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DETERMINANTS OF FEMALE EDUCATION IN RURAL AREAS- A MICRO LEVEL ANALYSIS

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ABSTRACT

Education is the key factor in accelerating the pace of development of any country. Education enables human beings to understand the interrelationship among the visible and intangible phenomena surrounding them and give skill to translate the same into action. Acquisition of education helps workers to take advantage of technological changes, increases their productivity and earnings. (Asok Basu, 2002). The acquisition of education creates both private benefits and spillover benefits to society. As education emerged as a key form of investment in human beings (Duraishamy, 2002). The importance of education in the process of economic growth has been highlighted by several economists- Mint(1954), Theodore W.Schult(1962), P.R.(1965), Ambashat,N.K(1966),Richard A.Musgrave(1966), Mark Christaper Colclough(1982), Jandhyala B.G.Tilk(1987) etc.

Realizing the importance of education, the Government of India has increased its heavy outlay for education in various Five year plans. In the First five year plan, the outlay was Rs 150 crores which has increased to Rs 2, 75,000 crores in Eleventh Five Year Plan. The expenditure on education as a percentage of Gross Domestic Product also rose from 0.7 percent in the First Plan to 6 percent in Eleventh plan (Planning Commission, 2007).

Female education is considered to be one of the most sensitive indices of social development, prosperity, harmony and cooperation in the society (Pillai, 2002). In order to achieve full development of our human resources, the improvement of homes and for moulding the character of children during the most impressionable years of infancy, the education of women has been of greater importance than that of men. Female education increases the value of women's time in economic activities by raising labour productivity and wages, with a consequential rise in household income and reduction in poverty. According to United Nations Educational Scientific and Cultural Organization (2004) female education is the best investment for reducing poverty, improving health and

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ensuring social well being". Women with education are more likely to be employed and to support themselves and their children independently.

In India, there is strong gender bias in education and as a result of customs, rituals and traditional practices, girls are denied the opportunity for education. This is reflected in the low literacy level of women. In 2004-2005, overall literacy rate was 67.30 percent; male literacy rate was 77.00 percent while female literacy was 57.00 percent (Selected Educational Statistics, 2004-2005).

The problem of low female literacy rate is more pronounced in rural areas. According to 2001 census, the rural female literary rate was only 46.58 percent while male literacy rate was 71.18 percent. Due to poverty and the existences of child labour, the rural girls were not sent to schools or colleges.

In India, many studies- Reddy (1999), Chinara(2000) Subramanian(2001) and Yadappanavar(2002) were carried out pertaining to female education. But the existing studies on female education have concentrated on the analysis of the growth and problems in female education. There have been limited studies focusing on the analysis of the determinants of female education in rural areas. Hence, the current study 'Determinants of female education in rural areas- A micro level analysis' is undertaken with the following objectives

- To find out the educational status of girls in terms enrolment in rural areas
- To find out the cost of female education in rural areas;
- To identify the factors determining female education in rural areas and
- To identify the problems in female education in rural areas.

METHODOLOGY

The study was related to 130 households in the village "Manjakombal" in Districts. The required data relating to socio-economic background, enrolment, cost of female education and the problems in female education, etc were collected by administering an interview schedule to the head of the households. The study also construct composite educational index following the approach of Naunyal and Singh (2010). The composite educational index was calculated as follows.

$$\text{Composite Educational Index (CEI)} = (2 * LI + GI)/3$$

$$\text{where LI (Literacy Index)} = \frac{\text{Actual literacy rate} - \text{Minimum literacy rate}}{\text{Maximum literacy rate} - \text{Minimum literacy rate}}$$

$$GI(\text{GER Index}) = \frac{\text{Actual gross enrolment ratio} - \text{Minimum gross enrolment ratio}}{\text{Maximum gross enrolment ratio} - \text{Minimum gross enrolment ratio}}$$

Maximum gross enrolment ratio- Minimum gross enrolment ratio

Where maximum value is 100 and minimum value is 0.

The disparity in literacy rate between males and females among selected population has been estimated using Sophers (1974) disparity index. The index may be written as follows:

$$D = \log(X_2/X_1) + \log(Q-X_1)/Q-X_2$$

Where X_1 and X_2 are per cent literate among the two groups of population and Q is greater than 100. The index as proposed by Sopher lacks in certain desirable properties. Indicating this Kundu and Rao(1986) proposed Q greater than 200 and the current study follows the same. Lower value indicates lower disparity and higher values indicates higher disparity.

The study tried to apply multiple regression analysis for identifying the determinants of female education in rural areas. The estimated multiple regression equation is of the form.

$$Y = b_0 + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + b_8x_8 + e$$

Where Y = Mean years of schooling for females;

x_1 = Father's age(in years)

x_2 = Mother's age(in years)

x_3 = Father's education(years of schooling)

x_4 = Mother's education(years of schooling)

x_5 = Family Size(in number)

x_6 = Type of Family(Nuclear = 1, Joint = 0)

x_7 = Family Income(in Rs)

x_8 = Land ownership(in acres)

e = Error term

FINDINGS OF THE STUDY

(A) Educational status of girls in rural areas:

(i). Socio economic profile of the selected families:

The literacy level is determined by size of the family, family income, type of family etc. Hence the current study tried to analyse socio economic profile of the families. Table I represents the socio economic profile of the selected families.

TABLE I
SOCIO ECONOMIC PROFILE OF THE SELECTED FAMILIES

S.No	Items	Number
1.	Age Structure	
	0-5	13
	5-10	32
	10-15	35
	15-20	24
	20-25	20
2.	Education	
	Primary	55
	Secondary	20
	Higher Secondary	15
	College	10
3.	Occupations	
	Farming	25
	Business	8
	Workers	15
	Coolies	18
4.	Family Income (per month)	
	Below Rs 5000	22
	5000-10,000	21
	10,000-20,000	14
	Above 20,000	7
5.	Type of Family	
	Small	80
	Large	50
6.	Religion	
	Hindus	70
	Christians	40
	Muslims	20

Table I reveals that, there were 124 members in the selected households. Of total members, 13 were representing the age of 0-5, while 32 belonged to the age group of 5-10 and 35 belonged to the age of 10-15. The analysis of occupation indicated that majority of family members were doing the work of farming. Only 55 percent have completed primary education and only 10 percent were studying in college. Table I also implies that 34 percent of the families were getting the family income of below Rs 5000. Of the total families covered 62 percent belonged to small family and 38 represent large family. Also 70 members were Hindus, 40 were Christians and 20 were Muslims.

enrolment of girls in schools/colleges

enrolment of girls at different levels of education is shown in Table II.

TABLE II

STAGewise ENROLMENT OF GIRLS

Level of Education	Number enrolled	Enrolment rate
Up to 5 th standard	28	93.33
5 th to 8 th standard	20	80.00
8 th to 10 th standard	14	70.00
10 th to 12 th standard	10	66.67
College	5	50.00

The enrolment rate for girls at the primary level was estimated as 93.33 percent, at the secondary level it was 66.67 percent and at the collegiate level it was only 50

among girls

When the students enrolled are not able to complete their study, they drop out of schools and this implies wastage of human resources. Table-III represents the details about the dropout of girls.

TABLE III

STAGewise DROPOUT OF GIRLS

S.No	Level of education	Number of dropouts	Dropout rate
1	5 th standard	6	21.43
2	6 th to 8 th standard	7	35.00
3	8 th to 10 th standard	6	42.86
4	10 th to 12 th standard	4	40.00

Table III reveals that majority of the girls have dropped out (42.86 percent) in the 8th to 10th standard. However dropout rate seemed to be the lowest at the primary level (21.43 percent).

Reasons for dropout

The reasons for dropout are shown in table IV.

TABLE IV
REASONS FOR DROPOUT

S.No	Reasons	Number stating	Percentage
1.	Domestic Purpose	3	13.04
2.	Marriage	10	43.48
3.	Long Distance	7	30.43
4.	Lack of Transport	3	13.04

The above table reveals that majority of girls (43.48 percent) have dropped out due to marriage. Further long distance is identified as reason for dropout for 30.43 percent of the respondents.

(v). Attitude towards female education

The study tries to find out the attitude of the head of the family towards female education. Of the total respondents, 90 percent were having positive attitude towards female education and 10 percent were having negative attitude. Table V shows information on level of education for girls as preferred by the head of the households in rural areas.

TABLE V
LEVEL OF EDUCATION FOR GIRLS AS PREFERRED BY THE HEAD OF THE HOUSEHOLDS

S.No	Level of education	Number Stating	Percentage
1	Primary	15	12.50
2	Secondary	12	10.00
3	Higher Secondary	28	23.33
4	College	65	54.17
	Total	120	

It is obvious from Table V that majority of the respondents (54.17 percent) are of the view that girls should be educated up to collegiate level. They were of the view that girls can get a job easily and their marriage prospects become more promising after collegiate education.

Gender disparity index and Composite educational Index

The current study estimated the disparity index. In the selected area, the female literacy rate was 61.04 percent while male literacy rate was 98.04

The estimated Sopher's disparity index is 0.2459.

The study estimated educational attainment index of females as 0.6104 and index of girls as 0.6209. The estimated composite educational index of girls is

0.6209

Cost of female education

The cost of education includes school and college fees, uniform, expenses on books and transport. Table VI reveals the item wise cost of female education in selected households.

TABLE VI
COST OF FEMALE EDUCATION

Sl. No.	Item	Amount per student per month (in Rs)	Percentage to total expenditure
1	School fees	1000	68.97
2	Books/notes	130	8.97
3	Uniform	120	8.28
4	Transport	200	13.79
Total		1450	100

The above Table VI shows the average cost of female education as Rs. 1450. School and college fees were an essential item of education expenditure for girl children in the selected households, since 69 percent of the total expenditure is accounted by school fees. However there have been lower uniform fees and expenses for books since there had been supply of free books and uniforms for students below poverty line.

Problems in education

There are restraining factors on the demand for female education ranging from low income of the family to higher cost of education. Table VII brings out the problems in female education.

TABLE VII
PROBLEMS OF FEMALE EDUCATION IN RURAL AREAS

S.No	Problems	Number	Percentage
1.	Domestic responsibility	12	9.23
2.	Long distance	5	3.85
3.	Lack of interest	6	4.62
4.	Difficult Syllabus	1	0.77
5.	Inadequate facilities in school	3	2.31

Table VII reveals that, majority of the total respondents (9.23 percent) stated the main problem as domestic responsibility. Above all the distance between home and schools acts as a bottleneck in sending the female children to schools. The parents are more concerned about the safety of the female children.

(D) Identification of the factors determining female education

The study tried to identify the determinants of female education with the multiple linear regression analysis. The estimated multiple regression coefficients mean years of schooling as related to father's age, mother's age, father's education, mother's education, family size, type of family, income and land ownership are given following Table VIII.

TABLE VIII
ESTIMATED MULTIPLE REGRESSION COEFFICIENT OF MEAN YEARS OF SCHOOLING AS RELATED TO SELECTED VARIABLES

S.No	Variable	Regression Coefficients	t value
1.	Father's age	.000508	1.399
2.	Mother's age	.000343	0.914
3.	Father's education	.123	0.987
4.	Mother's education	.154	-1.455
5.	Family size	.128	0.355
6.	Type of Family	.313	1.555
7.	Family Income	.000308	0.108
8.	Landownership	.000232	1.152

Table VIII indicates that mean years schooling of females is influenced by father's education, mother's education, type of family and landownership. Father's age and mother's age have got positive impact on mean years of schooling. However, father's education has got positive impact, mother's education has a negative impact. This might be due to the fact that in the selected rural area most of the

Family income and land ownership has got a positive impact on mean years of schooling for girls. The estimated equation is statistically valid as indicated by R^2 value and F value (69.527).

CONCLUSION

- i. In recent times, people are realizing the value of female education. Even the low income families are willing to educate their daughters;
- ii. The motivation for female education is similar to that of male education. The major reason for female education is to get employment and thereby contribute to family income;
- iii. The basic determinant of female education in rural areas is the educational status and employment status of mothers and
- iv. Female education is constrained by the distance between home and school and the non-availability of adequate transport facilities.

Measures recommended to improve female education in rural areas:

Based on the findings of the study, the following measures are recommended to improve female education in rural areas.

1. Establishment of secondary and higher secondary schools within easy accessibility;
2. Providing regular transport facilities;
3. Motivating all the parents to send the children to school and not to work
4. Creating awareness to the rural families about the educational facilities provided by Government and
5. Flexible school timings can be introduced for girl children

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