

Socio-economic Status Factors Effecting the Students Achievement: A Predictive Study

By

Zarina Akhtar

Department of Education, International Islamic University Islamabad, Pakistan

Abstract

This study tries to predict which socio-economic status (SES) factors effects Pakistani students' achievement. The indicators of SES were taken from the national documents of Pakistan. The SES questionnaire was constructed keeping in view the defined indicators. The sample of the study was secondary school students enrolled in four districts of Rawalpindi Division. The achievement of students was collected in form of grades from the gazette of respective Board of Intermediate and Secondary Education. Linear regression showed mother's education, income, refrigerator, and source used to travel to school has positive effect on achievement. Number of siblings and transport facility (car/van) has negative effect on achievement. The linear regression equation was used to get SES score of each student. The obtained SES score was interpreted by five SES classes/groups. In the sample the A⁺ grade achievers were not upper and lower class students. Majority of the students of middle class were average achievers. The students belong to lower class remain low achievers.

Key Words: *Socio-economic Status, SES indicators, students' achievement, SES classes/groups.*

Introduction

Home environment is influenced by the factors such as parent's education, occupation, income, and facilities provided to their children. All these factors together can be defined by a single term the "socio-economic status" (SES) of parents. Thus one can say the SES of parents effects the learning achievement of students. SES perceived by different factors in different countries. It is based on social, cultural and economic situation of the country. This study is aimed to predict which factors of SES are effecting the student's achievement in Pakistan.

Socio-economic status is a term comprises of two variables: the social status and economic status. Social status is acquired by social position and economic status is associated with the money or economy a person has. The SES was measured with same indicators by different sociologists, educationists and psychologists. According to Parson, Stephanie and Deborah (2001), "Socio-economic Status (SES) is the term used to distinguish between people's relative position in the society in terms of family income, political power, educational background and occupational prestige". After ten years the SES was defined by Saifi and Mehmood (2011) as "SES is a combined measure of an individual or family's economic and social position relative to others based on income, education and occupation". These are almost the same indicators.

Many research studies indicated that SES affects the student's achievement. Mirza (2001) conducted a research study to find out the relationship of SES and student's achievement and found that SES has fairly significant affect on their achievement. Khan and Shah (2002) also conducted a research study on factors associated with learning achievement of grade V students in public schools. The findings of the research were that father's education significantly affects the students increase in percentage score specially the urban student's achievement. It was further found that mother's education up to SSC level showed significant increase in urban girls students achievement and decrease from HSC to Master's level education. The findings regarding father's occupation were the father's technical education has greater impact on student's achievement.

Eamon (2005) research showed that low SES prevents access to resources and leads to additional stress and conflicts at home that affects student's academic achievements. Barry (2006) supported the findings of Eamon's study and reported that SES had greater impact on student's test scores.

Hijazi and Naqvi (2006) found that mother education has significant positive relation and mother's age has significantly negative relationship with student's achievement. The study further indicated that income showed significant negative relationship with student's achievement.

Yucel's (2007) observed slightly different results. The aim of the study was to analyze the factors effecting student's achievement in chemistry. The findings indicated that the number of siblings affect the student's achievement. The study showed the significant positive relationship when the number of siblings are two and significant negative relationship when number of siblings increases up to 4 or 5.

The Saifi and Mehmood (2011) study the effects of SES on student's achievement. They used income, parent's education and occupation, material possessed at home, transport and servants as the indicators of SES and data were analyzed through percentages. The findings indicated that parent's education and occupation and facilities at home affect the student's achievement.

Most of the research studies discussed above was conducted in Pakistan. The researcher's of these researches taken the general factors affecting the student's achievement. Khan and Shah (2002) in their study take parent's education and father's occupation only and study its effect on the student's achievement. Hijazi and Naqvi (2006) also discuss the general factors like mother's education and age as independent variable effecting student's achievement. The research of Saifi and Mehmood selected some factors of SES but they did not give any reference from where they selected these. The current research is different from already conducted researches. In this research the researcher used national documents of Pakistan i.e. Pakistan social and living standard measurement survey (PSLSMS), Pakistan House Hold Integrated Survey and Economic survey of Pakistan to identify the SES indicators.

Methodology

The objectives of the present research were to:

- predict the factors of SES effecting the learning achievement of students.
- construct the SES classes/groups.
- study the effect of SES classes on the students achievement.

The population of the study was identified from northern zone called “Barani Zone” of Pakistan. The target population was secondary school students and their parents enrolled at four districts of “Barani Zone” i.e. Attock, Chakwal, Rawalpindi and Islamabad. Multistage stratified random sampling design was used to select the sample. At first stage schools were selected randomly from the lists provided by the respective Education District Officer (EDO) and Federal Directorate of Education offices. At second stage respondents were selected. Total population was 13254. 2450 respondents were selected and delivered the SES instrument. 1580 respondents returned back the completely filled questionnaire. The overall response rate was 64%. For the meaningful interpretation of data a large sample was required.

Socio-economic Status Questionnaire was developed to measure the Socio-economic status of students which was filled by their parents. The factors used for measuring SES of students were selected from national documents of Pakistan. Those factors were parent’s general and professional education, parent’s occupation, family size, number of earning members of the family, number of siblings and their educational level, total income from all sources, nature of accommodation, facilities at home, medical facility used, membership of any organization working around, traveling facilities, distance of school from home and coaching at home.

The developed instrument was pilot tested in four schools (two from Rawalpindi and two from Islamabad). The instrument was delivered to students in their class and was asked to be filled by their parents and returned next day. The instrument was given twice to students with the gap of one week. Test retest method of reliability was used to find out the reliability of the instrument. The calculated value of correlation was 0.89 which indicated that the statements were consistent and measure the same construct. The developed SES questionnaire was validated by the experts of sociology, psychology and education departments of different universities. The queries raised by students were again taken to the experts. The instrument was finalized in the light of expert’s opinion.

Data was collected with the help of the teachers teaching to selected sample. The final SES questionnaire was delivered to students in their classes with help of their teachers before their final examination i.e. Secondary School Certificate (SSC) Examination conducted by respective Boards of Intermediate and Secondary Education (BISE). The questionnaire was filled by parents/guardians of secondary school students and returned to their teachers which were collected by the researcher. The data of students’ achievement was collected after the examination conducted and results were announced by BISE’s. The achievement data was collected from the gazette of respective BISE’s.

The linear regression model was used to predict the effect of the identified factors of SES on students' achievement. The factors significantly affecting to the students' achievement were taken as exogenous (independent) variables and students' achievement was taken as endogenous (dependent) variable.

Exogenous variables

- i. medu = Mother Education
- ii. aggp = Age group 11-15 year's
- iii. income = Income
- iv. rfgt = Refrigerator
- v. tptf = Transport facility (car/van)
- vi. sts = Source used to travel to school
- vii. ns = Number of siblings

Endogenous variables

Ach = The students score of SSC examination taken by respective BISE's was taken as students achievement.

$$SES = a + \beta_1 medu + \beta_2 aggp + \beta_3 income + \beta_4 rfgt + \beta_5 tptf + \beta_6 sts + \beta_7 ns$$

The above linear regression equation was used to determine the SES scores of each respondent. The obtained score was divided in to equal intervals to get SES classes. Five class SES model defined by Socio-economic Classification (2004) was used. The classes were named as upper, upper middle, middle, lower middle and lower class. Usually the student's achievement is measured by their grades. These grades are defined by the Board of Intermediate and Secondary Education (BISE) in gazette. The defined grades were A⁺, A, B, C, D and E. Five SES classes and six achievement grades were the main categories so a large sample was selected for meaningful interpretation of each category may be possible.

Results:

Table:1 Linear regression analysis for SES as predictor of achievement

t-value	p	β	F-ratio	R	R ²
2.55	.01	.079	2.037	0.235	.055

Linear regression analysis for all the SES indicators as predictor of student's achievement is presented in above table. The analysis of the data resulted in R-square of .055, F-value of 2.037 and p value of .01. The R-square of 0.055 implies that the indicators used for measuring SES accounted for only 5 percent of the variation in student's achievement. However the t-value = 2.55 and p = .01 is significant. So it can be concluded that SES effects student's achievement.

Table:2 Regression analysis of SES indicators as predictors of achievement

Predictor	β	t-value	p	F-ratio	sig	R ²
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medu	.083	3.05	.002			
aggp	.053	2.055	.040			
income	.075	2.706	.007			
rfgt	.056	2.114	.035	8.632	.000	.037
tptf	-.063	2.380	.017			
sts	.070	2.813	.005			
ns	-.071	2.761	.006			

Table 2 shows the affect of individual SES indicator as the predictor of student's achievement. The value of R^2 is .037, which implies the identified factors contributed only 3 percent in the variation of student's achievement. Although the value of R^2 is low but the F-ratio is significant at .05 level which leads to conclude that SES indicators are the predictors of student's achievement. Further the beta values and t-values for transport facility and number of siblings was negatively significant while rest is positively significant. It implies the transport facility at home and number of siblings are negatively affecting the achievement of student's.

Table: 3 Distribution of respondents of each SES group in respective grades.

	A ⁺	A	B	C	D	E	Total
Upper Class	0	9	13	15	5	0	42
Upper Middle Class	12	29	92	98	29	0	260
Middle Class	10	87	164	292	88	0	641
Lower Middle Class	11	39	162	265	95	3	575
Lower Class	0	3	13	24	21	1	62
Total	33	167	444	694	238	4	1580

Table 3 is a two way table the horizontal distribution shows the number of respondents in each SES class where as vertical distribution shows the number of respondents in each achievement grade. Table values shows majority (641 and 575) of sample belongs to middle and lower middle class. Table values further highlights the majority (444 and 694) respondents got B and C achievement grades. The upper and lower class respondents were not A⁺ grade achievers. The E grade achievers belong to lower middle and lower class.

Discussion

The findings of linear regression showed that the SES of parents contributed for students' achievement. Although the value of R^2 was very low i.e. only 5 percent but it effects significantly. Surely there were some other factors which may has strong effect on it: like school and classroom environment, student's teacher relationship and pedagogical techniques used by teachers and students cognitive and physical perceptions and abilities.

Mother's education was supported by many research studies (Khan and Shah, 2002; Hijazi and Naqvi, 2006; Saifi and Mehmood, 2011) which effects the students'

achievement. Only one research shows the effect of father's education and that was about father's technical education which effects students' achievement. The reason may be in Pakistani situation father remain out of home for their jobs. Their absence may be the reason for not effecting the students' achievement but in contrast to the mother job no evidence found whether it effects student's achievement.

The income was considered a strong factor of SES. The findings of the study showed the income effects the achievement. It is supported by Eamon (2005), Barry (2006). The research of Hijazi and Naqvi (2006) showed converse results.

The findings regarding the number of siblings showed the increase in no of siblings inversely effects the students' achievement. It also supports the findings of Yucel's (2007) study. The reason of this may be the attention of parents and students divided with siblings and they are unable to focus on their studies. The findings of the study further highlighted that refrigerator and source used to travel to school has significant positive effect on students' achievement. The reason may be if the students travel long to reach the school it exhaust them and exertion did not allow them to focus on their studies.

One finding was about having the transport facility like car/van at home effects negatively the students' achievement. The reason may be the students of secondary class is an adolescent and found of getting new experiences. They may focus on driving which divert their attention. This finding was inline with the finding of table 3. The upper class students were not the high achievers. Further the findings of the table 4 also give interesting results. Although the students from upper middle class, middle class and lower middle class were high (A⁺ grade) achievers. It showed their concern about their studies; but the over all picture showed that majority of students in sample were average (C grade) achiever. The reason may be the majority of sample belongs to middle class. They may have fewer opportunities to focus on their studies.

Recommendations

Keeping in view the findings of the study it is recommended that mother's education may be of central focus to get educated youth. As mother's can educate and train their children to play a positive role in making a country as a developed one. Along with it the parents may carefully decide the family size. A large family has greater responsibilities. In Pakistani culture consciously or unconsciously the parents' responsibilities are transferred to their children and it affects their studies. The children of age 13 years to 15 years may not be allowed to drive a vehicle. They are not mature enough to manage their attention towards their studies. The parents are also advised to enroll their children in the schools near their home because the longer distance to travel affects negatively the achievement of their children.

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