

CULTURAL DETERMINANTS OF FEMALE EDUCATIONAL ATTAINMENT IN RURAL JHANG, PUNJAB, PAKISTAN

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Development of the human capital is of vital importance for the progress of a nation. The high literacy level is a precondition for the development of any country. The rural women of Pakistan are far behind in education. The cultural norms of the society are reported to be major hindrance in the schooling of rural girls. The study identifies the deterrents of the educational attainment of rural females in the cultural milieu of Punjab. A sample of 288 was selected using multistage random sampling technique from rural Jhang, a district of the central Punjab, Pakistan. Descriptive, inferential and multiple regression analysis demonstrate that the higher education of parents, distances of schools, better residential and wealth statuses of the households, gender bias attitude of the heads of the households towards children's education, innovative attitude of the heads of the households towards female population and perceptions of the heads of the households for higher ideal level of education for females are the significant and positive contributors for the educational attainment of the females living in these rural areas. The study proposed to set up more secondary level schools for girls in these backward rural areas. Government should design long term policies to change the cultural attitude of the society towards the development of human capital of female population of the country.

Keywords: Educational attainment, cultural determinants, rural females

INTRODUCTION

Female population constitutes 49.6% of the total population of Pakistan (GOP, 2006). Any investment in the development of human capital, ignoring female population cannot be fruitful for the progress of country. A number of previous studies highlighted the importance of female education from many aspects of human life. Literature reported a positive contribution of mothers' education on the schooling of next generation (Behrman, 1997; Alderman and King, 1998). Heise *et al.* (1999) found a very small rate of domestic violence among the educated women as compared to their uneducated counter parts. Female education has a positive effect on the economic development of the country. A higher ratio of educated women increases the per capita income of the country (Stephan, 2002). Secondary level education has been found to be significantly related to low fertility rate (Zafar, 1996). Constitution of Pakistan guarantees the education of rural females in the country. In the document, it is stated that "The state shall remove illiteracy and provide free and compulsory secondary education within minimum possible period, make technical and professional education generally available and higher education equally accessible to all on the basis of their merit (Constitution of Pakistan, Article-37)."

The situation of female education in rural areas is not satisfactory in any of the four provinces of Pakistan. The Net Enrolment Rate (NER) of females at

secondary level in rural Punjab is 7% as compared to 24% and 17% in major cities and other urban areas (PBS, 2005).

The Millennium Development Goals (MDG) targeted to "eliminate the gender disparity in primary and secondary education by 2005, and achieving gender equality in education by 2015, with a focus on ensuing girls' full and equal access to and achievement in basic education of good quality (Khalid and Mukhtar, 2002: p.6)." The achievement of target of MDG looks difficult for Pakistan; especially the rural areas are far behind with regards to these targets.

In developing societies like Pakistan, the role of culture in educating females is of vital importance. Hamid (1993) expressed that the socio cultural norms of the rural society of Pakistan keep the girls away from school. Likewise, Khan and Ali (2005) attributed the low school enrolment in rural Punjab to the cultural and religious norms of the society.

Colclough *et al.* (2000) argued that the traditional societies expecting females simply to perform household chores and to look after the younger children increase the chance of low parental investment in the education of their daughters. Parents perceive the low value of female education because the main leadership roles in local and national life are limited to men only. According to them, at household level, the gendered division of labour intensifies the opportunity costs for girls relative to boys.

The present research is designed to identify the socio cultural hurdles in the educational attainment of rural females in Punjab. The study was conducted in a typical district of the province of Punjab, Jhang. Jhang, a centrally located district of the Punjab, has an agro-base economy. People of this historical district, especially those living in the rural areas are traditional and have ethnocentric attitude (Qureshi, 1996). The literacy rate among females of age 10 years and above was much less (31.3) than their male counter parts (60.3) in the district (MICS, 2006). Similarly, there were only 46 girls' secondary schools as compared to 115 for boys in the same district (PBS, 2005).

MATERIALS AND METHODS

Selection criteria of units of analysis

The official age at enrolment in school for children in Punjab is up to nine years (DPI, 2000). It was decided to select a single female child from a household who attained her final educational grade within last five years. The households with any one of the following characteristics constitute the study population:

- i. At least one female child of age six years and above, and had completed her education or dropped from school within the past five years.
- ii. At least one female child of age up to 14 years, who had no chance of enrolment in school.

The female children, who had completed their education for more than five years ago, were not included in the study. Similarly, among 'never enrolled', those who had passed the chance of enrolment for more than five years (were of age above 14) were also dropped during the selection of 'Units of Analysis' (UA) of the study. The respondents of the study were the Heads of the Households (HH).

Sampling

District Jhang consists of four tehsils. Two tehsils (Jhang and Chiniot) were selected randomly. A sample of size 288 was selected using the simple random sampling technique. The sample size was selected using the principle of proportional allocation among the two tehsils i.e. 161 cases were selected from tehsil Jhang while the other 127 from tehsil Chiniot. However, it was decided to select five union councils using simple random sampling technique from each tehsil to give proper coverage to the scattered areas of both tehsils. The number of 'units of analysis' from each union council were selected proportional to the population size of the selected union councils, given in the population census-1998 (DCR, 1998). The data for the research were collected with the help of students of final semester of M.Sc. from the department of Rural Sociology, University of Agriculture, Faisalabad.

Techniques of analyses

The analysis of the study was performed at both, the bivariate and multivariate levels. For bivariate analysis, the final completed educational levels of the 'units of analysis' ranged from 1 to 19, were categorized on ordinal scale in 5 classes viz. no education, primary, middle, matric (secondary level education), and above matric. The independent variables of the study were also grouped in to number of classes on the ordinal scale for the purpose.

Both the response and the explanatory variables were measured on the ordinal scale. Hence the suitable test-statistic for bivariate analysis under crosstabulation is Somers'd (SPSS, 1988). The algebraic form of the Somers'd is as:

$$d_y = \frac{C - D}{C + D + T_y}$$

Where C and D represent the number of concordant and discordant pairs respectively, while T_y is the number of pairs tied on Y but not on X.

The study used the multiple linear regression model to measure the relative effect of the predictors on the response variable. The mathematical form of the model is as:

$$Y = X\beta + \varepsilon$$

$$\text{and } \hat{\beta} = (X'X)^{-1} X'Y$$

Where X is the matrix of independent variables while, $\hat{\beta}$, Y and ε are the vectors of estimates, dependent variable and error term respectively.

The indices variables of the study were not measured on the interval scale. However, when the discrete variable is in the long range, it can be treated as approximately continuous (Stock and Watson, 2003).

RESULTS AND DISCUSSION

Before proceeding to presenting the results and their interpretation, it was deemed fit to present a short description of the variables used in the analysis.

The response variable of the study is the final completed levels of education of the units of analysis. The distances of primary to post graduate level institutions vary for each selected village. The variable 'average distance of educational institutions' was obtained by taking an average value of the distances of the different levels of educational institutions i.e. from primary to post-graduate levels. Index for facilities at home comprised of the two indices i.e. index of the type of residence and index of available items of educational use and other need in the household. The

index for the type of residence includes the items like quality of the construction of the house, ownership status of the residence, whether the house had wall around it, and the number of rooms in the house. Index for items in use comprised the possession/availability of 11 items viz. electricity, refrigerator, computer, internet, television, source of drinking water, sewing machine, source of fuel for cooking, telephone, type of toilet and source of personal conveyance. The score of the combined index ranges from 16 to 41.

The wealth status of the households was measured through the ownership of the area of agriculture land by all its members. The value of female education by heads of the households was measured through their perceptions about ideal level of education for females. The level of the gender bias of the heads of the households was measured through their gender preference attitude among the children on the matters like level of education, advice for study, expenditures on education, social respect for education and willing for educating them in the system of coeducation. The level of gender bias was measured on semantic scale. A negative score indicates a bias in favour of daughters, while a positive score indicates the gender bias of respondents towards sons. The score obtained by each respondent indicated his/her level of the gender bias. The gender bias variable ranged from -2 to 5. The traditional level of the heads of the households was measured using Likert scale through seven questions within the traditional framework of the rural Punjab. It included the statement: the higher education of girls causes them rebel to parents, the higher female education increases the chances of corruption among them, the educated women have disorderly home set up, the activities of women should be limited within four walls, earning of women is a matter of disrespect for family, females are misfit for election job, and women have low IQ as compared to men. The score of the innovative index variable ranged from 7 to 35. A better score on index indicates a weak traditional attitude of the respondents.

The results pertaining to bivariate and multiple regression analyses are presented below:

Bivariate analysis

The bivariate analysis comprises of the crosstabulation using the test-statistic of Somers'd, coefficient of the correlation between the observed values of the final completed educational level of the units of analysis and independent variables, and the average education attainment of the units of analysis at various categories of independent variables. The results pertaining to Somers'd and coefficients of correlation are given in

table 1, while those pertaining to the average education attainment of the units of analysis in table 2. The effect of each of the independent variable is given below:

Table 1. Results of Somers'd for crosstabulation and coefficient of correlation

Variable	Somers'd	Coefficient of correlation
Father education	0.30 ^{***}	0.40 ^{***}
Mother education	0.49 ^{***}	0.24 ^{***}
Distance of school	-0.33 ^{***}	-0.35 ^{***}
Facilities at home	0.53 ^{***}	0.59 ^{***}
Area of agro-land	0.31 ^{***}	0.25 ^{***}
Gender bias level of HH	-0.58 ^{***}	-0.68 ^{***}
Innovative level of HH	0.69 ^{***}	0.76 ^{***}
Perceptions of HH about Ideal level of female Education	0.53 ^{***}	0.70 ^{***}

*** Significant at 0.1 level of significance.

The education of father was found to be positively related to the educational attainment of their daughters with the bivariate analysis. As revealed in table 1, the value of Somers'd (0.301) was highly significant with $p < 0.001$. Similarly, the value of coefficient of correlation (0.40) with p -value less than 0.001 between the response variable and the corresponding values of final completed grade of the units of analysis indicates a positive effect of fathers' education on the educational attainment of their daughters. The average educational attainment of units of analysis increased gradually with increase in the fathers' education. The units of analysis who belonged to the uneducated fathers had average education attainment of 3.08 classes, whereas those belonged to fathers with educational attainment of above matric had average education attainment of 6.94 classes (see table 2).

The value of Somers'd (0.49) found a moderate positive relationship between the education of a mother and her daughter(s). The average education attainment of the selected female children belonged to mothers with secondary level education (13.0) was higher than those belonged to uneducated mothers (4.35). The value of the coefficient of correlation (0.24) between the final completed educational levels of mothers and their daughters also depicted a positive relationship between them. A limitation associated with the result is that 92% of the mothers were illiterate and only 2 (0.7%) mothers had the educational status of matric. None of the mothers had attained college level education (above matric).

Table 2. The average education attainment of units of analysis at various levels of independent variables

Variable	Ave. educational attainment	Variable	Ave. educational attainment
Father education		Acres of agro-land	
No Education	3.08	0	3.10
Primary	3.73	1-3	6.04
Middle	5.97	4-9	5.77
Matric	6.94	10-25	7.08
Inter +	8.00	26-110	9.67
Mother education		Gender bias level of HH	
No Education	4.35	No gender bias	10.45
Primary	8.50	Moderate gender bias	7.32
Middle	6.60	High gender bias	2.98
Matric	13.0	Innovative level of HH	
Distances of schools		Traditional	1.84
Up to 8	8.12	Low traditional	6.14
8.1-16	4.96	Non-traditional	9.96
16.1-25	2.92	Perceptions of HH about Ideal level of female education	
Facilities at home		No Education	0.28
16-22	1.49	Middle or less	2.87
23-29	3.32	Matric	4.93
30-36	7.53	Inter	7.50
37-41	10.06	Graduation & above	10.70

The average distance of the educational institutions (measured in km) of all levels was categorised into three classes i.e. up to 8.0, 8.1 to 16.0 and 16.1 to 25.0 km. The variable was found to be negatively related to the educational attainment of rural female in the population. The value of Somers'd is significant at $p < 0.0001$ (table 1). The coefficient of correlation between the final completed educational level of the selected cases and the corresponding observed average distances of their homes from the school (-0.35) revealed a strong negative relationship between the variables. The average education attainment of the cases that had the average distance of 8 km was 8.12 classes, whereas those with the average distance of 16.1 to 25.0 km had the average education attainment 2.92 classes. A sharp negative linear trend for average educational attainment of units of analysis vs. various categories of average distance of schools revealed the same pattern (see Fig. 1).

The combined index on the characteristics of residence and available facilities in the home reflects the economic status as well as the living standard of the households. The variable is also measured as a proxy for the income status of the households. The index variable of economic status is partitioned in to four classes for the purpose of crosstabulation in the bivariate analysis. The index variable was found to be positively related to the educational attainment of rural females. The value of Somers'd (0.53) is highly

significant for the relationship. The coefficient of correlation between the observed score of the

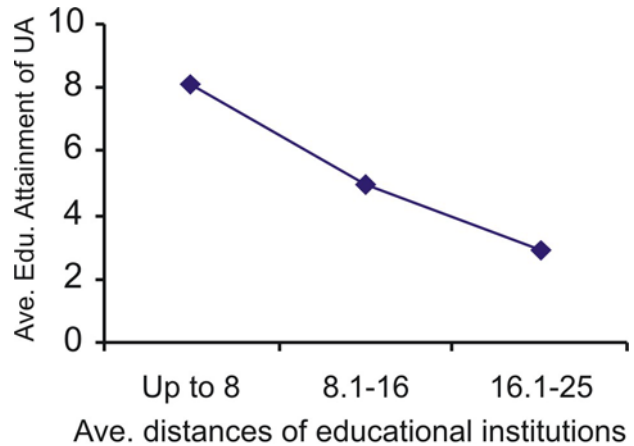


Fig. 1. Ave. Education Attainment of UA vs. Ave. distance of schools

individuals on the index and final completed level of education of units of analysis is also statistically significant ($p < 0.0001$). The average educational attainment was the lowest (1.49) for units of analysis who belonged to the lowest category of the index variable (16-22), whereas, it was maximum (10.06) with the units of analysis who fell in the highest category of the index (37-41). Graphical presentation of the results is given in Fig. 2.

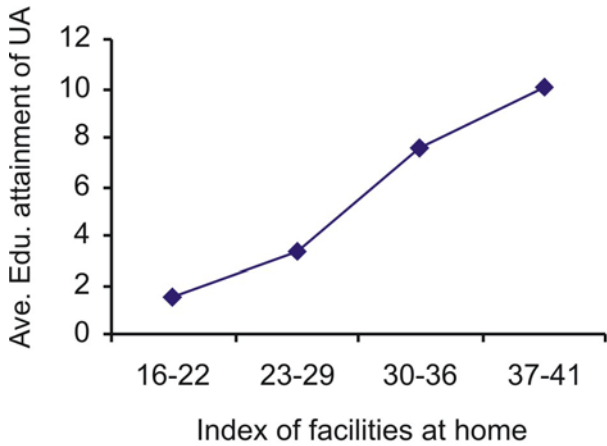


Fig. 2. Ave. Edu. Attainment of UA vs. Index of facilities at home

In the rural areas of Jhang, the area of agro-land is the major asset of the people. The ownership of land is also considered to be a symbol of the social status of the families. Hence, it was decided to measure the wealth status of the household through the area of the agricultural land held by the households. The numbers of acres of agro-land were divided into five categories. The wealth status of the households has positive effect on the educational attainment of the female children in the households with the test statistic of Somers'd (0.31). The coefficient of correlation between the observed values of the number of acres of agro-land and the final completed level of education of the selected female children (0.25) indicates a strong positive relationship between the variables (table 1). As shown in Fig. 3, the average education attainment for the units of analysis has positive linear trend with respect to the various categories of the area of the

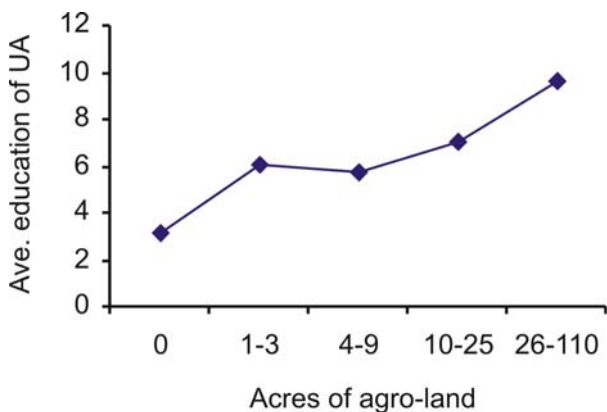


Fig. 3. Ave. Edu. Attainment of UA vs. acres of agro-land

agro-land. The average educational attainment of units of analysis from the households having the agro-land

more than 25 acres was three times more than those who had no agro-land.

The gender bias index variable was categorized into three categories i.e. 'no gender bias', 'moderate gender bias' and 'high gender bias' for the purpose of crosstabulation in bivariate analysis. The study found that the level of the gender bias of the heads of the households and the educational attainment of the female children are negatively associated. The value of Somers'd (-0.58) is statistically significant at $p < 0.0001$. The coefficient of correlation between the score of individuals' level of gender bias of the respondents and the final completed educational levels of the units of analysis (-0.68) also revealed the same relationship. A sharp downward trend (Fig. 4) in average education attainment of units of analysis with increase in the gender bias level of the heads of the households depicted the same relationship.

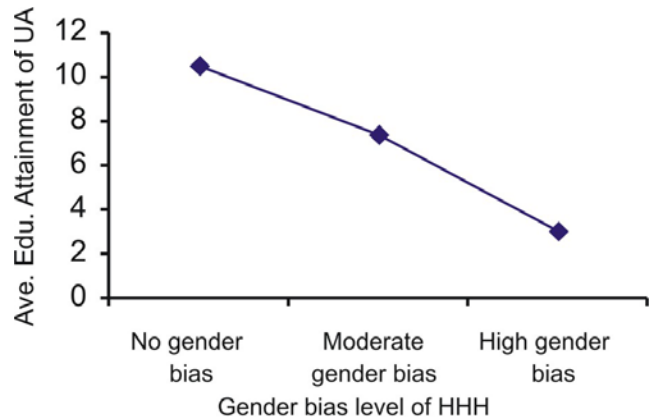


Fig. 4. Ave. Edu. Attainment of UA vs. gender bias level of HHH.

The respondents of the study were partitioned into three classes with respect to the levels of their traditional attitude towards females and their education. Bivariate analysis found a positive relationship between the weak traditional thinking of the heads of the households and the higher educational levels of the female children in the households. A very small p-value ($p < 0.001$) for the Somers'd (0.69) verified the positive relationship statistically. A significant positive coefficient of correlation (0.76) between the individual scores of the innovative level of the heads of the households and the corresponding values of the educational attainment of the units of analysis verified the above relationship. The average education attainment of the units of analysis increased with decrease in the traditional level of the heads of the households. The average education attainment of units of analysis among the heads of the households with highest and weakest traditional level was 1.84 and 9.96 respectively (table 2). The positive

linear relationship between the two variables is depicted in Fig. 5.

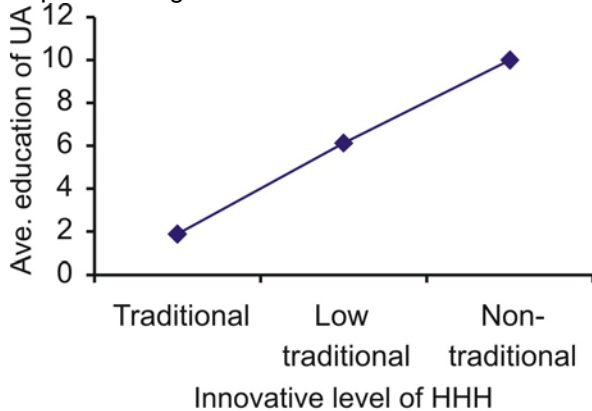


Fig. 5. Ave. Edu. Attainment of UA vs. innovative level of HH.

It is interesting to note that 141 (48.96%) of the heads of the households had the opinion to educate females less than matric level. The perceptions of the heads of the households about females' education were found to be directly related to the actual educational attainment of their female children. The measure of Somers'd presented a highly significant value (0.53) in favour of the positive relationship between the variables. The value of coefficient of correlation (0.70) also depicted a strong positive relationship between the two variables. A sharp positive linear trend in the average education attainment of units of analysis with increase in the perceptions of heads of the households about ideal education for females indicates a strong influence of the heads of the households on the educational attainment of children in the households

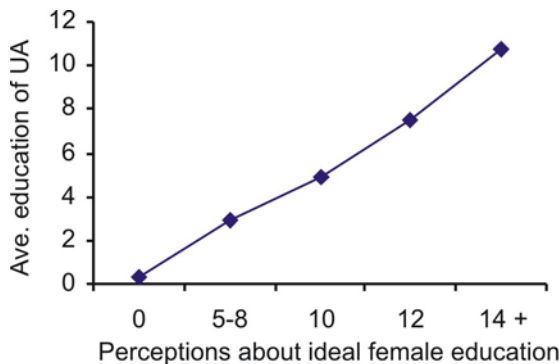


Fig. 6. Ave. Edu. Attainment of UA vs. perceptions about ideal female education

(see Fig. 6).

Multiple linear regression model

It was decided to measure the relative effect of each of the independent variable. The dependent variable of

the regression model is final completed educational level of the selected female children. The results of the analysis are given in table 3. The description of the relative effect of each variable is elaborated in the following paragraph.

Owing to very small number of mothers with higher education, the relative effect of mother education on the response variable could not be measured precisely. A vast majority (99.7%) of the mothers had less than secondary level education and none of the mothers had education of intermediate level or above. The relative effect of fathers' education could not emerge as significant factor for the dependent variable in the multiple regression model, hence it was excluded from the model. A number of other previously conducted studies also reported a weak cross-sex effect of parents' education on the schooling of their children (Pal, 2004; Maitra, 2003; Saha, 2005; Yu and Su, 2005; PCGA, 2005).

As shown in table 3, the negative value of the regression coefficient (-0.103) is highly significant ($p < 0.0001$) for the average distance of educational institutions. It indicates that an increase of one km in the average distance of schools decreased the educational level of units of analysis by 0.103 points.

However, the field experience revealed that it was primarily a cultural rather than any other issue which influences girls' educational attainment. People perceive their daughters at risk for sexual harassment on the long distances of schools. Mobility of adult females outside the home is a matter of disrespect for them. They prefer the females' schooling up to the level of the school within community. The longer distance of educational institutions proved a significant deterrent in the educational attainment of females in Pakistan and other developing countries of the World also (King and Lillard, 1983; Tansel, 1997; Holmes, 1999; Jayachandran, 2002).

A positive value of the regression coefficient for the index of the facilities at households (0.15) indicates that the females with more resources and better living standard attained more education than those who were deprived of these facilities. The index variable also worked as a proxy for the income of the household. Availability of electricity, computer, telephone, better conveyance etc. in the household facilitates the students in proceeding to higher levels of education.

A number of previous studies also presented a positive effect of the indices of facilities in the households on the educational attainment of the female children (King and Bellew, 1990; Filmer and Pritchett, 1999; Dreze and Kingdon, 2001; Rose and Samarrai, 2001).

Ownership of agro-land represents the wealth status of the families in these rural areas. A marginally

Table 3. Results of multiple linear regression analysis

Independent Variables	Unstandardized Coefficients		Standardized Coefficients	
	Beta	Std. Error	Beta	t
Distance of school	-0.103***	0.028	-0.232	-3.671
Facilities at home	0.150***	0.025	0.659	5.986
Area of agro-land	0.029*	0.015	0.048	1.937
Gender bias level of HH	-0.624***	0.091	-0.385	-6.874
Innovative level of HH	0.152***	0.028	0.428	5.390
Perceptions of HH about Ideal level of female education	0.197***	0.045	0.283	4.389

Coefficient of determination (R^2) = 0.864. *Significant at 5% level of significance *** Significant at 0.1% level of significance.

significant ($p=0.05$) value of the regression coefficient for the variable indicates that the families with the more area of agro-land had better level of education of their daughters as compared to those with no or small area of agro-land. An increase of one acre of land is associated with an average increase of 0.029 in the educational level of the units of analysis. The ownership of the area of the agro-land reflects the social status of the families in these rural areas. Families with more land had more respect in the rural society of Punjab. Therefore, families with better social status seek the same status of their next generation through education. Same are the findings of some other studies in the context of the rural areas of the developed countries of the World (King and Lillard, 1983; Holmes, 1999; Sawada and Lokshin, 2001; Keng, 2004).

The multiple regression analysis also found a strong positive cause-effect relationship between the ideal female educational level with the heads of the households and the actual educational attainment levels of the selected female children from the household. The analysis presented a positive value of the regression coefficient (0.197) for the variable.

The rural society of Pakistan is a male dominant society. The decisions of the male head of the household are respected and obeyed without questioning by the other members of the family (Zafar, 1996). A male head of the household with higher desire of education for female population had higher education of their daughters.

The level of gender bias of heads of the households emerged as negative predictor of the female educational attainment with the multiple regression analysis. A negative value of the regression coefficient (-0.624) with a small p-value indicates that a one unit increase in the gender bias score of head of the household is associated with an average decrease of factor 0.624 in the educational level of the units of analysis. The result implies that the gender bias of the heads of the households is one of the major deterrents

in the schooling of rural females. The parents had low value of female education as compared to sons due to their higher opportunity costs (Song *et al.*, 1995; Psacharopoulos, 1997), low wages for females in the job market (Rose and Samarrai, 2001) and the factor of leaving the parental home of daughters after marriage (Liu, 2004) in the socio cultural milieu of these rural areas.

The relative effect of the innovative level of the head of the household was positive for the educational attainment of rural females at very small level of significance. A positive value of regression coefficient (0.152) for the variable indicates that the heads of the households who followed the traditional attitude towards female education had low schooling levels for their female children. The results of the research are in line with the findings of Hamid (1993) and Khan and Ali (2005) in the context of rural areas of Pakistan and Punjab respectively.

A number of studies conducted in the economic perspectives found that cultural factors are more important in the education of females than the economic factors (Johnson and Kyle, 2001; Liu, 2004; Smits and Hosgor, 2006), reflecting the importance of cultural forces in influencing female educational attainment especially for rural community, where socio-economic 'activities' are mainly defined by the culture. The large values of the coefficient of determination (0.86) and F-statistic (299.38) in the ANOVA table verified the goodness of fit of the model statistically.

CONCLUSION

The findings of the study supported the hypothesis that the cultural factors are the major hindrance in the human capital development of rural women in the Punjab. Investment on both, the demand and supply sides in the rural areas of the country is the need of the hour. Field experience realized the need of additional higher level schools, especially the secondary level schools for females in the rural areas of Jhang. The

provision of transport for access to school is also expected to increase the educational levels of rural females. However, just provision of nearby school for girls alone cannot uplift the educational status of rural women. The change in the value system from traditional to modern for the development of female human capital seems a viable strategy for traditional societies like Pakistan. It requires a long run policy for the cultural change and development of innovative attitude. Poor prospects of parents about educating daughters as compared to boys should be treated by increasing the awareness of rural society about the intrinsic benefits of educating girls. Government of the Punjab should also think on compulsory education of girls up to primary level for handling the non-enrolment and high drop rate of female children from schools. For formulating a workable policy for the problem, the study also recommends frequently collecting fresh information (data) about the reasons of dropouts from school of female children and on the responses of parents living in the far off rural areas about their problems in educating their daughters.

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