country, developed or developing, primarily counts upon education as a primary indicator as well as base of economic and social growth (UNDP, 2015). This is the reason that it has become an area intense debate and discussion among policy makers. A country like India that has borne the brunt of colonial rule was left free by the British with the dismal literacy rate of around 12 percent (wikipedia). The biggest irony of this country was that the literacy rate among the women was worse than their male counterparts and this huge gap built another block of their social exclusion and it also reinforced the historical trends of discrimination against women. All these trends constitute the other social evils and discriminatory practices against women. As per a study, around 12 millions girls have been aborted in recent three decades. Education always has a significant contribution in development of the nation. It is not only one of the indicators but also a road to the well-being of whole society in general and its members into. It is well accepted that educational achievement of women have the ripple effect on the well-being of the society in general and family in particular and create generational path dependency and resulted in the structural break of the vicious cycle of poverty. More attention on girls education brings the unimaginative results as it leads to gender parity in the as women headed household or where women are bread earner for the family tend to distribute resource among members on equal footing, and it also cause late marriage of girls that saves her from the health

hazard risk of early pregnancy and other health issues during immature pregnancy. A study which was conducted by UNESCO in 2000 reveals that an educated woman has on an average 2.5 children whereas women who are not educated tend to have on an average 6 children. There have been many pieces of evidence about the literate women more aware and conscious of the health issues of them as well as their family. Education makes aware girls about their rights and builds their confidence to access a different kind of institutions. Various social researchers have established this fact that parent's educational status has a great effect on their children and mother's status matters more in this regard. Mothers' influence in family negotiations is decisive factors in the distribution process of resources, and high influence secure equal distribution.

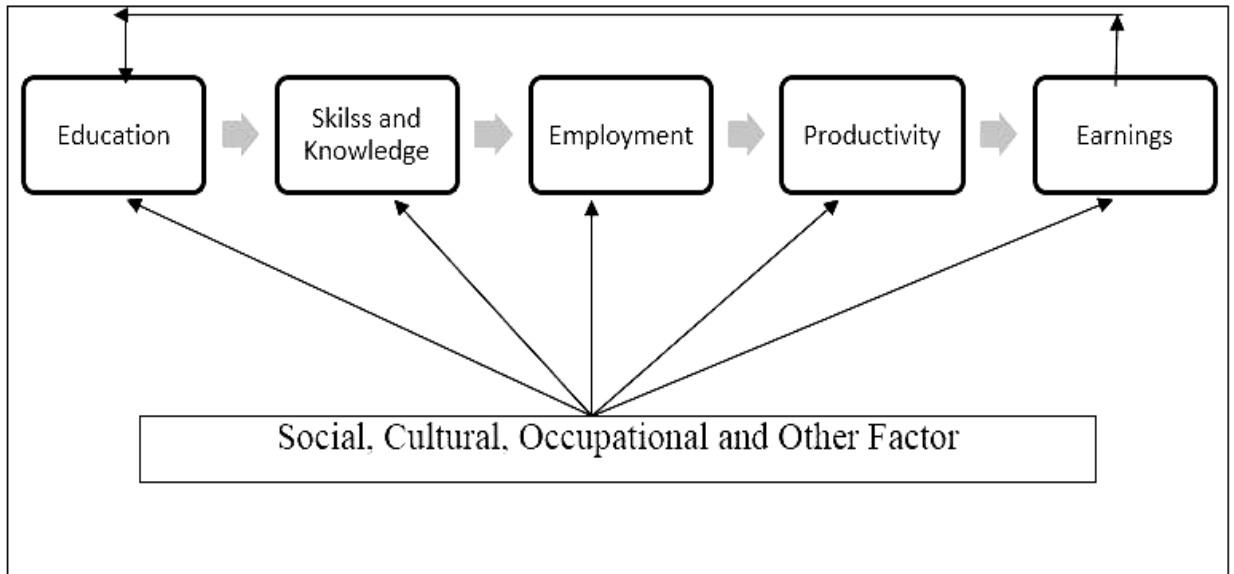
Education is one the prominent indicator of development and for this reason right to education became the one of the main provision of the Universal Declaration on Human Rights. That is why policy makers and planners have started emphasizing the role of education in determining the pace of development. Some measures for reducing poverty which include direct measures such as the right to food, provisions for employment and indirect measures like provisions for free and compulsory elementary education, health and other entitlements which will help the poor to come out from the web of poverty.

## **1.2 Theoretical Approaches**

### **1.2.1 The Human capital approach**

The human capital theory says human capital is formed with the investment in education, and it is significant factor of economic growth. Thus education is considered as an important tool for reducing poverty. The production capacity of the people and their incomes are augmented through the productive skills and knowledge which come from the investment in education. In this way, there is a strong linear relationship between the two variables that are the level of education and the income of people as given in figure 1.

**Figure1.2.A: Relationship between education and income in the human capital framework**



Source: Tilak, 2002

The human capital approach has replicated the relation between education and people's income with the support of rate of returns analysis and production function analysis. The Mincerian Earnings Function or the marginal efficiency of capital's concept can be used to estimate the Rate of returns which shows the relationship between the lifetime benefits of education and the cost of education. Production function analysis can also be understood by examining growth accounting equations, Schultz and Denison.

### **1.2.2 The basic needs approach**

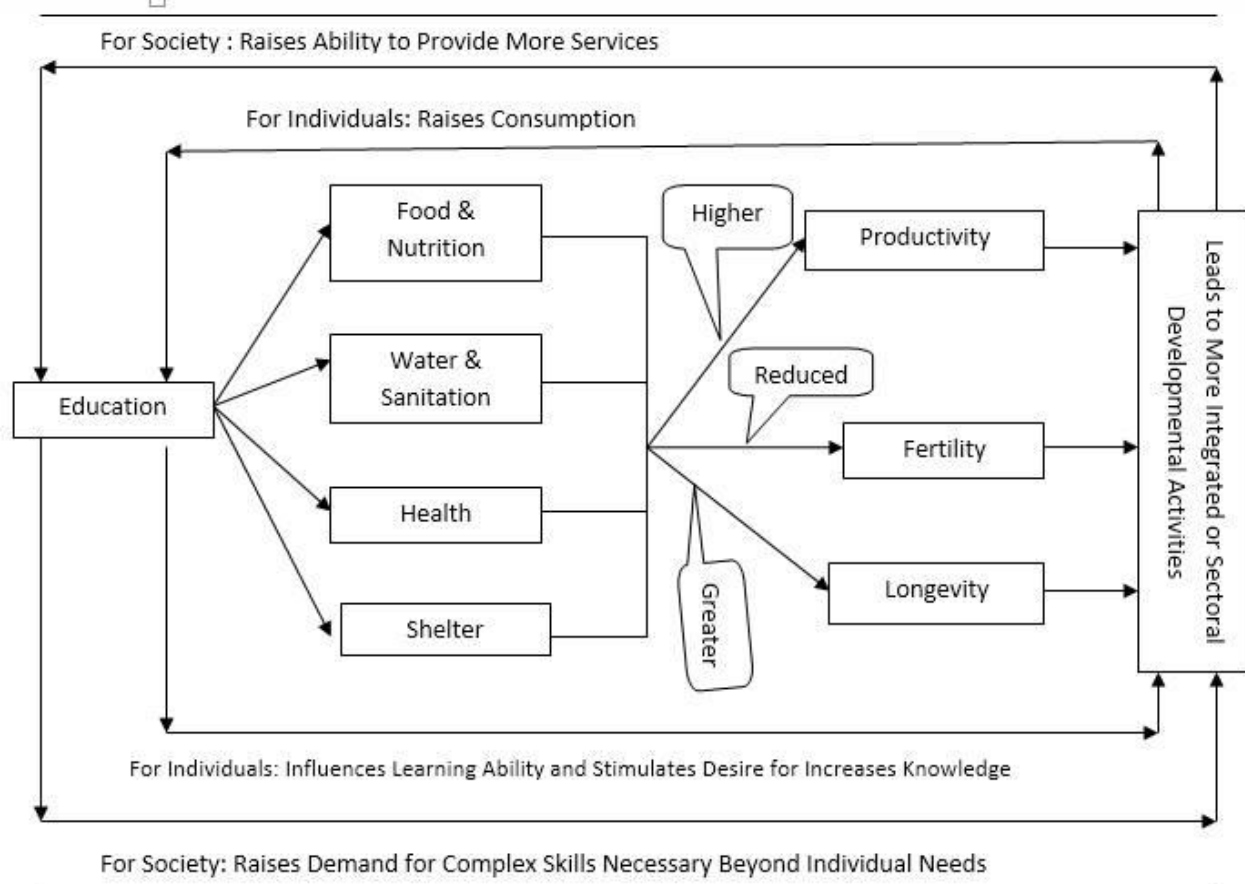
Education has been acknowledged as the basic need by the basic needs approach developed in 1976, which helps to fulfill the other basic needs and is also helpful in upgrading the life standard. The fulfillment of the basic requirements/needs such as

utilization of health facilities in a better way, shelter, water and sanitation and their effect on the behaviour of women in terms decision making on matters related to health, fertility and family welfare etc. have an indirect effect on poverty.

Apart from identifying education as a basic need in it, the basic needs analysis also emphasizes on the instrumental role of education. The international labor office (1977) shows that lack of access to education denies many people the opportunity to participate fully and meaningfully in the social, economic, cultural and political life of the community.

Until the human development approach was developed, the above-mentioned aspects did not attract attention.

**Figure 1.2.B: Education as a critical factor in the basic needs framework.**



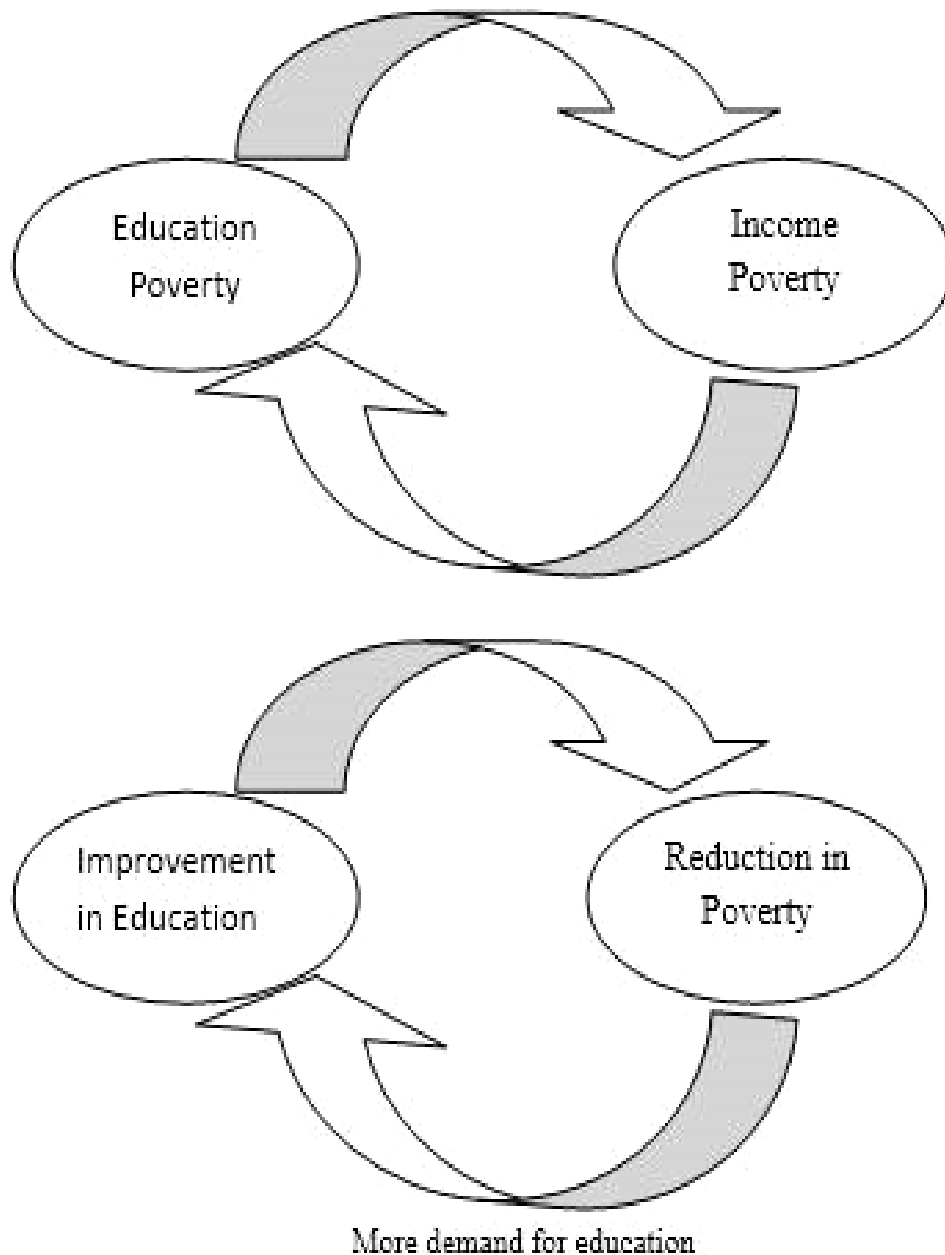
Source: Noor (1980)

The indirect effect of education on poverty through its fulfilment of basic needs such as better utilization of health facilities, shelter, water and sanitation, and its effect on the behaviour of women on decisions relating to fertility, family welfare and health, etc., has been well researched (A.Noor, 1980).As shown in figure 2, by fulfilling basic needs productivity increases, fertility reduces and life span increases. This leads to more integrated or sectoral development.

### **1.2.3 Education poverty and income poverty**

The prime factor responsible for income poverty is “Poverty of Education” and income poverty, in turn, does not allow the people to overcome the poverty of education. It can be interpreted that poverty can be reduced through the improvement of education which, in return, can lead to an increase in education status of the people through an in an increase in demand for education.

**Figure 1.2.C: Inter-relationship between education poverty and income poverty.**

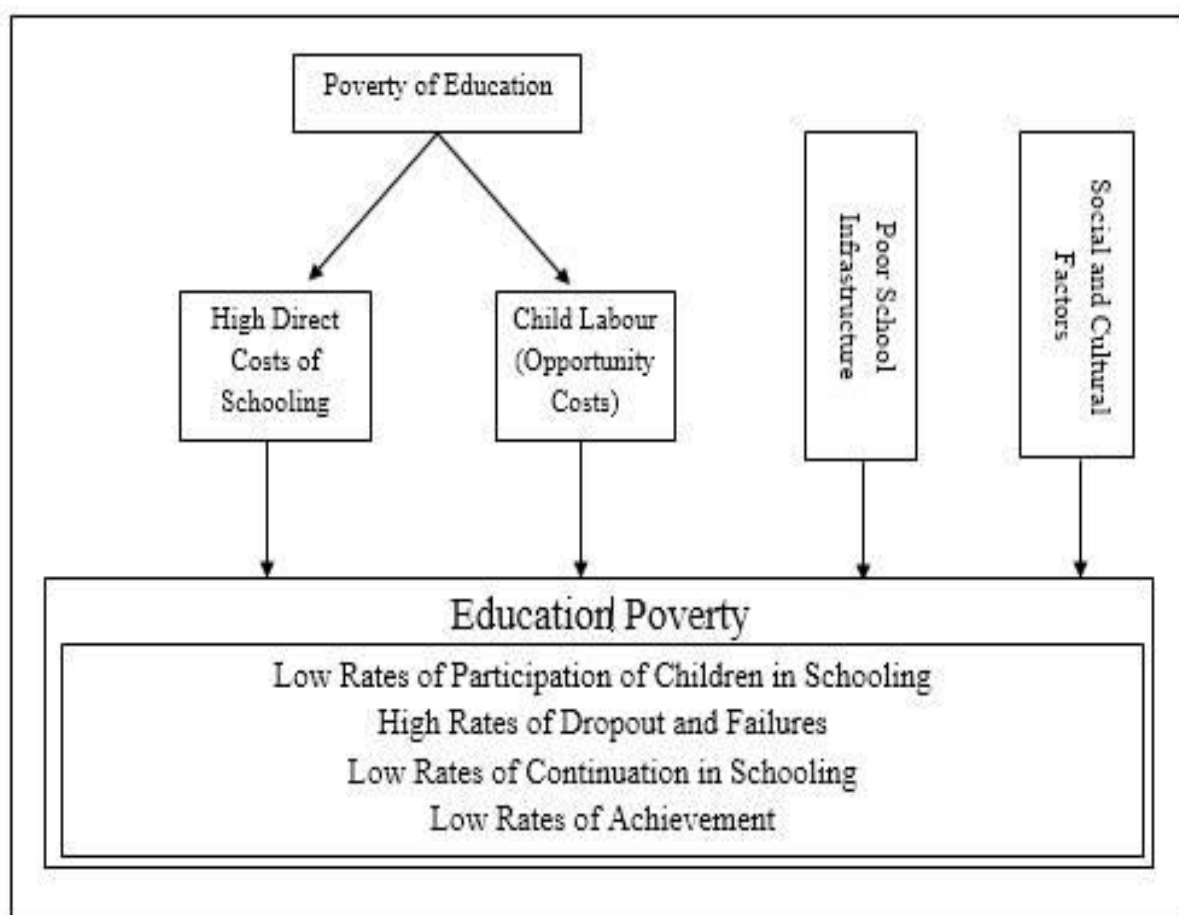


Source: Tilak, 2002

How income poverty has a direct effect on education poverty has been shown in several studies on educational deprivation. In the case of most of the developed countries, primary education is made freely available by the state, but in developing countries due to income poverty, children are forced to be out of school for different reasons. Hence, they are denied of the opportunity to participate in schooling due to

Income poverty, and they are not able to make adequate investments in education due to high direct costs of schooling and the opportunity costs of schooling which is obviously higher for children of poor families than for the rich. There are only fewer children belonging to poor families who go to schools, and even those who go to school are forced to leave before completion of primary education.

**Figure 1.2.D: Education Deprivation at household level**



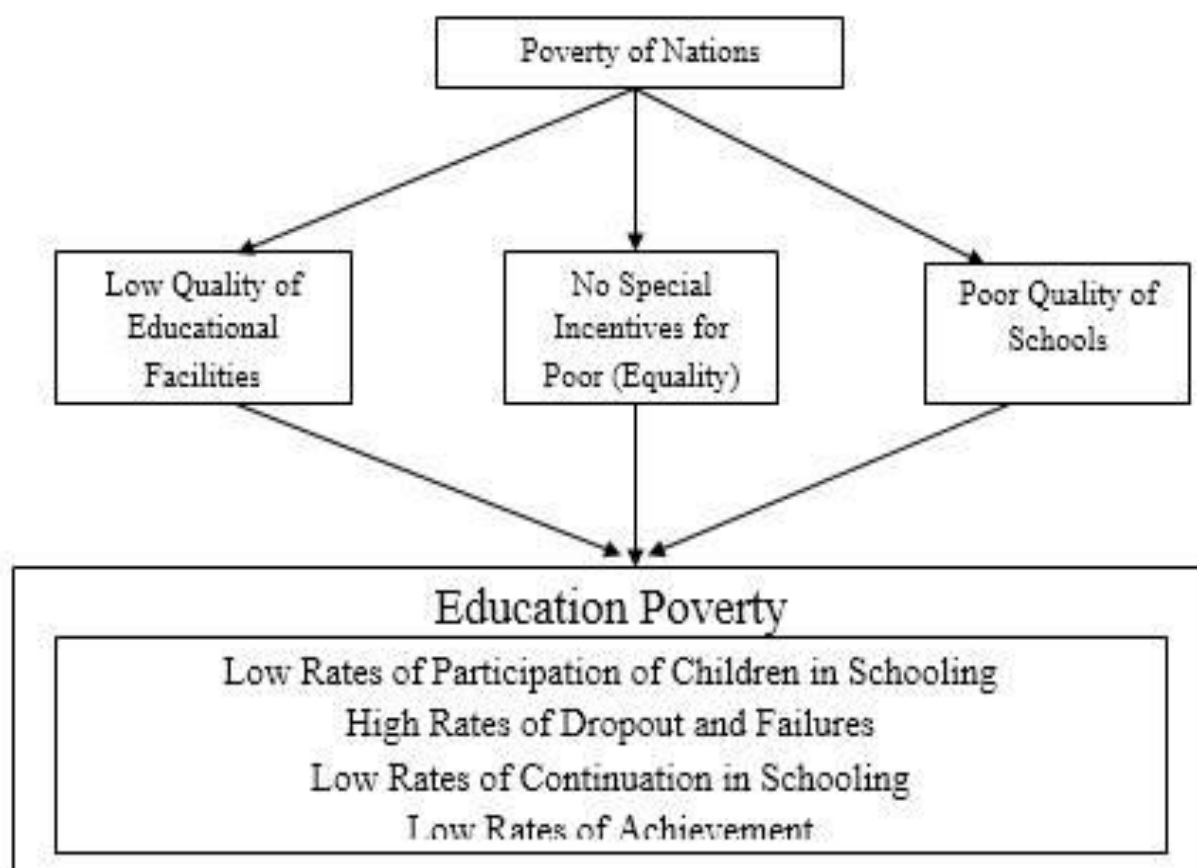
Source: Tilak, 2002

The opportunity cost of schooling of children, economical barriers to pay the costs relating to schooling, low level of earning of the poor families is found to be an important set of factors which cause non-participation or low participation of children in schooling. Other important factors are the poor quality of school infrastructure, insufficient strength of teachers, small numbers of schools, the huge distance from home to school and lack of a conducive learning environment in schools constitute

the second set of factors. Social, cultural and other factors are also important, but may not be as important as mentioned above two which are presented in Figure.1.4.A

This is true for households in general and nations as a whole that economically backward states are not able to provide enough schools, quality education with sufficient number of qualified and trained teachers and other infrastructural facility for all children and to make any other special arrangements for the poor section of the society.

**Figure 1.2.E: Education deprivation at the societal level**



Source: Tilak, 2002

In short, the poverty of income of the country adversely affects the quantity, quality and equality dimensions of education.

Gender equality in a society means that a society in where both men and women can enjoy the same opportunities, outcomes, rights and obligations in all spheres of life. The empowerment of women is a critical way of promoting gender equality. Another way to maintain gender equality is to give more autonomy to women in managing their own lives by identifying and rectifying the power imbalances. Although both women and men have much common interest, their life style and the availability of choices may be widely different.

The sex ratio in India at the time of independence was almost normal but after that, it started declining at the fast pace. States which are showing decreasing trends in the population of women are Punjab and Haryana, and that is the matter of grave concern. The state Haryana has the lowest rate of sex ratio in India and the figure for this state shows 877 female on 1000 male.

Education is accepted as a significant measure, and one of the most primary way of empowerment of women and knowledge, skills and self-confidence are the necessary component to contribute fully in the development process (Isiugo-Abanihe, 1996).

More than two-third of the world's illiterates are women. In India, the literacy rate among women is 64.64 whereas in men it is around 80.89 (Census, 2011). Education plays a significant role for girls and women as this is an entry point for other opportunities and the women's educational achievements can have ripple effects on the family as well as also on many generations to come. Educated women know the value of health care and how to take care of themselves and their families. Education helps them to recognize their rights and provide them with confidence to claim them. An educated mother can pay more attention to her children. The Indian scenario has provided enough role models that stand out as an icon of gender equality.

In India, children constitute one-third of its total population i.e. around 400 million children. An estimated 11.6 lakhs children die every year during their neonatal period due to lack of immunization (Ministry of Health and Family Welfare, GOI). Of which 62 per cent are India's male children as against 60 per cent of females (MOSPI, 2012). In India, the child sex ratio is at the lowest as there are 914 girl children for every 1000 boy children (Census 2011). India also has one of the highest infanticide

rate in the world with 400000 girls are being killed at the time of birth or inside the womb.

India has 10.12 child labourers aged between 5 to 14 years (National Census 2011). Half of the all working children are girls. Nearly 45 per cent girls in India get married before the age of 18 years (NFHS 2012).

However, the most essential to achieve gender equality is to educate both men and women about the changing roles. Men and Women must be rightly educated to modify the woman's traditional roles so that there could be awareness of women's basic needs for fulfilling the psychological, financial biological needs.

The government of India is giving priority for the education of girls. The Nation's Commitment to providing free and compulsory education to all children in the age group from 6 to 14 is now a fundamental Right of every child in India after the passing of the Constitution's 86th Amendment Act in December 2002.

Reaching out to every girl child is central to all the efforts to universalize elementary education. The Sarva-ShikshaAbiyan or 'Education for All' program recognizes that ensure girl's education requires changes not only in the current education system but also in societal norms and attitudes. A multi-pronged gender policy which has been adopted to make the education system responsive to the needs of the girls through focused interventions which serve as a pull factor to enhance the access and retention of girls in community demand for girls' education through training and mobilization.

Gender is a social term and gender discrimination refers to only women because women are the only victims of gender discrimination. Many components of discrimination such as denial of equality, rights and opportunity and suppression in any form on the basis of sex constitute the gender discrimination. Our female counterparts constitute around 50% of the total population and are engaged in two-third of the total work but received only one-tenth of the world's total income. Around two-third women are illiterate, but they possess just one percent of the total assets. Recognition of women's rights and their ability is essential for their development and empowerment. Today India has become a male dominated society where women head only one-fourth of the total families.

### **1.3 Broad Objectives**

The ultimate aim of this study is to examine various factors which are responsible for the low literacy rate among the girl's children in Kapurthala district of Punjab in previous decades. Our objective is also to study the patterns of drop-out rate in girls children in comparison to boys. We will also examine the nature of discrimination against the girl child and its implications.

### **1.4 Statement of the problem**

Kapurthala district is the smallest district of Punjab in terms of area and population as well. Kapurthala has registered the growth of 8.04 percent in its population from the census of 2001. The sex ratio of district is still dismal as it was 912 female for every 1000 males which is less than that of national sex ratio which stands at 933 females for 1000 males.

Average literacy rate of Kapurthala has performed better as it was 79.90 percent which is around 6 point high than the national literacy rate. Though when we do apply gender approach to look at numbers then we find that literacy rate for women was around 74.63 percent and 83.15 percent for males. However there is slight gap of 8.52 point but still it is better than that of national average for both male and female and gap is also less between two (India, 2011)

Average literacy rate of district in 2011 was 79.07 and 73.90 in 2001. If the situation is looked out in terms gender, then male and female literacy was 83.15 and 74.63 respectively. According to 2001 census these figures of district Kapurthala stood at 79.00 and 68.30. Total number of literate of district Kapurthala was 576,567 out of which 316,254 were male and 260,313 were female. To find out the reasons for this gap in literacy rate, we need to find the factors that have been responsible for gender discrimination. So reasons for this gender gap would be analysed. Factors like income, pupil teacher ratio, an insufficient number of teachers, lack of infrastructure, availability of school,

returns to education, the number of female teachers in school, etc. would be analysed to see that what factors are causing this gender gap in education. We would carry out data analysis to find out various factors that affect the enrolment and drop-out rate so that after carrying out the whole analysis we can understand the reasons for high drop-out rate for female and can also find out the factors to increase the enrolment rate for female.

### **1.5 Objective of the Study**

The broad objectives of the study are:

- To study the gender discrimination in accessing primary education.
- To see the inter-linkages between education and poverty in Kapurthala district of Punjab.

### **1.6 Research Structure**

The literature would be concerned with topics of poverty, income, returns to education, gender discrimination, availability of schools and an insufficient number of teachers and other factors that have caused gender discrimination in education. After reading enough literature, the factors that are to be studied for the research would be jotted down, and data for them would be arranged from authentic sources. The interview would also be conducted with school children, teachers and parents to understand the inner situation in the schools of Punjab (Kapurthala). After this, the methodology to be followed for our analysis would be discussed where the research philosophy, research design, nature, and approach, etc. would be discussed in detail. After getting the hold on data and forming the methodology to be followed, the data would be analysed with the help of statistical softwares and analytical acumen. After analysing the relevant data, the conclusion would be derived which can later help us in giving further recommendations to prospective researchers.

## **1.7 Research Methodology**

This study has adopted the definition of literate based on MHRD. According to MHRD, (education ministry), a person who can read and write in any language is called literate.

A comparative study of Boys and Girls of the different section in selected rural and urban areas is undertaken to highlight economic and social deprivation among various social groups.

Research includes both qualitative as well as quantitative methods. The quantitative method has been used to find the relationship between cause and effect on the other hand; qualitative method has been used to describe the on-going process. Qualitative data as interviewing school children, teachers and sharing their thoughts on the present situation and future prospects of school education has also been included in the study.

Data has been collected from Kapurthala district of Punjab and tried to compare urban and rural areas of this district. Data collected for dissertation was from both primary as well as secondary sources. Interviews schedule was semi-structured in nature, and a questionnaire was also formed for children's perspective which was mostly formed of closed-ended questions to make data analysis more accurate.

Secondary and the primary data source is used, and appropriate statistical tools have been used for data analyses and interpretations. Secondary data is sourced from Census of India (2001, 2011), Director of Education (Punjab), Ministry of Education, Gender Statistics of Punjab (2012). Reports of officials and various other government publications and websites were also used for the study. Studies carried out by individual authors and institutions are also collected from various journals which enabled us to focus on all issues of gender discrimination in education and to get hold of all types of information. The school education and discrimination were also studied by using internet scholarly articles of JSTOR, EPW, and SAGE. Besides this, various books and websites were also used for this purpose.

Structured household survey schedule was also used to collect primary data. The government schools at district level are also selected purposively to collect primary data. Actual sample from the primary and secondary schools is based on random

sampling technique. The details regarding the enrolment, drop-out, and expenditure were accessed from the records of the concerned local body of Kapurthala (Punjab). Kapurthala district is in the northern part of Punjab state which lies in northern part of the Republic of India. Kapurthala district is one of the smallest districts in Punjab concerning both area and population. The district is divided into two non-contiguous parts, the main Kapurthala, Sultanpur, Lodhi portion, and the Phagwara tehsil or block. Samples will be taken from both regions.

The economy of this part is still predominantly agricultural. According to the 2011 census, Kapurthala district has a population of 8,15,168 of which 4,26,311 is male population, and 3,88,857 is female population. The initial data, shows that the density of this district is 499 people per sqm.km for the year 2011, published by Indian census of 2011. Kapurthala district administers 1,633 square kilometers of areas. 34.65 percent of the total Kapurthala population for 2011 census lives in urban regions of district. Total population who lives in urban area of district Kapurthala is 282,462 out of which 150,379 are males and 132,083 are females. Average literacy rate of Kapurthala district as per census of 2011 is 85.03 % of which males and females literacy rates are 88.23 % and 81.38 % respectively. In numbers, 215,791 people are literate in urban region of which males and females are 119,335 and 96,456 respectively.

In contrast literacy rate in rural areas of Kapurthala district is 75.90 % as per census data 2011. Male and female literacy is 80.35 and 71.16 percent respectively. In total, 360,776 people were literate of which males and females were 196,919 and 163,857 respectively.

Average Literacy rate of Punjab for Urban regions was 83.18 percent in which 86.67% males were literate while female literacy stood at 68.29%. In rural areas of Punjab, literacy rate for

Males and female stood at 76.62 % and 58.99 %. Average literacy rate in Punjab for rural areas was 71.42 percent.

## **1.8 Chapter Scheme**

The entire dissertation is presented in five chapters.

The first chapter is the introduction. It gives a brief overview of the issues relating to the gender discrimination in education, Broad objectives, statement of problems, research objectives, and structure of the research, research methodology, data sources and limitations

The second chapter discusses the issues thoughtful review of the literature.

The third chapter analyses the gender discrimination in education prevalent in India.

The fourth chapter deals with access to education and poverty in Kapurthala district

The fifth chapter deals with major findings and policy issues.

## **1.9 Limitations of the Study**

- a) Since the size of our sample is small and it is concentrated to single district which is also a smallest district of Punjab. So we can no generalize the findings to whole state as well as nation.
- b) The sample site was chosen by the researcher himself and convenient sampling method was used to collect the data. Thus there are chances of biasness in research.
- c) The sample was more or less homogenous as sample was taken from one particular location and all the respondents belong to the same socio-cultural background.

## **CHAPTER-II**

### **Literature Review**

Under this section, various studies which have been carried out on the similar lines of this research will be reviewed and tried to be scrutinized and taken insights from. The review will begin with the relation between gender and education and how the gender gap has impacted overall education policies of our economy. The next section of this research would be on understanding the relation between poverty and education and how a person falls in the vicious trap of poverty and is not able to be well educated. The next section would analyze the relation between education and economic growth and lack of human resources. Under this section, it will be explained that how not having enough skilled and educated manpower deters the economic growth and human development in our country. Under the final section, there will be a broad discussion on discrimination against women and how their growth is constrained by the patriarchal thinking of our society.

#### **2.1 Gender and Education**

The studies of S. Korea, China, and India by Balatchandirane show the significance of gender equality and particularly in primary education. Moreover the effects of gender discrimination is long lasting Balatchandirane (2013). Becker's coefficient has shown the discrimination against women in education where he has explained the importance of women education in empowering society. Schultz considered education as an investment good unlike others who used to consider it as consumption goods.

. Education is an investment in human capital that benefits raises these set of skills and productive ideas in people. Balachandirane (2013) have well argued that private rate of returns are concerned with the returns that are linked to the individuals or households with investment in education and social rate of return considered the overall contribution to the society. It has been seen that the social rates of return of the least developed countries are higher compared to the developed countries and as one goes up the educational standard. When these rates decline then the private rates of return are marginalized due to the social rates of return.

On the scale of gender, age cohort and location (rural and urban), the estimates of the returns to education in wage employment in India for the most recent period of 1993/94 and also the evaluation of the changes in returns over a period of time from 1983-94 has been provided by Duraisamy P (2001) using data from a large national level household survey. High unemployment among the educated population is an indicator of the fact that there is a surplus of education in the economy while the productivity of the labour force is low. Hence the profitability of investment in the education in India becomes a big question. P. Duraisamy and M. Duraisamy (1993) used the national level degree holders and technical personnel survey data of 1981 to estimate the returns to higher education and also to specific and technical education. The drawback in these later works is that persons with higher education constitute only a small fraction of the labour force and hence are not representative of the Indian labour market.

Sonal Desai (1994) observed that the problems of women have its roots in the parent's reluctance to educate daughters. Among the several incentives for not educating their daughters, the foremost is the view that education of girls will not bring any returns to parents and that their future roles are mainly domestic that is why they need no formal education.

(Morrison, A., Raju, D., & Sinha, N., 2007) Showed that the women's rights and decision-making power in families have a pivotal role in reducing poverty and improving productivity at per person and family levels. Moreover, they showed that there is a mutual relationship between gender equality, poverty reduction and economic growth at the macro level.

*(Balatchandirane, 2013) argues that gender discrimination in education will slow the rate of economic development but massive gain can accrue to a developing economy by not discriminating girls and women while investing in education. Moreover, more attention should be given to the primary education and special program which are girl centric should be launched which would reduce the gender discrimination in return. Besides it, returns on investment in female literacy are much higher than that of men. Comparison of the younger and older age cohorts (15-29 and 30-44) where the younger receives lower returns to an additional year of education at the primary, middle and secondary level than the latter. In the case of a college degree and technical diploma, wage workers in the 15-29 age groups obtain higher returns compared to the others.(Duraisamy P., 2001) .*

## **2.2 Poverty and Education**

Balatchandirane (2013) puts it that education is an essential input for the reduction in poverty. Literate people have higher income earning potential which make them able to enhance the quality of their lives. People with even basic education are able to utilise many services and never likely to be deprived in the society.

Education is the key ingredient in making people empowered and helping them to become proactive, gaining control over their lives and widening the range of available choices. Enhanced earning ability, socio-political empowerment and strong capability to participate can break the vicious cycle of poverty.

HakanOztunc, Zar Chi Oo, ZehraVildanSerin (2015), showed that poverty could be analyzed through many factors such as distribution of assets and income, per capita income, quality of governance, policies and institutions which are related to education, health and other aspects of human development. The issues faced by the poor while living is different in rural and urban areas. Although the poor living in rural have limited access to education and health care and they are different from their urban counterparts on the ground that the poor people living in urban areas are dependent on cash for survival as they are unable to grow their food, unlike their rural counterpart.

### **2.3 Education and Economic Growth**

A. Ozpolat and Yildirim (2009), through the analysis of the economic dimension of women's education, investigated the relationship between the education of women and economic growth. They expressed that in addition to the fact that the net returns from education and training of women are more than that for men, it has been a positive effect on economic growth in all societies especially in developing nations and that calls for more attention to women's education.

Klasen, (2008) through the analysis of 41-years period (1960-2000) found the impact of gender inequality in education and employment on economic growth of developing nations and it revealed that gender inequality in education and employment could reduce economic growth. The analysis also shows that reducing gender inequality will lead to economic development because the education of women has a significant impact on fertility and the creation of human capital for the next generation.

The impact of education on the growth of income in India for the period 1966-1996 has been examined by Sharmishtha Self and Richard Grabowski, (2003). Education can be categorised into these categories: Primary, Secondary, and Tertiary. Time series techniques have been used to determine whether education, for each category, has a causal impact on growth and education variables are also broken down by gender and analyses is carried out to determine whether the causal results vary by gender or not. From the various studies, the evidence is quite satisfying that it is the female education at all levels, which has a potential for generating further economic growth. Males, on the other hand, appear to have a causal impact on growth only at primary level and perhaps, meagrely, at the secondary level. Hence the facts given are compelling that primary education is the main causal force in the economic growth in India and must be qualified since educational impact is likely to show only after long time lags and they might act as an important variable

## **2.4 Education –Invest in Human Resource**

*To project education (Schultz) as an investment good, and not as the consumption good as had hitherto been held was its pioneering contribution.* Education must be considered as an investment in human capital which increases people skills and their knowledge. Balatchandirane (2013) considered private rate of returns as the returns that are linked to an individual or particular household whereas social rate of returns are considered as overall returns to the societies. It is a well established fact that social rate of returns are lower for the least developed or developing countries compared to developed countries.

D. T. Jamison and L. J. Lau (1982) stated that, apart from monetary returns to education in the form of wages or earnings in the labour market, education confers other benefits also. One such benefit of education is its effect on productivity in the self-employed occupation such as farming, and own-account enterprises. P. Duraisamy showed that farmer's education (4 years and above) has been akin to the increment of the gross value of farm output by 4 percent in India and also found that the educated farmers are more technically and economically efficient than their uneducated counterparts. Schultz T (1988) and McMahon (1995) have explained several non-monetary benefits such as reduced family size, better health status, efficiency in home production, child care, political awareness, etc. Duraisamy and Malathy(1990) report that female adult education significantly helps in the reduction of family size, and adult men and women's education induces the increment factors conducive to better child schooling. Malathy (1994) shows that woman's education has a significant positive effect on time allocation to teaching children. In totality, McMahon (1999) said that education has its effect on poverty and inequality.

P. Duraisamy (2000) states that one of the benefits of education is that it enables one to enter into regular wage work. Returns per year on education increases as the level of education increases up to the secondary school and then declines after that. Return to women's education exceeds that to men's at the middle, secondary and higher high school level.

Hussain and Byerlee(1995) pointed out that returns to schooling in agriculture may be equally high as urban wage earners. M. Lockheed, D. Jamison, and L. Lau (1980) found that education has a positive effect on output, and though results were mixed,

they concluded that there is the significant positive relationship in areas where the farmers are modernizing. Phillips (1994) noticed that the extra four years of schooling brought an average increase in output. Mirotchie(1994) gave out the fact that primary education tends to increase productivity, while the secondary school has no effect and that there is a significant impact on the technical efficiency in the production of cereal crop in Ethiopia using aggregate data for the 1980-86 period.

HakanOztunc, Zar Chi Oo, and ZehraVildanSerin(2015) state that women's education is a major factor to increase female labor force participation, as increasing female schooling will lead to better education among women who can enter the job market, secure professional jobs, and earn higher incomes. He also investigates that fertility rate is the most important factor affecting GDP per capita growth. Birth control is political issues that can be used by the government also to help reduce fertility rates, as a high birth rate could remain a very significant obstacle to economic growth. An increase in the level of women's education can help to reduce child mortality rate and women's fertility rate also, which accelerates expansion in the upbringing of the next generation.

## **2.5 Discrimination against women**

Kumar, M. Siva (2008) explained the gender discrimination and its various forms and factors. He also emphasised upon the importance of women in development process and advocated legal rights for women and solutions for gender discrimination. Women are subject to discrimination from their neo-natal age to old age. These are some sort of discrimination which are more common in day to day life.

- Elimination of girls during at pre-natal stage
- Girl infanticide
- Discrimination in accessing schools
- Discrimination in access to health services.
- Marriage at tender age.
- Social prejudices against girls.

- Evil practices like dowry, domestic violence, unreal stereotypes and divorce

Reasons of gender favouritism are:

- low literacy in women
- Caste and social hierarchy
- Traditions, values, mores and norms
- Races
- Low income, etc.

Of college, and inadequate delivery system, which is an absence of necessary physical facilities. Other factors are qualitative and are rooted in socio-cultural context. Sometimes it is hard to separate qualitative factors from quantitative factors because separate college for women are considered desirable because prolonged interaction with men (students and teachers) is not socially. Siva Kumar has argued that gender discrimination problems can be solved by the E4SD (Education, Employment, Empowerment, Economic Independence, Self-confidence, and Decision Making) factors. He said that a nation could not achieve development without the participation of women. If we eliminate gender discrimination then women will deliver all the potentials, skills and knowledge to develop the family, the nation and the world.

Julie Mullin (2008) indicated that the developing world is full of poverty stricken families who see their daughters as an economic predicament. That attitude has resulted in the widespread neglect of baby girls in Africa, Asia, and South America. In many communities, it is a regular practice to breastfeed girls for a shorter time than boys so that women can try to get pregnant again with a baby soon as possible. As a result, girls miss out on life-giving nutrition during a crucial time of their development which stunts their growth and weakens their resistance to disease.

KalyaniMenonSen and A.K. Shiva Kumar (2001) found that there are many ways in terms of which a girl child is discriminated in India like short span of breastfeeding, less attention towards girl's nurturing, less care or medical treatment during sickness, unavailability nutritious food and lack parental attention towards the girl child which

make them more prone to infections and diseases that leads to ill health and high mortality rate among them than their male counterpart. This discrimination is inter-generational and culprit of infanticide and feticide it might seem silent but more vocal than killings.

Planning Commission of India (2008) indicates that discrimination against female and girls starts down from the right to health and assert itself in poor health and nutrition indices. Still, India continues to struggle with critically high MMR, IMR and high rates of anaemia, mal-nutrition and HIV/AIDS cases among women.

## **2.6 Reasons behind Gender Discrimination & Way Forward**

Anna-Maria Lind (2006) found that a major chunk of India's population lives traditional life in rural society where traditions and religious laws dominate the lives of its people and it is more for women. Sometimes women have access to Right to possess property but these social and religious customs make them deprived of their right for the sake of family peace. The importance of son in family is in all the societies and this preference for having boy child makes girls second class members in their own families.

Berta Esteve-Volart (2004) considered the gender discrimination against women in the marketplace decrease the availability of work-force in labour economy and it keeps with it many negative economic outcomes. Gender discrimination occurs in various ways. Many traditions and norms which are quite normal in religious or cultural perspectives have caused women out of the economic mainstream. The exclusion of women from various spheres due to several social evils has a significant effects on economy as it prohibits women to unleash their innate talent.

Chanana (2000) goes far from women in higher education and raises several questions such as

- What are the consequences after their entry in to higher education
- How are their prospects of sustenance and progression
- How they make disciplinary choices and what are their trends of choices

## Barriers to access

Factors that inhibit female access to higher education are quantitative like non-availability desirable.

There are many other problems such as out-dated Curriculum ( introduction of subjects and disciplines in the educational institutions based on the premise that only men will be the students), physical facilities, gender-stereotyping in sports facilities (Girls students are not allowed to or discouraged from playing cricket or other sports) and career option. It creates several problems such as lack of adequate facilities for women students, like toilets, no extra room for girls, hostels, non-availability of scholarships and disciplines of their choice, absence of female teachers or separate schools and college for women, the lack of counselling for students and career options etc.

There are two sets of socio-cultural factors which are at the micro level as well as at macro level.

Macro level dimension relates to caste, tribe, class and regional variations indicated earlier. The micro level further divided into institutional and societal factors. Institutional factors like gender stereotyping in course content and subject choices, the discriminatory attitude of teachers and administration, the absence of role models for career option and academic leadership at the college and university etc. Societal factors are the lack of economic resources in the family, the choice between dowry and educational expenses, education being perceived as consumption and being irrelevant for production and the absence of role models at home etc.

## **CHAPTER-III**

### **Introduction**

Productive human labourer plays a measure role in development of a nation. Education plays significant role in developing human capital. It has impact of different aspects of life. That determines path dependency and prospects of development of society. There are various factors which inhibit the children in general and girl child in particular to participate in school education. In this chapter, We explained various factors which explain major role in determination of favouritism in favor of boys at school level. Moreover we have also compared these trends with other states' as well as national level. We have also discussed the policy and measures to get rid of these discriminatory trends and overall improvement of literacy rate and their drawbacks.

#### **3.1 Sex-wise literacy rate in rural and urban of the Punjab**

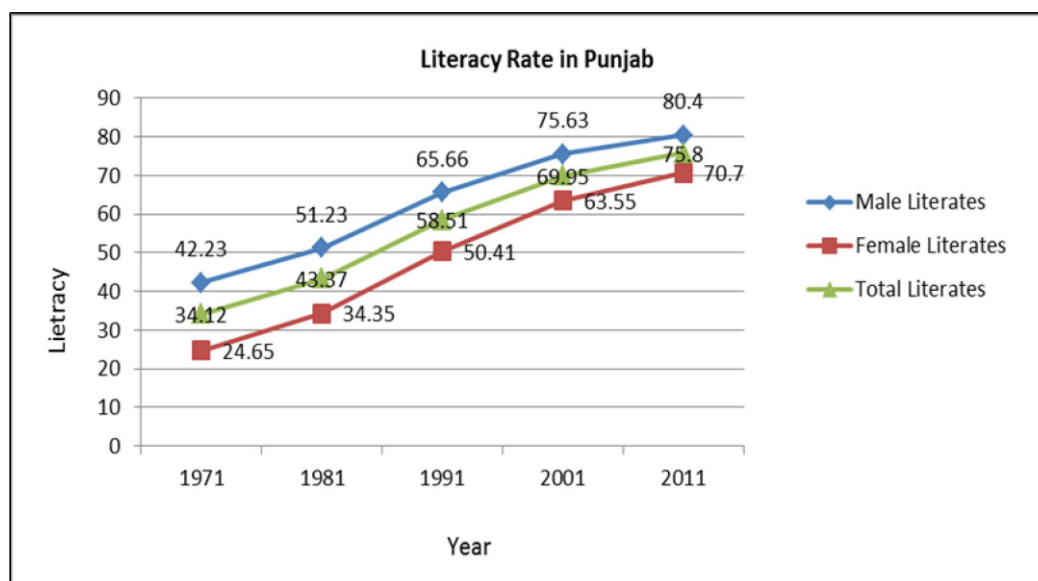
Anyone who can read or write any language with understanding is termed as literate. Literacy is termed as one of most acceptable variable to measure development of individual and as well as a nation. It helps in personal development of a person and improves its productivity.

**Table 3.1.A: Sex-wise Literacy Rate in Punjab as per the census year 1961 – 2011**

Year	Total Population	Literates			Literacy Rate		
		Male	Female	Total	Male	Female	Total
1961	11135069	2084556	892588	2977144	NA	NA	NA
1971	13551060	2934281	1627842	4562123	42.23	24.65	34.12
1981	16788915	4214878	2645471	6860349	51.23	34.35	43.37
1991	20281969	5919225	4012891	9932116	65.66	50.41	58.51
2001	24358999	8442493	6314677	14757170	75.63	63.55	69.95
2011	27743338	10436056	8271081	18707137	80.44	70.73	75.84

\*Source: Director, Census Operations, Punjab

**Figure 3.1.A: Sex-wise Literacy Rate in Punjab as per the census year 1961 –2011**



Punjab’s literacy rate shows secular increasing trend from last few decades. It was 34.12 percent in 1971, but it has established the increasing tendency since that time as it was recorded 43.37 percent in 1981 while 58.51 percent in 1991 and finally it touched to 69.95 percent in 2001 with a tremendous increase of 11.44 percent points. It did not stop here and recorded an increase of 5.89 percent in the previous decade as the literacy rate which was recorded as 69.95 jumped to the 75.8 percent in 2011. Punjab did phenomenal in reducing gender disparity in literacy rate. It was around

17.54 percent point in 197. Which came down to 16.88 in 1981, 15.25 during the census of 1991 and in 2001 it touched the number 12.08 as percentage point gap. This gulf was further bridged with the census of 2011 when the percentage number came down to all-time low of 9.7 percent. The literacy rate for has gone up from 80.44 percent 75.63 percent in 2001 to 80.44 percent in 2011. The literacy rate for the female was registered in 2001 was 63.55 which went up in 2011 and it was recorded as 70.73. Female literacy rate has seen an increase of 13.14 percent points and for male literacy rate; it was only 9.97 per cent points for both 2001 and 2011. Male literacy increased by 4.81 percent, while female literacy improves 7.18 percent in last ten year. Punjab's female literacy rate is 74.04 percent; this is significantly higher than India's aggregate.

**Table 3.1.B: Rural-Urban Literacy Rates for the census year 1961-2011**

Year	Rural			Urban		
	<i>Male</i>	<i>Female</i>	<i>Total</i>	<i>Male</i>	<i>Female</i>	<i>Total</i>
1961	28.12	11.51	20.42	56.09	37.7	47.82
1971	34.69	19.88	27.81	58.6	45.4	52.49
1981	41.91	27.63	35.21	60.7	49.7	55.63
1991	60.71	43.85	52.77	77.3	66.1	72.08
2001	71.05	57.75	64.72	83.05	74.49	79.1
2011	76.6	65.7	71.4	86.7	79.2	83.2

\*Source: Director, Census Operations, Punjab

According to the Census data of 2011, the literacy rate of rural Punjab is 71.40 where it was around 83.20 percent of urban Punjab which signifies that the gap between two is not long. There has been trends reduction in the rural-urban literacy gap as it was around 13.97 which by an extent have come down to 11.76 percent point in 2011.

Along with positive trends, there are around 94.35 lakh which also includes 0-6 population that come in category of illiterate in Punjab (india, 2011). It becomes a paradox and also an irony that Punjab is having progressive literacy rate but it ranks itself lower than other states and union territories as it was placed at 16<sup>th</sup> in 2001

which later went down to 21<sup>st</sup> in 2011. Currently, Kerala tops the list with wonderful performance of 93.91 percent while Bihar is at the bottom.

### 3.2.State-wise literacy rate and literacy rate for all districts of the Punjab

**Table 3.2.A: States and Union Territories Ranked by Literacy Rate – India 2011**

S.No	India/State/Union Territory*	Litracy Rate
1	Kerala	93.91
2	Lakshadweep*	92.28
3	Mizoram	91.58
4	Tripura	87.75
5	Goa	87.4
6	Daman & Diu*	87.07
7	Puducherry*	86.55
8	Chandigarh*	86.43
9	NCT of Delhi*	86.34
10	Andaman & Nicobar Islands*	86.27
11	Himachal Pradesh	83.78
12	Maharashtra	82.91
13	Sikkim	82.2
14	Tamil Nadu	80.33
15	Nagaland	80.11
16	Manipur	79.85
17	Uttrakhand	79.63
18	Gujarat	79.31
19	Dadra & Nagar Haveli*	77.65
20	West Bengal	77.08
<b>21</b>	<b>Punjab</b>	<b>76.68</b>
22	Haryana	76.64
23	Karnataka	75.6
24	Meghalaya	75.48
25	Orissa	73.45
26	Assam	73.18

27	Chhattisgarh	71.04
28	Madhya Pradesh	70.63
29	Uttar Pradesh	69.72
30	Jammu & Kashmir	68.74
31	Andhra Pradesh	67.66
32	Jharkhand	67.63
33	Rajasthan	67.06
34	Arunachal Pradesh	66.95
35	Bihar	63.82

Source: Census of India, 2011

Note: The literacy rate pertains to ratio of total literates to whole population except age group of 0-6.

Moreover, district-wise trends present glaring disparity in literacy rates of Punjab.

**Table 3.2.B: Total Literacy and Female Literacy by Districts of Punjab, 2011**

District	Literacy rate	Male	Female
Total	76.68%	81.48%	71.34%
Gurdaspur	81.06%	85.88%	75.73%
<b>Kapurthala</b>	<b>80.18%</b>	<b>84.59%</b>	<b>75.36%</b>
Jalandhar	82.40%	86.15%	78.31%
Hoshiarpur	85.43%	89.95%	80.78%
ShahidBhagat Singh Nagar	80.33%	86.16%	74.28%
Fatehgarh Sahib	80.33%	84.53%	75.53%
Ludhiana	82.54%	86.35%	78.16%
Moga	71.59%	75.34%	67.41%
Firozpur	69.85%	76.70%	62.24%
Muktsar	66.79%	72.91%	60.03%
Faridkot	70.65%	75.86%	64.82%
Bathinda	69.57%	75.33%	62.92%
Mansa	62.78%	68.43%	56.41%
Patiala	76.26%	81.45%	70.47%

Amritsar	77.20%	81.17%	72.75%
Tarn Taran	69.43%	75.38%	62.88%
Rupnagar	83.28%	88.90%	77.17%
SahibzadaAjit Singh Nagar	84.87%	89.17%	80.01%
Sangrur	68.88%	74.24%	62.86%
Barnala	68.90%	73.09%	64.14%

\*Source: Director, Census Operations, Punjab

Table 3.4 showcases that Hoshiarpur district which is having highest literacy rate among all the districts has progressive literacy rate which stand at 80.43%, after that comes SahibzadaAjit Singh Nagar with the literacy rate of 84.87%. Moreover, there are 3 more districts which are having literacy rate of more than 80%. Such districts are Jalandhar, Ludhiana and Gurdaspur. We can say that literacy rate in these districts are satisfactory as these districts having high level of literacy rate compare to national average. But, still few are lacking behind, their literacy rate is significantly lower than national average such as Muktsar, Mansa and Bamala. Literacy rate of Doaba region are better than rest of Punjab and situation of Dalit women are worst.

### **3.3 Class-wise Enrolment Ratio at National level and Punjab level**

Enrolment ratio of Punjab shows secular decreasing trend with respect to age groups of children. It is 108.8 for age group of 6 to 10, 94 for 11 to 13 and 65.2 for 14 to 15. Enrolment ratio for boys is 109.1, 95.8 for the age group of 6 to 10 and 11 to 13. For the girls it is 108.3, 91.7 for respective age groups

**Table No. 3.3.A: Age group/class-wise Gross Enrolment Ratio in India**

SN	State/UTs	Classes I - V (6-10 Years)			Classes VI - VIII (11-13 Years)			Classes IX - X (14-15 Years)		
		Boys	Girls	Total	Boys	Girls	Total	Boys	Girls	Total
1	Andhra Pradesh	99.7	99.4	99.5	80.3	79.9	80.1	67.1	67.3	67.2
2	Arunachal Pradesh	184.5	176.9	180.8	108.5	102.6	105.5	73.3	67.9	70.6
3	Assam	93.1	95.6	94.3	67.2	68.7	67.9	52	46.9	49.5
4	Bihar	131.3	123.6	127.7	68.4	60.4	64.6	46.3	37	41.8
5	Chhattisgarh	125.6	120	122.8	90.2	84.7	87.5	63.6	58.9	61.3
6	Goa	106.9	101.5	104.3	99.2	92.2	95.8	67.8	64.7	66.3
7	Gujarat	119.4	121.4	120.3	79.5	81.5	85.7	71.3	56.5	64.3
8	Haryana	90.6	100.2	94.9	82.3	84.8	83.5	60.8	71.4	65.7
9	Himachal Pradesh	109.1	109.4	109.2	116	111.4	113.8	102.4	101	101.7
10	Jammu & Kashmir	108.3	111.7	109.9	96.6	92.6	94.7	66.8	63.2	65.1
11	Jharkhand	145.9	148.5	147.1	81.7	81	81.3	47.4	43.1	45.3
12	Karnataka	105.2	104.1	104.7	92.2	89.1	90.7	74	72.5	73.3
13	Kerala	91.4	91.5	91.4	106.5	101.3	103.9	101.6	99.7	100.6
14	Madhya Pradesh	131.2	139.7	135.2	100.2	102.6	101.4	80.4	52.8	67
15	Maharashtra	105.5	103.7	104.7	95.1	89.6	92.4	76	71.2	73.7
16	Manipur	195.7	188.4	192.1	108.5	100.8	104.6	83.5	80.1	81.8
17	Meghalaya	193.7	196.3	195	95.9	96.2	91	49	49.9	49.5
18	Mizoram	191.7	180	186	108.2	101.3	104.8	75.4	78.3	76.8
19	Nagaland	103.7	102.8	103.3	59.4	60.7	60	27.4	29.5	28.4
20	Orissa	118.7	120.1	119.4	83.3	80.7	82	60.7	56.8	58.8
<b>21</b>	<b>Punjab</b>	<b>109.1</b>	<b>108.3</b>	<b>108.8</b>	<b>95.8</b>	<b>91.7</b>	<b>94</b>	<b>64.8</b>	<b>65.8</b>	<b>65.2</b>
22	Rajasthan	110.3	109.5	109.9	91	73	82.4	72.4	50.1	61.8
23	Sikkim	164.4	158.7	161.6	71.2	86.6	78.8	44.9	50.3	47.6

24	Tamil Nadu	111	112.6	111.8	103	111.5	112.3	84.4	83.3	82.3
25	Tripura	134.9	133.3	134.1	92.2	91.5	91.9	73	73.3	73.1
26	Uttar Pradesh	123.8	130.4	126.9	84.1	75.5	79.9	75	60.4	68.1
27	Uttrakhand	107.9	110.2	109	102.6	109.2	105.8	89	84.8	87
28	West Bengal	91.5	93.9	92.7	84.6	88	81.3	58.3	59.7	59
29	A & N Islands	87.5	84.9	96.2	89.4	86.4	87.9	84.7	79.7	82.2
30	Chandigarh	78.6	78.1	78.4	84.5	77.1	81	69.3	57.7	63.5
31	Dadra & Nagar Haveli	104.3	107	105.6	100.7	100.5	100.6	72.1	69.9	71.2
32	Daman & Diu	76.5	82.6	79.3	72.4	81.3	76.4	60.7	65.7	62.9
33	Delhi	126	129.6	127.7	110.9	106.4	108.8	101.9	98.4	100.2
34	Lakshadweep	81.4	80.8	81.1	74	93	83	71	76.1	73.5
35	Pondicherry	104.8	102.3	103.6	106.8	99.7	103.2	98.3	96.5	97.4
<b>India</b>		<b>115.4</b>	<b>116.7</b>	<b>116</b>	<b>87.7</b>	<b>83.1</b>	<b>85.5</b>	<b>69</b>	<b>60.8</b>	<b>65</b>

\*Source: Director, Census Operations, Punjab

Punjab's enrolment ratio is significantly lower than national average in age group of 6 to 10. But, it is above national average in age group of 11 to 13. But, 35% of 14-15 age groups are not enrolled. .

### 3.4 Level of Disparity in education in Punjab

Gender parity index (GPI) is the socioeconomic index which indicates the relative access to education of males and females. It can be calculated as:

$$\text{GPI} = (\text{Net intake rate for boys}) / (\text{Net intake rate for girls})$$

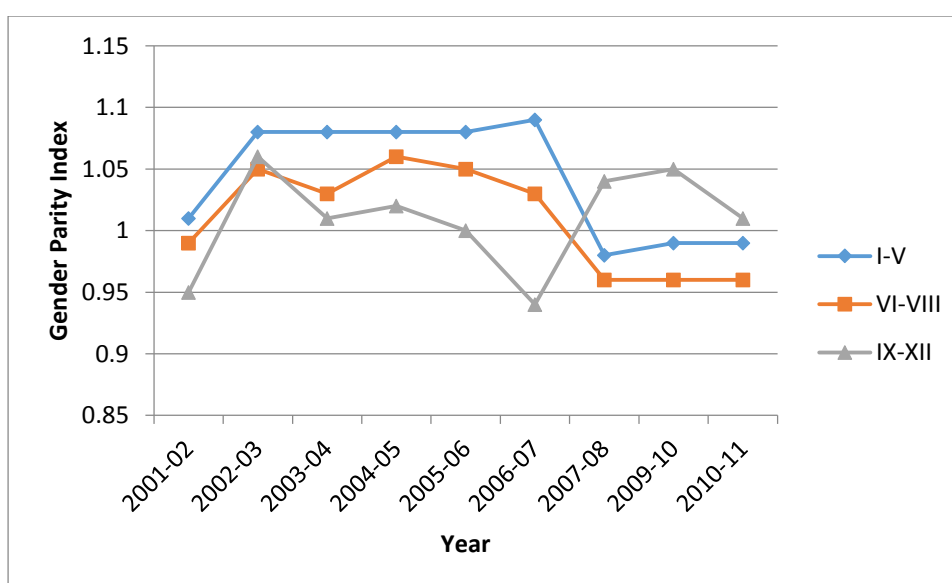
If the value of GPI is less than one, then the difference is in favor of boys.

**Table No. 3.4.A: Gender Parity Index, Punjab**

Years	I-V	VI-VIII	IX-XII
2001-02	1.01	0.99	0.95
2002-03	1.08	1.05	1.06
2003-04	1.08	1.03	1.01
2004-05	1.08	1.06	1.02
2005-06	1.08	1.05	1
2006-07	1.09	1.03	0.94
2007-08	0.98	0.96	1.04
2009-10	0.99	0.96	1.05
2010-11	0.99	0.96	1.01

\*Source: Director, Census Operations, Punjab

**Figure 3.4.A: Gender Parity Index, Punjab**



Now, in above table, we can clearly observe that over the period of time from 2001 to 2010 that disparity in access to primary(I-V) education has increased( although it is insignificant).In the case of secondary education, the difference was in favor of girls education, but one can notice that after 2006-07 disparity has increased( although it is constant after that).Similarly for higher secondary education in 2001-02 gender parity index was in favor of boys but from 2002-03 to 2005 disparity has reduced and in 2006-07 again difference has increased and after that year difference is in favor of girls.

### 3.5. Net enrolment rate and Drop-out rate in Punjab as well as in India

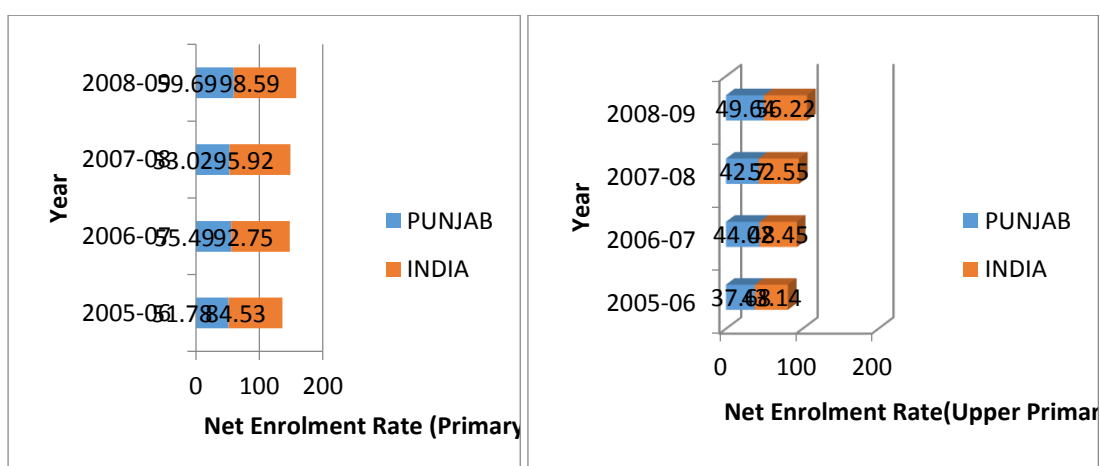
Net enrolment ratio is the ratio of the number of children of the official age of that group who have enrolled and a total population of that official age group that is expressed in percentage.

**Table 3.5.A: Net Enrolment Ratio: 2005-06 to 2008-09**

	<b>PUNJAB</b>	<b>INDIA</b>
<i>Primary</i>		
2005-06	51.78	84.53
2006-07	55.49	92.75
2007-08	53.02	95.92
2008-09	59.69	98.59
<i>Upper Primary</i>		
2005-06	37.68	43.14
2006-07	44.02	48.45
2007-08	42.7	52.55
2008-09	49.64	56.22

\*Source: Director, Census Operations, Punjab

**Figure 3.5.A: Net Enrolment Ratio: 2005-06 to 2008-09**



Now in the above table one can notice that NER was 51.78 percent for Punjab in 2005-06, and 84.53 percent for India and over the period the ratio has increased insignificantly for Punjab(59.69) compare to India(98.59). Which shows that only 59.69 percent of the total population of that particular age group is getting the primary education during 2008-09 in Punjab.

Similarly, The upper primary education ratio has increased in Punjab from 37.68 percent in 2005-06 to 49.64 in 2008-09, but it is less when compared to that of India which is 56.22 percent Which means that still, 50.36 percent of the total population of that particular age group does not have access to upper primary education.

**Table No. 3.5.B: School Drop-out Rate in Punjab**

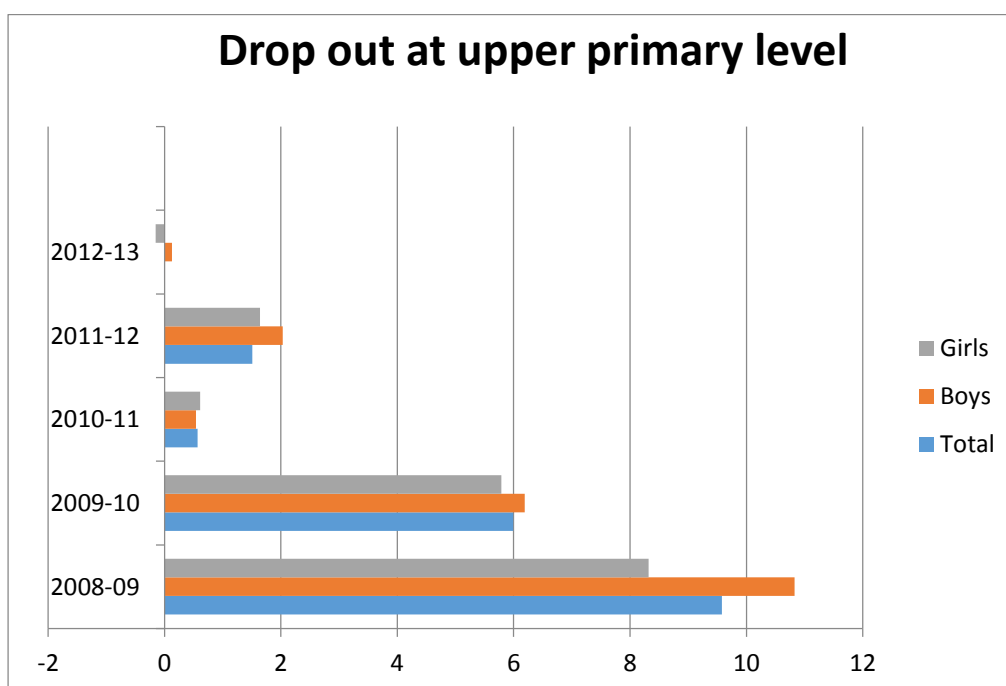
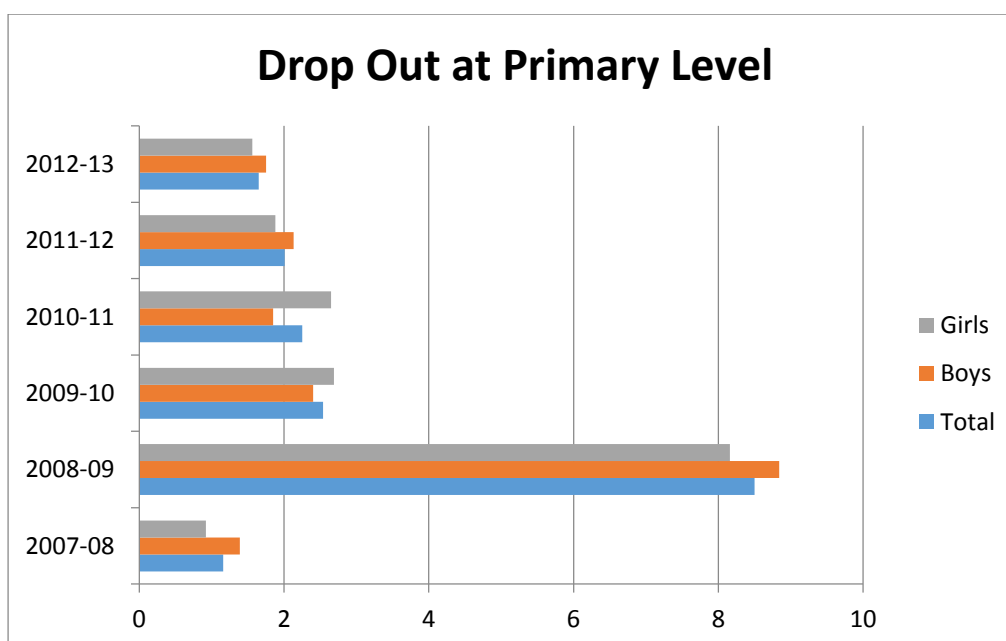
Level	Year	All communities		
		Total	Boys	Girls
Drop out at Primary Level	2007-08	1.16	1.39	0.92
	2008-09	8.5	8.84	8.16
	2009-10	2.54	2.4	2.69
	2010-11	2.25	1.85	2.65
	2011-12	2.01	2.13	1.88
	2012-13	1.65	1.75	1.56
Drop out at upper primary level	2007-08	11.57	12.33	10.8
	2008-09	9.58	10.83	8.32
	2009-10	5.99	6.19	5.79
	2010-11	0.57	0.54	0.61
	2011-12	1.51	2.03	1.64
	2012-13	-0.01	0.13	-0.15

\*Source: Director, Census Operations, Punjab

In above table which shows that the drop-out rate in Punjab from 2007-08 to 2012-13 for primary and upper primary level. It can be seen that drop-out rate has increased

drastically from 1.16 (1.39 for boys and 0.92 for girls) to 8.5 (8.84 for boys and 8.16 for girls) during 2007 to 2000 and after 2008-09, it has fallen significantly, and downward trends can be seen but compare to 2007-08 rate it is still more in 2012-13 for primary level.

**Figure 3.5.B: School Drop-out Rate in Punjab**



Similarly, for upper primary education, the drop-out rate was very high during 2007-08 that is 12.33 for boys and 10.8 for girls, and rate for upper primary education shows downward trend till 2010-11 but in 2011-12 it increases to 2.03 for boys and 1.64 for girls. In 2012-13 we can notice the significant positive change for girls.

## CHAPTER-IV

### Introduction:

This chapter deals with the micro level analyses to see the access to education and the level of gender discrimination. This chapter also deals with the state level policy and their impact on access to education and reducing the gender discrimination. For the micro level study we have selected district Kapurthala, Punjab. The sample size of the data is 99 and Data has been collected from 14 villages of Kapurthala district. Data has been collected from 14 government schools, 10 private schools and 4 government aided schools of this district.

**Table 4.1: Detail of the data collected**

<b>Sample size</b>	<b>99</b>
<b>Number of villages covered</b>	<b>14</b>
<b>Number of private school</b>	<b>10</b>
<b>Number of government school</b>	<b>14</b>
<b>Number of government aided school</b>	<b>4</b>
<b>Number of male child</b>	<b>44</b>
<b>Number of female child</b>	<b>55</b>

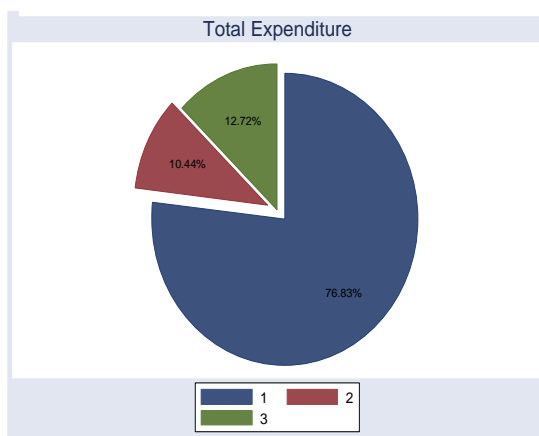
*Source: Computed by the researcher on the basis of field survey data*

The district is divided into two non-contiguous parts, the main Kapurthala, Sultanpur, Lodhi portion, and the Phagwara tehsil or block. The economy of this part is still predominantly agricultural. According to the 2011 census, Kapurthala district has a population of 8,15,168 of which 4,26,311 is male population, and 3,88,857 is female

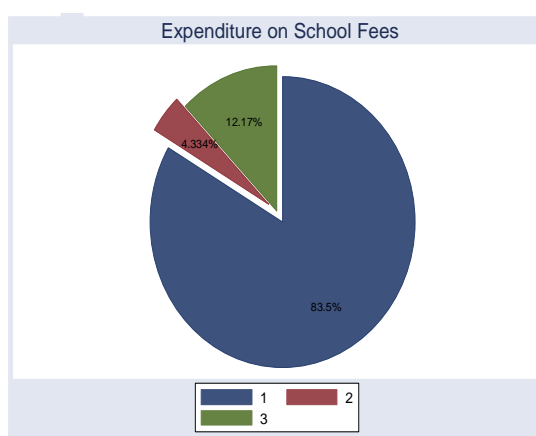
population. Average literacy rate of Kapurthala district as per census of 2011 is 85.03 % of which males and females literacy rates are 88.23 % and 81.38 % respectively. In numbers, 215,791 people are literate in urban region of which males and females are 119,335 and 96,456 respectively.

#### 4.1 Graphical analysis on various groups

**Figure 4.1.A: Percentage of total expenditure with respect to types of school**



**Figure 4.1.B: Percentage of expenditure on school fees with respect to types of school**



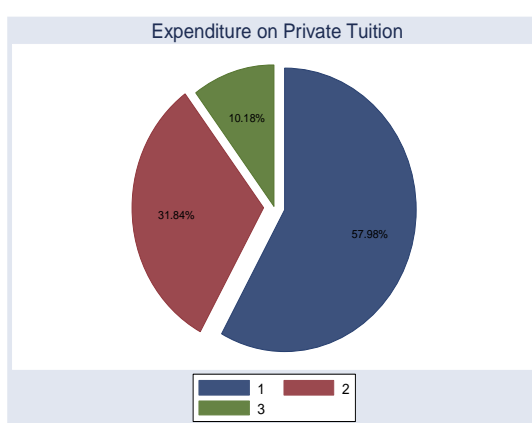
*Source: Computed by the researcher on the basis of field survey data*

Figure 4.1.A shows the total expenditure on education on three different types of schools (where 1 represents private school, 2 represents government schools and 3 represents government aided school). Total expenditure on education is high in case of private schools followed by government aided and government schools. It can be seen that about 76.83 percent of total expenditure goes to private school and 10.44 percent of total expenditure goes to government school and 12.72 percent of total expenditure goes to government aided schools. Thus People are spending more on private education in comparison to government and government aided education.

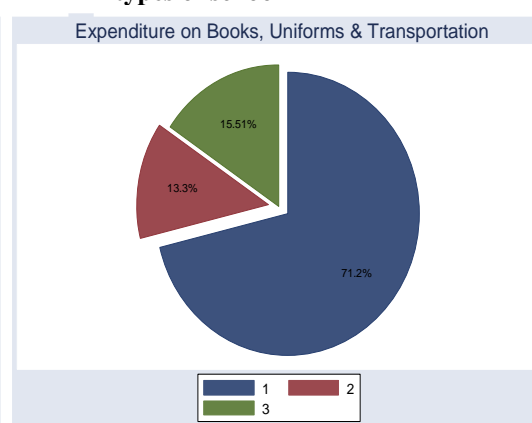
Figure 4.1.B shows the total expenditure on school fees on three different types of schools (where 1 represents private school, 2 represents government schools and 3 represents government aided school). Total expenditure on school fees is high in case of private schools followed by government aided and government schools. It can be

seen that about 83.5 percent of total expenditure on school fees goes to private school and 4.334 percent of total expenditure goes to government school and 12.17 percent of expenditure on school fees goes to government aided schools. Thus People are spending more on private education in comparison to government and government aided education.

**Figure 4.1.C: Percentage of expenditure on private tuition with respect to types of school**



**Figure 4.1.D: Percentage of expenditure on books, uniform, transportation with respect to types of school**



*Source: Computed by the researcher on the basis of field survey data*

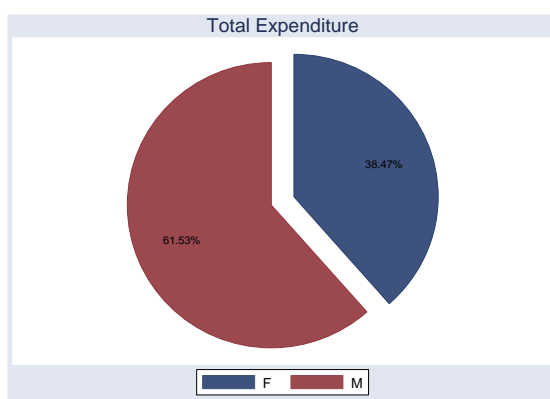
Figure 4.1.C and 4.1.D shows the total expenditure on private tuition and expenditure on books, uniforms and transportation respectively on three different types of schools (where 1 represents private school, 2 represents government schools and 3 represents government aided school). It is visible that those who are studying in private schools are often going for tuition also. 57.98 percent expenditure is done on private tuition by those who are studying in private schools, 31.84 percent expenditure done on private tuition by the government school studentsren and only 10.18 percent students of government aided schools spend on private tuition. Only 13.3 percent expenditure on books, uniform and transportation is made by government school studentsren.

It can also be seen that private school students are spending more on books, uniform and transportation. 71.2 percent expenditure on books, uniform and transportation is done by private school students. Hence we can see that expenditure on uniform, books is lowest for the government school students. We can say that it is due to the government legislation or program like SARVA SHIKSHA ABHIYAN or RIGHT TO EDUCATION ACT, 2009 where provisions are made that student will be

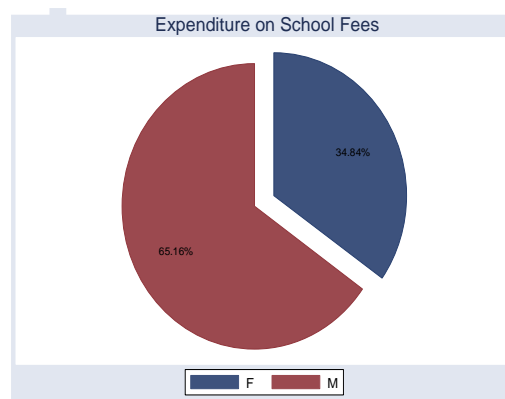
provided with school uniform, books and stationary free of cost in all the government schools. The trends for government aided schools are also more or less but the extent is not that high.

Gender-wise total expenditure on education, expenditure on school fees, expenditure on private tuition and expenditure on books, uniforms and transportation can be seen in below figures.

**Figure 4.1.E: Percentage of total expenditure on With respect to gender**



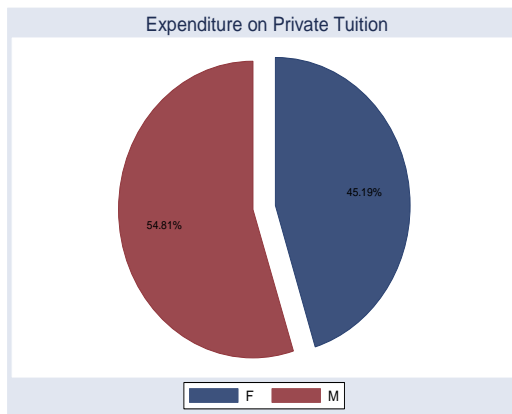
**Figure 4.1.F: Percentage of expenditure on School fees with respect to gender**



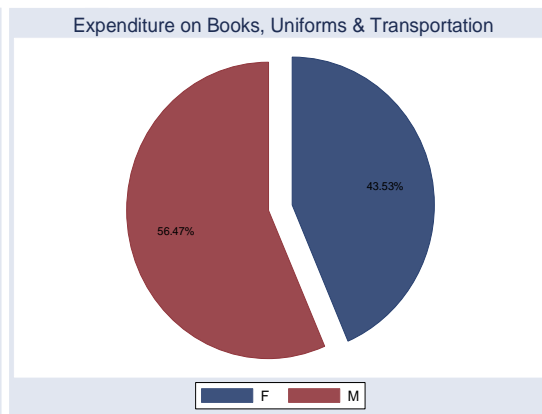
*Source: Computed by the researcher on the basis of field survey data*

Figure 4.1.E and 4.1.F shows gender-wise the total expenditure on education and expenditure on school fees respectively (where F represents female, M represent male). We can see that 61.53 percent of the total expenditure is made by male and 38.47 percent by female. Similarly 65.16 percent expenditure is made on male students on their school fees and 34.84 percent spend on girl students school fees. Which shows that families are spending more on education of male students compare to female students.

**Figure 4.1.G: Percentage of expenditure on private tuition with respect to gender**



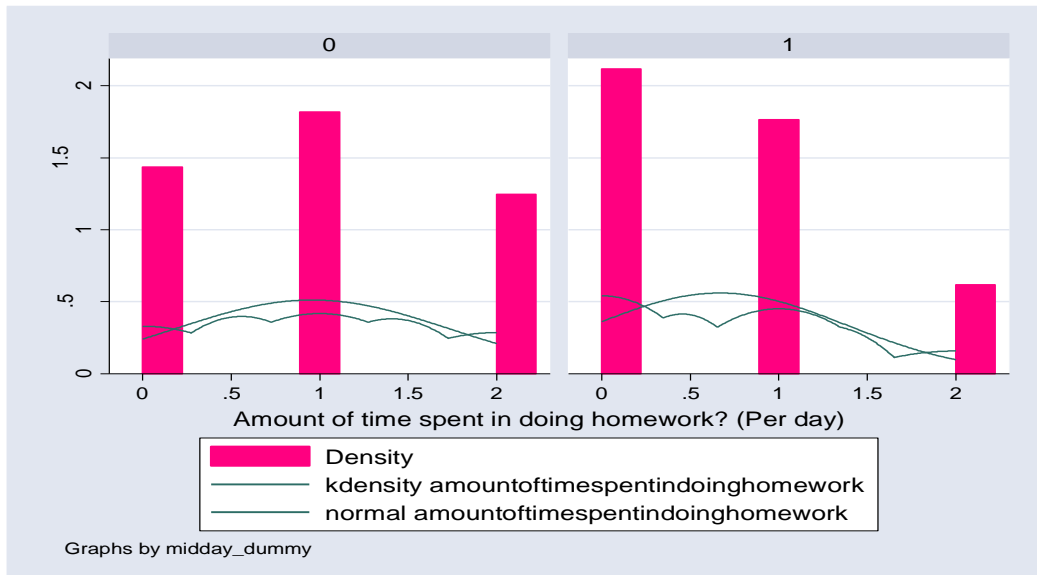
**Figure 4.1.H: Percentage of expenditure on books, uniform, transportation with respect to gender**



*Source: Computed by the researcher on the basis of field survey data*

Figure 4.1.G and 4.1.H shows gender-wise expenditure on private tuition and expenditure on books, uniforms and transportation respectively (where F represents female, M represents male). It is visible that those who are studying in private schools are often going for private tuition also. 54.81 percent expenditure is done on private tuition by male, 45.19 percent expenditure done on private tuition by female. Expenditure on books, uniform and transportation by male is higher than the female. 56.47 percent of the expenditure on books, uniforms and transportation is made by male and 43.53 percent by female.

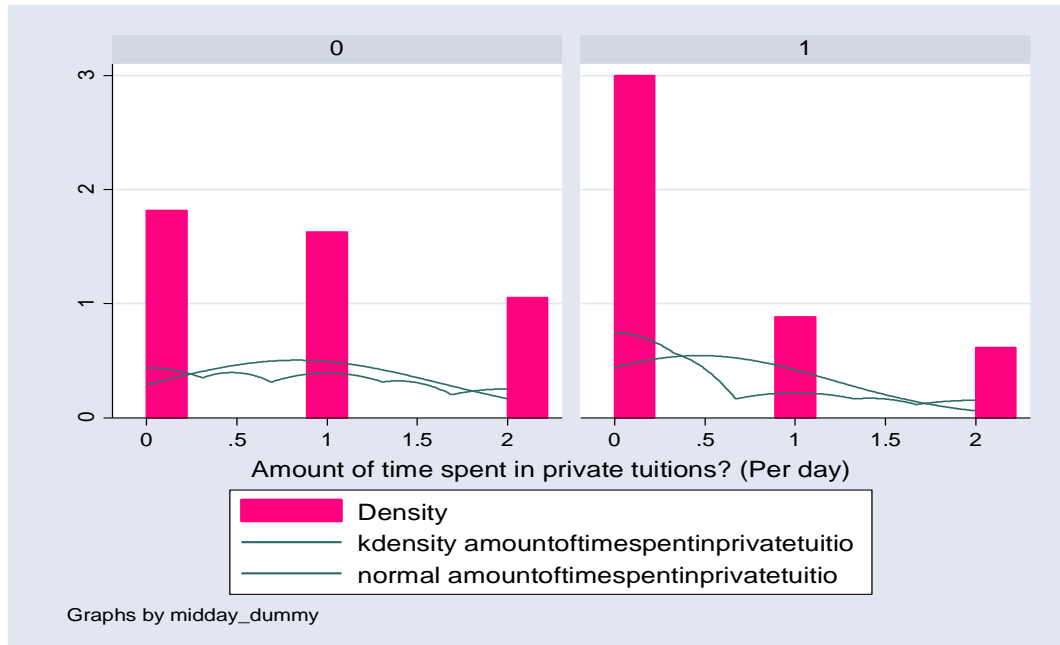
**Figure 4.1.J: Time spent on homework with respect to mid-day meal**



*Source: Computed by the researcher on the basis of field survey data*

The above figure implies the performance of two groups (1 represents presence of mid day meal scheme in school and 0 represents absence of mid day meal scheme in school) with respect to time spend on doing home work. Y-axis represents density values and x-axis represents time spend on home work. In the middle of histogram there are two thin lines which are very sensitive to the model represents kernel and normal density line respectively. On the basis of this histogram we can say that the students belong to mid day meal program spend less hours on home work in comparison to absence of mid day meal scheme.

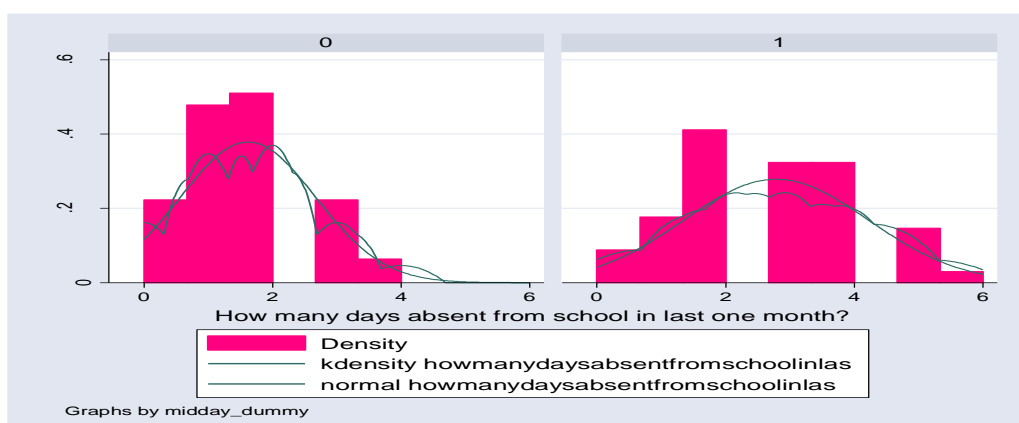
**Figure 4.1.K: Time spent on private tuition with respect to mid-day meal**



*Source: Computed by the researcher on the basis of field survey data*

The above figure implies the performance of two groups (1 represents presence of mid day meal scheme in school and 0 represents absence of mid day meal scheme in school) with respect to time spend on private tuition. Y-axis represents density values and x-axis represents time spend on private tuition. On the basis of this histogram we can say that the students belong to mid day meal program spend less hours on private tuition in comparison to absence of mid day meal scheme.

**Figure 4.1.L: Number of days absent from school with respect to mid-day meal**



Source: Computed by the researcher on the basis of field survey data

The above figure implies the performance of two groups (1 represents presence of mid day meal scheme in school and 0 represents absence of mid day meal scheme in school) with respect to absent from school in last one month. Y-axis represents density values and x-axis represents absent from school in last one month. On the basis of this histogram we can say that the students belong to mid day meal program are less absent from school in last one month in comparison to absence of mid day meal scheme.

## 4.2 Classification of average expenditure on the basis of gender:

**Table 4.2.A: Mean expenditure on education with respect to gender.**

Gender	Summary of Total Expenditure on Education		
	Mean	Std. Dev.	Freq.
F	7223.6364	10610.612	55
M	14444.091	15218.656	44
Total	10432.727	13291.522	99

Source: Computed by the researcher on the basis of field survey data

Above table tries to explain mean expenditure on education of both male and female students where mean expenditure of male students are almost two times that of female students.

**Table 4.2.B: Expenditure on private tuition with respect to gender.**

Gender	Summary of How much spent on private tuition?		
	Mean	Std. Dev.	Freq.
F	1194.5455	1609.3958	55
M	1811.3636	2480.5491	44
Total	1468.6869	2054.743	99

*Source: Computed by the researcher on the basis of field survey data*

In this table mean expenditure on private tuition of male students (Rs-1811.36) is more than female students (Rs-1194.54).

**Table 4.2.C: Mean expenditure on stationeries with respect to gender.**

Gender	Summary of How much spent on books, uniform and transportation?		
	Mean	Std. Dev.	Freq.
F	2041.8182	3260.2937	55
M	3310.4545	3675.4104	44
Total	2605.6566	3490.8148	99

*Source: Computed by the researcher on the basis of field survey data*

It is also clear that average expenditure on stationeries of male students are more than female students.

**Table 4.2.D: Mean expenditures towards school fees with respect to gender**

Gender	Summary of How much payed towards school fees?		
	Mean	Std. Dev.	Freq.
F	3987.2727	7029.4672	55
M	9322.2727	10822.655	44
Total	6358.3838	9258.5599	99

*Source: Computed by the researcher on the basis of field survey data*

The above table explains mean expenditures towards school fees of male students are almost more than 2,5 times than female students. However all the above four tables claims there exists gender discrimination between male and female students.

### 4.3 Hypothesis Testing (ANOVA) :

In my analysis three different groups of schools are studied where the numbers 1, 2, 3 represents private, Govt., Govt. Aided School respectively.

**Table 4.3.A: How much spent on private tuition with respect to types of school**

Type of school	Summary of How much spent on private tuition?		
	Mean	Std. Dev.	Freq.
1	2554.5455	2630.1249	33
2	812.2807	1387.324	57
3	1850	1595.5295	8
Total	1483.6735	2059.8616	98

Source	Analysis of Variance			F	Prob > F
	SS	df	MS		
Between groups	64610655.9	2	32305327.9	8.85	0.0003
Within groups	346963222	95	3652244.44		
Total	411573878	97	4243029.67		

Bartlett's test for equal variances:  $\chi^2(2) = 17.4332$  Prob> $\chi^2 = 0.000$

*Source: Computed by the researcher on the basis of field survey data*

Above ANOVA rejects the null hypothesis that there is no significant difference among the mean expenditure on private tuition against there is a significant difference among them at 5% level of significance as the p-value(0.000) corresponding to chi-square is less than 0.05.

**Table 4.3.B How much spent on books, uniform and transportation with respect to type of school**

Type of school	Summary of How much spent on books, uniform and transportation?		
	Mean	Std. Dev.	Freq.
1	5565.4545	3395.406	33
2	601.75439	1651.0269	57
3	5000	3817.2541	8
Total	2632.2449	3498.6721	98

Source	Analysis of Variance			F	Prob > F
	SS	df	MS		
Between groups	563777663	2	281888832	42.95	0.0000
Within groups	623570843	95	6563903.61		
Total	1.1873e+09	97	12240706.2		

Bartlett's test for equal variances:  $\chi^2(2) = 24.8540$  Prob> $\chi^2 = 0.000$

*Source: Computed by the researcher on the basis of field survey data*

Above ANOVA rejects the null hypothesis that there is no significant difference among the mean expenditure on book, uniforms and transport against there is a significant difference among them at 5% level of significance as the p-value(0.000) corresponding to chi-square is less than 0.05.

**Table 4.3.C: How much payed towards school fees with respect to type of school**

Type of school	Summary of How much payed towards school fees?		
	Mean	Std. Dev.	Freq.
1	15927.273	9376.8089	33
2	478.59649	1958.2731	57
3	9575	6058.2293	8
Total	6423.2653	9283.5126	98

Source	Analysis of Variance			F	Prob > F
	SS	df	MS		
Between groups	5.0746e+09	2	2.5373e+09	73.37	0.0000
Within groups	3.2853e+09	95	34581591		
Total	8.3598e+09	97	86183605.7		

Bartlett's test for equal variances:  $\chi^2(2) = 90.1512$  Prob> $\chi^2 = 0.000$

*Source: Computed by the researcher on the basis of field survey data*

Above ANOVA rejects the null hypothesis that there is no significant difference among the mean expenditure on school fees against there is a significant difference among them at 5% level of significance as the p-value(0.000) corresponding to chi-square is less than 0.05.

#### 4.4. Assumptions Of Classical Linear Regression Model (CLRM) :

**Table 4.4.A: Assumption of OLS**

Assumption	Test	P-Value
Linearity	Harvest Test	0.4761
Heteroscedasticity	BP Test	0.5648
Autocorrelation	Durbin Watson Test	0.004209
Normality	Jarque Bera Test	0.8046

*Source: Computed by the researcher on the basis of field survey data*

Except autocorrelation all other OLS assumptions are satisfied at 5% level of significance which can be seen from their corresponding P-Values. In order to improve autocorrelation problem, Newest test has been applied on the regression model and the result shows that there is no autocorrelation. The following three tables show Newest P-Values at different lags.

**Table 4.4.B: Newest autocorrelation test at lag(0)**

At lag(0)	Estimate	t-value	Pr(> t )	Stars
(Intercept)	2.09E+00	8.7643	7.78E-14	***
School fee_dummy	1.10E+00	3.7245	0.000334	***
How much spent on private tuition.	1.47E-04	2.6136	0.010432	*
Total Income	-2.06E-06	-2.677	0.008765	**

*Source: Computed by the researcher on the basis of field survey data*

**Table 4.4.C: Newest autocorrelation test at lag(1)**

At lag(1)	Estimate	t-value	Pr(> t )	Stars
(Intercept)	2.09E+00	8.6978	1.08E-13	***
School fee_dummy	1.10E+00	3.8378	0.000225	***
How much spent on private tuition.	1.47E-04	2.5797	0.011438	*
Total Income	-2.06E-06	-2.699	0.008247	**

*Source: Computed by the researcher on the basis of field survey data*

**Table 4.4.D: Newest autocorrelation test at lag(2)**

At lag(2)	Estimate	t-value	Pr(> t )	Stars
(Intercept)	2.09E+00	9.0992	1.51E-14	***
School fee_dummy	1.10E+00	3.785	0.000271	***
How much spent on private tuition	1.47E-04	2.6625	0.009125	**
Total Income	-2.06E-06	-2.9453	0.004067	**

*Source: Computed by the researcher on the basis of field survey data*

#### 4.4 Analysis of Covariance Model (ANCOVA)

$$Y_i = \beta_0 + \beta_1(x_{1i}) + \beta_2(x_{2i}) + \beta_3(x_{3i}) + \varepsilon_i$$

Where,

$Y_i$  = Number of days absent from school in last one month.

$x_{1i}$  = School fee dummy for ith student = 1 if exempted in last year

0 Otherwise

$x_{2i}$  = Expenditure on private tuition on ith student (in Rs)

$x_{3i}$  = Total annual family income of ith student (in Rs)

$\varepsilon_i$  = Random disturbance term

**Table 4.4.E: Regression analyses**

	Estimate	t-Value	Pr(> t )	Star
<b>(Intercept)</b>	2.09E+00	5.979	4.02E-08	***
<b>School fee_dummy</b>	1.10E+00	3.693	0.000372	***
<b>How much spent on private tuition.</b>	1.47E-04	2.282	0.024776	*
<b>Total Income</b>	-2.06E-06	-1.924	0.057355	.
<b>R-Squared</b>	<b>0.27</b>			
<b>Adj R-Squared</b>	<b>0.25</b>			

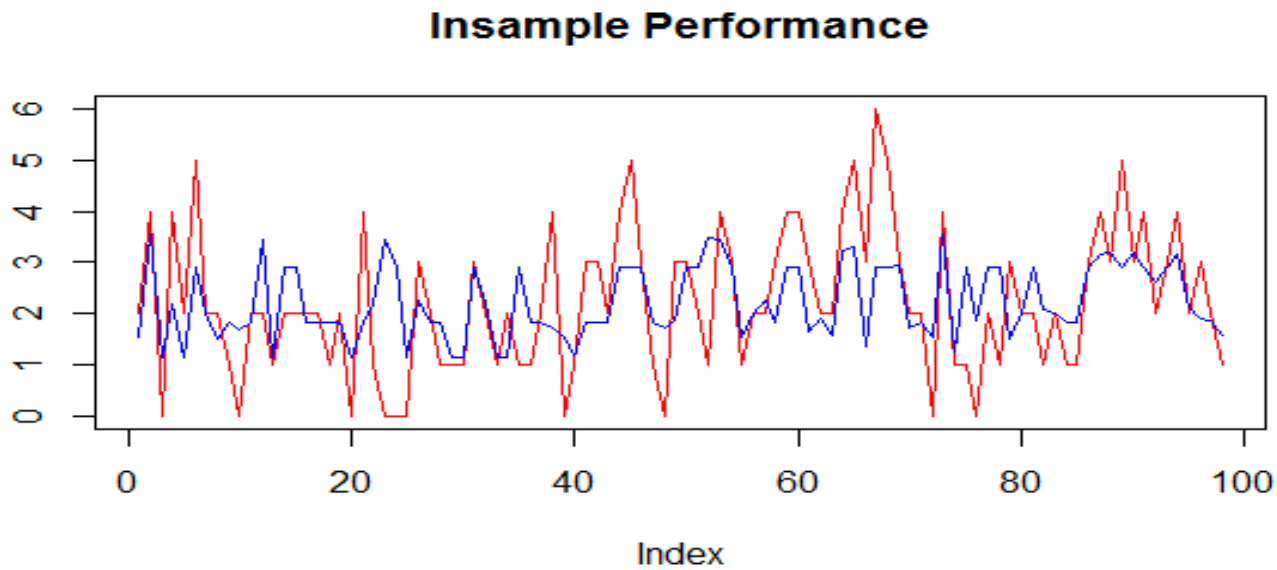
*Source: Computed by the researcher on the basis of field survey data*

Acceptance Criteria	Value
RMSE	1.183755
AIC	321.1755
BIC	334.1004
LL	-155.5878

By satisfying all the OLS assumptions (see section-1.2), coefficients of the above regression model shows the relationship between dependent and independent variables. So Except total income all other are positively related with dependent variable (Number of days. Absent from school in last one month.). Keeping other things constant if total annual income of a family decreased by one rupees, then the student belonging to that family will be absent by 0.00000206 days more in school on an average and vice versa. Although the number is negligible/ a fraction still it is important from the social point of view. Secondly If private tuition fees increased by one rupees, then the number of absent in school would increased by 1.47E-04 days on an average and vice versa. Because it is the psychological assumption of modern families that more tuition will increase the knowledge of students and no need to attain in school. Moreover they treats tuition learning is a substitute for school learning.

Finally if the annual school fees are exempted then more number of parents are inclined towards class room teaching resulting a reduction in number of absent days and vice versa. Other things being equal under the presence of exemption policy the number of absent days would be 3 on an average and will be 2 in the absence of exemption policy. Moreover R-Square is low (0.27) but not that much bad( cross section data) tries to explain that independent variables explains 27% variation in dependent variable. In addition to other model acceptance criteria ( AIC, BIC, RMSE, LL) are seems quite well along with in-sample performance given by the following figure:

**Figure 4.4.A: Insample performance**



*Source: Computed by the researcher on the basis of field survey data*

Red line implies actual values and blue line for predicted values. As actual values are more close to predicted values our in-sample performances are quite well.

**Conclusion:**

At last we can say that there are multiple of social, economic and cultural constraints which case gender discrimination in terms of child access to quality education. In this way, girls are denied of their basic right of education in many cases. There are various reasons for these discriminatory trends such as distance of schools from the house, poor economic conditions of households which make girls to work at home and help their mothers in domestic chores. In some cases, girl children go to other's house to work as domestic help with her mother. Sometimes girls are not send schools because of high investment in tuition fee, books and school uniforms. Though government has made various provision such as free school dress, books and mid day meal but these measures are not sufficient as quality of education in government that good which make students for extra tuition which directly ask high investment.

## Appendix

Direction: forward

Criterion: AIC

Start: AIC=65.35

How.many.days.absent.from.school.in.last.one.month. ~ 1

	Df	SS	RSS	AIC
+ school.fee_dummy	1	39.90	147.1	43.84
		4	6	
+ uniform.received_dummy	1	38.67	148.3	44.65
		5	9	6
+ received.book_dummy	1	37.68	149.3	45.31
			8	
+ midday_dummy	1	33.32	153.7	48.12
		7	3	5
+ from.which.standard.English.is.taught.in.this.school.	1	26.89	160.1	52.14
			7	5
+ Medium_dummy	1	24.03	163.0	53.87
		4	3	7
+ Total.Income	1	21.85	165.2	55.17
		9		6
+ How.much.payed.towards.school.fees.	1	14.06	173	59.69
		1		6
+ How.much.spent.on.books..uniform.and.transportation.	1	11.38	175.6	61.19
		9	7	8
+ Total.expenditure	1	11.37	175.6	61.20

			1	9	8
+	Distance.of.school.from.in.kms.	1	11.29	175.7	61.25
			2	7	2
+	gender_dummy	1	5.819	181.2	64.25
				4	7
	<none>			187.0	65.35
				6	4
+	Type.of.school	1	2.142	184.9	66.22
				2	5
+	Amount.of.time.spent.in.doing.homework... Per.day.	1	1.379	185.6	66.62
				8	9
+	How.much.spent.on.private.tuition.	1	0.691	186.3	66.99
				7	1
+	scholarship_dummy	1	0.433	186.6	67.12
				3	7
+	Amount.of.time.spent.in.private.tuitions...P er.day.	1	0.293	186.7	67.2
				7	
+	Standard	1	0.079	186.9	67.31
				8	3
+	Amount.of.time.spent.in.school...Per.day.	1	0.051	187.0	67.32
				1	7

Step: AIC=43.84

How.many.days.absent.from.school.in.last.one.month. ~ school.fee\_dummy

		Df	SS	RSS	AIC
+	uniform.received_dummy	1	7.613	139.5	40.63

			4	4	4
+	received.book_dummy	1	6.742	140.4	41.24
			8	1	4
+	midday_dummy	1	6.245	140.9	41.59
			6	1	
+	How.much.spent.on.private.tuition.	1	4.422	142.7	42.85
			9	3	
+	from.which.standard.English.is.taught.in.this.school.	1	4.260	142.9	42.96
			5		1
	<none>			147.1	43.84
				6	
+	gender_dummy	1	2.596	144.5	44.09
			8	6	5
+	Distance.of.school.from.in.kms.	1	2.448	144.7	44.19
			4	1	6
+	Total.Income	1	2.227	144.9	44.34
			6	3	5
+	Medium_dummy	1	1.855	145.3	44.59
			8		6
+	Amount.of.time.spent.in.private.tuitions...Per.day.	1	0.555	146.6	45.46
			9		9
+	Standard	1	0.555	146.6	45.46
			8		9
+	How.much.payed.towards.school.fees.	1	0.431	146.7	45.55
			9	2	2
+	scholarship_dummy	1	0.120	147.0	45.76
			4	4	

+	Amount.of.time.spent.in.school...Per.day.	1	0.081	147.0	45.78
			6	7	6
+	Type.of.school	1	0.066	147.0	45.79
			8	9	6
+	Amount.of.time.spent.in.doing.homework... Per.day.	1	0.030	147.1	45.82
			1	3	
+	Total.expenditure	1	0.009	147.1	45.83
			8	5	4
+	How.much.spent.on.books..uniform.and.tra nsportation.	1	0.001	147.1	45.83
			2	6	9

Step: AIC=40.63

How.many.days.absent.from.school.in.last.one.month. ~ school.fee\_dummy +  
uniform.received\_dummy

		df	SS	RSS	AIC
+	How.much.spent.on.private.tuition.	1	9.227	130.3	35.92
			7	2	9
+	How.much.spent.on.books..uniform.and.tra nsportation.	1	3.209	136.3	40.35
			8	3	4
+	Total.expenditure	1	2.962	136.5	40.53
			8	8	1
	<none>			139.5	40.63
				4	4
+	scholarship_dummy	1	2.134	137.4	41.12
			1	1	4
+	Amount.of.time.spent.in.private.tuitions...P	1	1.625	137.9	41.48

	er.day.		1	2	6
+	Type.of.school	1	1.379	138.1	41.66
			7	6	
+	gender_dummy	1	0.953	138.5	41.96
			9	9	2
+	How.much.payed.towards.school.fees.	1	0.751	138.7	42.10
			2	9	5
+	Standard	1	0.663	138.8	42.16
			9	8	7
+	received.book_dummy	1	0.485	139.0	42.29
			2	6	3
+	Distance.of.school.from.in.kms.	1	0.373	139.1	42.37
			1	7	2
+	midday_dummy	1	0.347	139.2	42.39
+	Medium_dummy	1	0.331	139.2	42.40
				1	1
+	Amount.of.time.spent.in.doing.homework... Per.day.	1	0.25	139.2	42.45
				9	8
+	from.which.standard.English.is.taught.in.thi s.school.	1	0.127	139.4	42.54
			9	2	4
+	Amount.of.time.spent.in.school...Per.day.	1	0.077	139.4	42.58
				7	
+	Total.Income	1	0.002	139.5	42.63
			7	4	2

Step: AIC=35.93

How.many.days.absent.from.school.in.last.one.month. ~ school.fee\_dummy +

uniform.received\_dummy + How.much.spent.on.private.tuition.

	df	SS	RSS	AIC
<none>			130.3	35.92
			2	9
+ scholarship_dummy	1	1.486	128.8	36.80
		77	3	5
+ How.much.spent.on.books..uniform.and.transportation.	1	1.437	128.8	36.84
		32	8	3
+ gender_dummy	1	1.323	128.9	36.92
		72	9	9
+ from.which.standard.English.is.taught.in.this.school.	1	0.881	129.4	37.26
		07	4	5
+ Distance.of.school.from.in.kms.	1	0.569	129.7	37.5
		69	5	
+ Type.of.school	1	0.506	129.8	37.54
		82	1	8
+ Total.Income	1	0.380	129.9	37.64
		37	4	3
+ received.book_dummy	1	0.366	129.9	37.65
		56	5	3
+ midday_dummy	1	0.347	129.9	37.66
		82	7	8
+ Amount.of.time.spent.in.private.tuitions...Per.day.	1	0.287	130.0	37.71
		95	3	3
+ Standard	1	0.182	130.1	37.79
		86	3	2
+ Total.expenditure	1	0.167	130.1	37.80

			66	5	3
+	Amount.of.time.spent.in.doing.homework.. .Per.day.	1	0.104 69	130.2 1	37.85 1
+	Medium_dummy	1	0.065 56	130.2 5	37.88
+	Amount.of.time.spent.in.school...Per.day.	1	0.029 66	130.2 9	37.90 7
+	How.much.payed.towards.school.fees.	1	0.007 19	130.3 1	37.92 4

Call:

```
lm(formula = How.many.days.absent.from.school.in.last.one.month. ~
    school.fee_dummy + How.much.spent.on.private.tuition.,
    data = mydata)
```

Coefficients:

(Intercept)	school.fee_dummy
2.090e+00	1.101e+00
How.much.spent.on.private.tuition.	Total.Income
1.470e-04	-2.063e-06

1. Heteroscedasticity: It occurs when the assumption of classical linear regression model is not satisfied i.e. variance ( $u_i$ )  $\neq$  sigma square.

2. Autocorrelation: It is the relation between variables of the model: Classical regression model assume that there is no relation between disturbances i.e.  $\text{cov}(u_i, u_j) = 0$ , where  $i \neq j$

If  $\text{cov}(u_i, u_j) \neq 0$   $i \neq j$ , then autocorrelation exist.

3. Jerque-Bera(JB) test: This test is large sample, asymptotic, test of normality. It Calculate Kurtosis and skewness.

$$JB = \left[ \frac{S^2}{6} + \frac{(k-3)^2}{24} \right]$$

4. Harvey test: It is used to check the linearity in CLRM (classical linear regression model).
5. Variance-Inflating factor (VIF): It shows the speed at which covariance and variance are increasing. It can be represented as:

$$VIF = \frac{1}{(1 - r)_{23}^2}$$

## **CHAPTER-V**

### **Conclusion**

Education as an indicator of development and form the human capital. This is a variable which contributes influence the socio- economic and cultural sphere of life and contribute in the various related aspects of life that contribute to the well-being of society and its members. Government has taken so many measures to ensure the universal access to education for all the citizen of our country irrespective of their caste, colour, class, race and gender. We have come a long way as our current literacy rate around 74 percent six time that of 1947. But still, we have long way to go as the literacy rate has increased continuously in previous decades but the pace of growth have never been up to our expectations. Moreover the trends of growth of literacy rate have also been different for different groups, communities and societies. We have seen that the pace of growth of literacy is high in urban areas compared to rural areas.

The low literacy rate of our country and glaring differences between male and female literacy rate is an obstacle in the development of the society. Low literacy rate among various sections of society make them socially, economically and politically excluded and affects their participation level in different sphere of life. The factors responsible for this obstacle are many such as social, political, cultural and economic which require structural reform of many socio-economic institutions and progressive legislations which can help in changing people's attitude towards education of mass in general and girl's education in particular. Besides all this, state is supposed to make some people as well as area centric policy for targeted population.

#### **5.1 Suggestions**

We have come across so many problems and issues after analyses of our data and extensive literature review. These problems and issues are creating constrains in the path of achieving cent percent literacy rate. Moreover, some of these issues are

playing critical role in creating hurdles in girls' education and making females deprived of their right to education. We are putting some of the suggestion for the problems which differ in their nature but their effects are inter-related. There are three types of issues and problem on the basis of their nature such as:

i) Economic      ii) Socio-cultural      iii) Political

- An economics condition of vast section of the society is not that good and poor families are not able to bear to expenses on education. As they consider, the education as a means of employment and the ultimate aim is to get job. That is why, if family find other means of occupation for their children, they involve their children in that occupation to complement the family income. In case of girls' education, families do not find any economic incentive. Therefore they do not send them to schools. For this, we need to provide them with conducive atmosphere and productive economic system where families can enhance their ability to raise their income and sustain their livelihood. In this way would be able to save resources for the investment in their children education.
- Family pay more attention to only male education as investment on boys' education is considered as an insurance for parents in their old age. So we need to break this stereotype that the girls are temporary member of their families and they would leave their house after marriage. In this way, their education is not an economic incentive in the eyes of family. We need to create awareness about girl education and its effect on the families as well as on the children health and well being
- Though we have so many schemes for the empowerment and education of the girls for example Ladlli and other scholarship schemes but these schemes are not enough for ensuring their universal access to formal education. We need to design area specific and job oriented programs in schools. Moreover, we can build their capacity with enabling them with productive skills so that they could be part of economics activities.
- We could have policy of positive discrimination such as a thirty three percent reservation in all government jobs like recently paramilitary forces have taken this measure after reserving 33percent quota in all the ranks.

- Data availability for district level data should be more detailed for further studies so that discrimination index at school level could be calculated.
- Different division should focus on women education as a priority sector.
- “One size fits all” policy should not be followed by government for all states as regarding development of girls and education. There is wide differential among states and states allocation of funds should be done according to status of women education development.
- How should be parents encourage to send their girl child to school should be priorities by government and scholarships such as LaxmiBai scholarship yojana should be more effective so there is all masses across India.
- Right to education 2009 and SarvaShikshaAbhiyan should focus on quality as well as quantity as people get enrolled and don’t take classes and there is loot of absenteeism.
- Most of our schools are lacking in proper infrastructure such unavailability of separate toilets for girls, spacious rooms and potable drinking water. We need to build proper infrastructure which laced with above mention facilities.
- We need mobilise community institutions of women like self-help groups and infuse these groups with skills, knowledge and capacities so that women can participate in economics activity and contribute towards family income as earning mothers are tend to ensure gender equality in family.
- We need to bring many more schemes like BetiBachao, BetiPadao so that we can create awareness about the importance of women education.
- For breaking stereotypes, we need to advertise the acheivements of women and showcase the contributions and achievements of women like Chandakochher, Kalpana Chawla, P T Usha, Sunita Williams etc. and make them role model.
- Ensure the participation of Panchayati Raj institutions as these institutions are more effective in implementing, monitoring and evaluating many related schemes.

## **5.2 Measure Finding**

Kaputhala district consist of 8 blocks Bhulath, Kaputhal (1), Kapurthala(2), Kapurthala(3), Sultanpur(1), Sultanpur(2), Fagfada(1), and Fagfada(2). There are very less number of girls school in whole Kapurthala that is five to six for primary education and only 10-12 schools are for girls for I to XII. Due to this parents are not able to send their girl child to school due to social, cultural factor because schools are far from home and girl has to travel in buses and due to increase in crime or eve teasing parents are insecure about their child.

High drop-out rate after VIII was observed because there is very few numbers of schools after VIII within 3 km. Even though if school is there, there is insufficient number of teachers. Low income of families cannot afford to send their children to private school. Due to that these children help their families instead of going to school. Some students go for part time job or help in family business or in agriculture in session for money. Due to this children stay out of school for one or two months which create gap in their study and sometimes it is very difficult to cover this gap which leads to high drop-out from the school.

Sometimes students go for part time job therefore they do not complete their homework and due to which students scared to go to school because teacher beats them. It is also seen that those who do part time job, pay less attention in classrooms, sometimes sleep during class time. It is found that students came late to class too.

Due to insufficient number of government schools, poor family are unable to send their child to school because they cannot afford private school. It has been noticed that people who are not economically strong send their children to work and school due to this double physical work students fall ill very frequently which make them unable to go to school.

In agriculture field children do work in field under sunlight and inside water and with different pesticide which is unhealthy for children. In backward communities people do not send their girl child to school after 5<sup>th</sup> or 8<sup>th</sup> because girl help in household work and sometimes send girl to work in different houses to clean and clean utensil for money.

If family are having two children (boy and girl). They prefer to send boy to private school which is far away from home (more than 5km) and girl to nearby government school.

Teachers do not take class room teaching seriously; hardly have they checked home works. They do not use blackboard and prefer to sit while teaching. Many are not regular and sometimes they leave after half day. Sometimes teachers made students to clean the class room and behaviour of teacher is not good with students, sometimes they use abusive words and punish students physically. Teachers in government schools are doing extra duties like preparing accounts, auditing of mid day meal etc., due to this work load teachers are not able to focus more on students.

Maximum daily labors' children are going to government schools therefore meal is more important for them than education. Since many parents are daily worker hence they are not able to give proper time to their children and are not aware of education and engaging their children with them at work, it is also found that daily workers; children take more leave from school. Most of the family migrates from one place to another due to which their children are not able to get education. Kaputhala district is doing well in terms of enrolment but still eight to ten children are out of school in each village and most of them are girls.

Parents do not understand importance of education and they mix education with job prospect due to that they prefer to children to abroad to earn.

## Bibliography

- Balatchandirane, G. (2013). Gender discrimination in Education and Economic Development: A study of South Kprea, China and India. *Sage Publication, New Delhi* .
- Chanana, K. (2000). Treading the Hallowed Halls: Women in Higher Education in India. *Economic and Political Weekly, Vol. 35, No. 12* .
- Desai, S. (1994). Gender Inequalities and Demographic Behaviours: India. *New York, The Population Council, Inc.*
- Duraisamy, P. (2001). Change in returns to education in India, 1983-94: by gender, age-cohort and location. *Economics of education review* .
- Duraisamy, P. D. (1995). Returns to higher education in India. *Journal of Education Planning and Administration* , 57-68.
- Duraisamy, P. (1992). Effects of education and extension contacts on agricultural production. *Indian Journal of Agricultural Economics* , 205-234.
- Duraisamy, P., & Malathy, R. (1990). Impact of public programs on fertility and gender specific investment in human capital of children in rural India: Cross sectional and time series analysis. In T. Schultz, *Research in labor economics, vol. 16* (pp. 157-186). USA: Jai Press Inc.
- Duraisamy, P., & Duraisamy, M. (1993). Returns to scientific and technical education in India. *Margin, 7(1)* , 396-406.
- Hakan Oztunc, Zar Chi Oo, Zehra Vildan Serin. (2015). Effect of Female Education on Economic Growth: A Cross Country Empirical Study. *Educational Sciences: Theory & Practice* .
- Hussain, S.S, & Byerlee, D. (1995). Education and farm productivity in post-green revolution agriculture in Asia. <http://www.ageconsearch.umn.edu/handle/183412> .
- India, G. o. (2008). *Eleventh Five Year Plan (2007-2012) Vol.II*. New Delhi: Planning Commission.
- Jamison, D.T., & Lau, L.J. (1982). Farmer education and farm efficiency. *John Hopkins University Press* .
- Kalyani Menon sen and A.K. Shiva Kumar. (2001). Women in India, How Free? *New Delhi, UNDAF* .
- Klasen, S. (2008). The impact of gender inequality in education and employment on economic growth in developing countries: Updates and extensions. *Ibero America Institute for Economic Research, 175* , 2-46.

- kumar, M. S. (2008). Gender discrimination and women's Development in India. *Munich Personal RePEc Archive* .
- Lind, A. M. (2006). Struggle and Development: Approaching gender bias in Practical International Development Work. *Orebro, Orebro University* .
- Lockheed, M., Jamison, D., & Lau, L. (1980). *Farmer education and farm efficiency : A survey*. Washington, DC: World Bank.
- Malathy, R. (1994). Education and women's time allocation to non market work in an urban setting in India. In *Development and cultural change* (pp. 743-760).
- McMahon, W. (1995). Consumption benefits of education. *Elsevier Science Ltd* .
- McMahon, W. (1999). Education and development: Measuring the social benefits. *New York: Oxford university Press*.
- Mirotschie, M. (1994). Technical efficiency off Ethiopian agriculture. In B. Abegaz, *Essay on Ethiopian economic development* (pp. 87-158). Aldershot, UK: Avebury.
- Morrison, A., Raju, D., & Sinha, N. (2007). Gender equality, poverty and economic growth. [http://econ.worldbank.org/external/default/main?entity-ID=000158349\\_20070911132056&pagePK=64165259](http://econ.worldbank.org/external/default/main?entity-ID=000158349_20070911132056&pagePK=64165259) .
- Mullin, J. (2008). Gender Discrimination-Why is it still so bad and what can you do about it? [www.childerninneed.org](http://www.childerninneed.org) .
- Özpölat, A., & Yıldırım, (2009). In developing countries, relationship between women's education and growth. *Anadolu International Conference in Economics*. Eskişehir, Turkey.
- Schultz. (1961). Investment in human capital. *American economic review vol. 51, no, 1* , 1-17.
- Schultz, T. (1971). *Investment in Human Capital: The Role of Education and of Research*, New York.
- Schultz, T. (1988). Education investment and returns. In & T. H.chenery, *Handbook of development economics Vol.1* (pp. 543-630). New York: Elsevier Science Publishers.
- Sharmistha self and Richard Grabowski. (2003). Does education at all levels cause growth? : India, a case study. *Economics of Education Review* .
- Volast, B. E. (2004). Gender discrimination and growth: Theory and Evidence fro India. *London school of economics and Political sciences* .