A Comparative study on the Effect of Family Socio-Economic Status between Female and Male Students’ Academic Achievement in College of Education and Behavioural Sciences and Haramaya University, Eastern Ethiopia

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The main purpose of this study was to assess the comparative effect of family socio-economic status on students’ (both female and male) academic achievements in one public university- Haramaya University, and College of Education and Behavioural Sciences in Eastern Ethiopia. The target population of the study comprised of four departments namely Adult Education and Community development (AECD), Educational Planning and Management (EdPM), Psychology and Special Needs and Inclusive Education of undergraduate students of 2014 academic year. A sample of these four departments was randomly selected based on sex. The research specific objectives were to establish the extent to which the family socio-economic status in general and the family income in particular contribute to students’ academic achievement in College of Education and Behavioral Sciences, Haramaya University, Eastern Ethiopia. Descriptive survey research design was employed in carrying out this study. The questionnaire was used to collect data in this study with a sample population of 172 consisting of 85 female and 87 male students from the total of 248 students who were in first year to second year by using stratified random sampling techniques. Data was analyzed using quantitative and qualitative techniques. Quantitative data was analyzed using statistical package for social sciences (SPSS-version 16) whereas qualitative data was sorted out according to the research themes. The study findings indicate that the family income had not brought any significant effect on students’ academic achievement in the subject under study. The findings also showed that there was no statistically significant relationship between Total Family Income per Month (TFIPM) and student academic achievement, (n=172, r =0.07), p > 0.01, two-tailed. However, it was shown that there was statistically significant negative relationship between sex and students academic achievement, (n=172, r = -0.37), P<0.01, two-tailed. Moreover the stepwise multiple regression coefficient analysis indicated that 89% and 86% respectively of the influence of students’ academic achievement were not from educated and non educated family’s contribution as indicated by coefficients of determinations (1-R²). The study finally recommended that there needed to be enhancing the adult education for families to enable them cater for education needs of their children. This can be done by enabling families’ access to educations so as to encourage their children in any level of education.

Key words: Academic Achievement, CEBS, Comparative, East Africa, Female, Haramaya University, Male, Socio-Economic Status.

INTRODUCTION

It is widely recognized that if learners are to maximize their potential from schooling, they will need the full support of their families. Attempts to enhance familial involvement in education occupy governments, administrators, educators and families’ organizations across all over the world. It is anticipated that families
should play a role not only in the promotion of their own children’s achievements but also more broadly in school improvement and the democratization of school governance. The European Commission, for example, holds that the degree of familial participation is a significant indicator of the quality of schooling (Scott, 2003).

Education is valued because it contributes to national development through provision of an appropriate human resource that helps to spur productivity and to eliminate poverty, disease and ignorance Federal Democratic Republic of Ethiopia (FDRE, 2001).

Education of females, in particular, contributes to various aspects of their lives such as increased productivity, family health and nutrition, reduced fertility rates and reduced related child mortality rates (Psacharopoulos and Patrinos, 2002). Familial influence is an important factor affecting both female students’ and male students’ achievement. Thus, families’ education and encouragement are strongly related to improve student achievement in both sexes. Familial education and socio-economic status have an impact on students’ academic achievements at any level of education. Students with families who were both college educated tended to achieve at the highest levels. Children whose families are of high educational scales have a far better statistical chance of participating in Tertiary Education (Olao, 2003).

This is further supported by Ahawo (2009) who observed that in modern society’s families’ influence played a very important role in the academic life of a student. Otula (2007) also supported this by stating that effective learning involves partnership of students, teachers and parents. He also observed that families’ involvement determines the emotional and material input that further determined the motivation level in students towards education.

Socio-economic status of families in one way or the other affects academic achievement. Omoraka (2001), noted that children with rich families have certain needs, physical and sociological which when met contribute positively to their academic performance. These needs may include a conducive reading atmosphere, good food, playing ground, provision of books and other material and attendance at the best schools available. All these help to promote effective learning and good performance in schools. Quality Education is a key to providing the right human resources for social and economic production sectors facilitating wealth creation and improving living standards (Abdullah, 2011).

A report from the Department of International Development (1998) revealed that countries consider the provision of education important for their overall socio-economic development and consequently allocate an annual basic substantial amount of resources to it. Post primary education for a female student has important individual benefits in terms of her options and resources over her lifetime. These benefits extent beyond the female student in affecting her family and the society as a whole; the benefits to society include enhanced economic development, education for the next generation, healthier young females and families and fewer maternal deaths (UNICEF, 2004). The benefit of education for a female and society can be explained by the effect that education has on empowering females to acquire and use new personnel, social and economic behavior that in turn, affect societal change (Moulton, 1997).

According to Wanjiku (1994) where resources are limited, education of males comes first. Females have been socialized to accept this and usually drop out of school for the benefit of their brothers.

Psacharopoulos and Woodhall (1985) concur with Udo (1979) in that they also noted that families, especially mothers favour boys’ education because they depend on adults for old age insurance. This in the end may lead to low females academic achievement in any levels of education, which will effect negatively on the society because lack of education for females has a negative influence on child mortality, economic growth and fertility rate (Kitaev, 1999). Ayodo (2010) observes that the quest for the provision of quality education continues to be a matter of leading concern to both consumers and providers of the education service in Ethiopia and other developing countries.

This is supported by the UNESCO (1994) report reveals that concerns for quality education has dominated the education debate from the early eighties and has remained a central issue in the twenty first century as well. Socio-cultural attitudes, practices and school-related factors which include irrelevant school curriculum and materials, inadequately trained teachers, unfriendly approaches in training and lack of role models are among the factors that have been obstacles to female’s academic achievement (Mbilinyi, 2003).

Most Ethiopian Regional States were relevant areas for this study particularly Eastern Ethiopia because people who live below poverty line in the district were estimated to be 38.9% (World Bank, 2005). The main economic activities of the region included animal farming in pastoralist areas, cereal crop farming, trading in very small scales and other related cash crop farming. However, due to poor infrastructure and lack of market, no sufficient income is realized from these activities. It had been noted that the female students’ academic performance were generally below average; yet, it is acknowledged that an educated female students play a significant role in society as compared to an educated male child. This is basically because females generally play major roles in the provision of essential services to the families particularly with respect to bringing up children in their formative stages. The girl child continues to perform poorly in school as compared to boy child.

Therefore, there was a need to conduct a study to establish a Comparative Effect of Family Socio-economic
Status between female and male students’ Academic Achievement in the College of Education and Behavioural Sciences, Haramaya University, Ethiopia, East Africa in general and the sampled college in particular.

Research Questions
Specifically, the study addressed the following questions:
1. To what extent does family level of education comparatively influence between female and male students’ academic achievement in the College of Education and Behavioural Sciences?
2. How does the family income comparatively affect both female and male students’ academic achievement in College of Education and Behavioural Sciences?
3. To what extent does the family’s size and birth order comparatively affect female and male students’ academic achievement in College of Education and Behavioural Sciences?

Research Hypothesis
So as to systematically examine and cross check the problems with the research questions earlier mentioned, the researcher has formulated the following research hypotheses.

Ho: There is no statistically significant relationship between family’s socio-economic status and their student academic achievement by sex in CEBS.
Ho1: There is no statistically significant relationship between family total income and students’ academic achievement by sex in CEBS.
Ho2: There is no statistically significant relationship between family level of education and students’ academic achievement by sex in CEBS.
Ho3: There is no statistically significant mean difference between birth order and student academic achievements by sex in CEBS.

Specific objectives
The specific objectives of this study were intended to:

i. Assess the extent to which familial-level of education influence female and male students’ academic achievement in College of Education and Behavioural Sciences.
ii. Identify the effect of family income on both sexes academic achievement in the College of Education and Behavioural Sciences.
iii. Show the extent to which the family’s size and birth order can affect both sexes in academic achievement in College of Education and Behavioural Sciences.
iv. Compare the significance effect of familial level education, family income, family size and birth order on both sexes in academic achievement in CEBS.

RESEARCH METHODOLOGY
Descriptive survey research design was employed in carrying out this study. The target population for this study consisted of one higher learning institution, Haramaya University, and particularly one college, College of Education and Behavioural Sciences, regular undergraduate students in this sampled higher institution.

The sample used for this study consisted of one college, four departments from which 172 undergraduate regular first and second year students were taken out of 248 total students. Out of 172 students 85 of them were female students whereas the rest 87 students were male students.

Then stratified random sampling technique was employed because firstly, there were different subdivisions in the targeted population which are important to be considered. Secondly, there were also variations in population sizes of different strata in this case (sex, department and batches) of the populations which were not equal in size.

The researcher was used both questionnaire and unstructured interview which contain three set of questions for each instrument.

To make the interpretation of the findings that would be collected descriptively easier, the researcher used statistical techniques in both descriptive (frequencies, percentages, means, and standard deviation) so as to describe dispersion or variability and the characteristics of the sample. Furthermore, inferential statistics (bivariate correlation, one way ANOVA and stepwise multiple regression were used to show the degree of strength or relationship, difference among and within groups and average relationship to predict or estimate the most likely value of those variables respectively.

RESULTS AND DISCUSSIONS
From Table 1, one can understand that there is a very weak positive relationship between fathers’ and mothers’ level of education and students’ academic achievement \((r_f = 0.02, r_m = 0.09)\) respectively. It seems that mother’s level of education was better contributing to students’ academic achievement than father’s level of education.

As far as sisters and brothers levels of education are concerned, there was a very weak negative relationship \((r_s = -0.02, r_b = -0.07)\) respectively between sisters and brothers levels of education and students’ academic achievement. Therefore, it can be concluded that there was no statistically significant effect between fathers’, mothers’, sisters, and brothers’ levels of education and
students academic achievement in CEBS, \((r_f = 0.02, r_m = 0.12, r_s = -0.03, r_b = -0.07, n= 172)\), \(p> 0.05\), two-tailed.

Moreover, the relative effect of fathers, mothers, brothers and sister level of educations was not found to be statistically significant effect on sex (female and male students), \((n= 172, r_f = 0.09, r_m = 0.06, r_b = 0.01, r_s = 0.04, p> 0.05\), two-tailed. However, this does not mean that there is no effect of these stake holders on sex. As it was indicated in that Table 1, there are weak positive relationships between sex and family level of education. However, it was shown that there is statistically significant negative relationship between being female and male students in academic achievement, \((n=172, r = -0.37), P< 0.01\), two-tailed.

As shown in Table 2, there is a weak positive relationship between Total Family Income Per Month (TFIPM) and student academic achievement as measured in CGPA \((r = 0.07)\). It was found that there was no statistically significant relationship between Total Family Income Per Month (TFIPM) and student academic achievement, \((n= 172, r =0.07), p> 0.01\), two-tailed.

As shown Table 3, 73.60% of the sampled students (both female and male) agreed that “families who are educated enhance their sons’ academic performance through guidance and counseling and effective supervision. On the other hand, 46.6% of the students (both female and male) disagreed that families who are not educated do not contribute to their sons’ academic performance in any way.”

Moreover, the stepwise multiple regression analysis coefficients \((R^2)\) showed us that the magnitude of the families’ Level of Education influence on students' Academic Achievement was contributing to students’ academic achievement respectively through (11%, and 14%); (1) families who are educated enhance their sons’ academic performance through guidance and counseling and effective supervision.” (2) Families who are educated do not contribute to their sons’ academic performance in any way. The t-value is statistically significant for the two issues mentioned in the Table 3. These indicated that 89% and 86% respectively of the influence of students’ academic achievement were not from educated and non educated family’s contribution as indicated by coefficients of determinations \((1-R^2)\).

The accompanying SPSS computer printout shows that a regression equation that predicts families level of education from eight independent variables only two of them were found to be statistically significant: families who are educated enhance their sons’ academic performance through guidance and counseling and effective supervision \((X_1)\), and Families who are not educated do not contribute to their sons’ academic performance in

| Table 1. Correlation Matrix between CGPA, Sex, FLE, MLE, BLE and BLE. |
|-----------------------|-------|-------|-------|-------|-------|-------|
|                      | CGPA  | Sex   | FLE   | MLE   | BLE   | SLE   |
| Spearman's rho       |       |       |       |       |       |       |
|                      | GPA   |       |       |       |       |       |
| r                    | 1.00  | -0.37**| 0.02  | 0.09  | -0.07 | -0.02 |
| Sig.                 |       |       |       |       |       |       |
|                      |        | 0.00  | 0.88  | 0.265 | 0.39  | 0.83  |
| N                    | 172   | 172   | 172   | 172   | 172   | 172   |
|                      |       |       |       |       |       |       |
| SEX                   |       |       |       |       |       |       |
| r                    | -0.37**| 1.00  | 0.09  | 0.06  | 0.01  | 0.04  |
| Sig.                 | 0.00  |       | 0.25  | 0.43  | 0.90  | 0.59  |
| N                    | 172   | 172   | 172   | 172   | 172   | 172   |

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

| Table 2. Correlations Matrices among TFIPM, CGPA and Sex. |
|---------------|-------|-------|-------|
| Spearman's rho | CGPA  | TFIPM | Sex   |
|               |       |       |       |
|               | GPA   |       |       |
| r              | 1.00  | 0.07  | -0.37**|
| Sig.           |       | 0.38  | 0.00  |
| TFIPM          |       |       |       |
| r              | 0.07  | 1.00  | 0.23**|
| Sig.           | 0.38  |       | 0.00  |
| SEX            |       |       |       |
| r              | -0.37**| 0.23**| 1.00  |
| Sig.           | 0.00  | 0.00  |       |
| N              | 172   | 172   | 172   |

**. Correlation is significant at the 0.01 level (2-tailed).
any way ($X_2$). Therefore, the multiple regression equation for dependent variable- Students’ Academic Achievement- measured as ($Y$) could be expressed in terms of these statistically significant independent variables- was: $Y = 1.95 + 0.28X_1 - 0.16X_2$ where 1.95 is constant. The positive sign in the slope (+0.28) showed us that those families level of education- guidance and counseling and effective supervision ($X_1$) tends to have an increment of an average of one point in students' academic achievement- CGPA. The negative sign in the slope (-0.16) showed us that those families- who are not educated ($X_2$) tends to have a decrease of an average of one point in male students’ academic achievement- CGPA. From this one concluded that an either educated or not educated family was not statistically significant contribution in female students’ academic achievement.

As summarized in Table 4, 66.93% of the sampled students (both female and male) agreed that “sex” could be an issued to students’ academic achievement. Moreover, 60.40% of the students (both female and male) agreed that “Both their families and guardian support that they do their homework in a number of subjects,” that contributed to their children academic performance in any way.” Moreover, the stepwise multiple regression analysis coefficients ($R^2$) showed us that being a female and a male resulted in a variation of students’ Academic Achievement, which was contributing to students’ academic achievement respectively (12%, and 14%); (1) being a female and a male.” (2) Both their families and guardian help them do their homework in a number of subjects which in turn contributed to their children’s academic achievement in any way. The t-value is statistically significant for the two issues mentioned in Table 4. These indicated that 88% and 86% respectively of the influence of students’ academic achievement were not from sex and family’s contribution as indicated by coefficients of determinations ($1-R^2$).

The accompanying SPSS computer printout showed us that a regression equation that predicts Sex and Families degree of support from five independent variables only one of them were found to be statistically significant: Sex ($X_1$), and Both families and guardian help them do their homework in a number of subjects ($X_2$). Therefore, the multiple regression equation for dependent variable-Students’ Academic Achievement- measured by CGPA ($Y$) could be expressed in terms of these statistically significant independent variables-:

$Y = 4.59 - 0.79X_1 - 0.11X_2$

where 4.59 is constant. The negative sign in the slope (-0.79) showed us that sex ($X_1$) tends to have a decrement of an average of one point in students’ academic achievement- CGPA; moreover, the negative sign in the slope (-0.11) showed us that both families and guardian help them do their homework in a number of subjects ($X_2$)
tends to have a decrease of an average of one point in students’ academic achievement- CGPA.

As indicated in Table 5, the computed F ratio at \( \alpha = 0.05 \), \( F(8, 163) = 2.09 \) that exceeds the critical region at \( F(8, 163) = 1.94 \). Therefore, one can conclude that there is statistically significant mean differences between birth date order and students’ academic achievement measured in CGPA, \( F(8, 163) = 2.09, p < 0.05 \), two-tailed respectively. This indicates that sibling birth order resulted in significant mean difference in students CGPA.

Table 5. ANOVA Summary Table between Birth order and CGPA.

<table>
<thead>
<tr>
<th></th>
<th>SS</th>
<th>df</th>
<th>MS</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Between Groups</td>
<td>19.43</td>
<td>8</td>
<td>2.43</td>
<td>2.09</td>
<td>0.04</td>
</tr>
<tr>
<td>Within Groups</td>
<td>189.09</td>
<td>163</td>
<td>1.16</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>208.51</td>
<td>171</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* The mean difference is significant at the 0.05 level (2-tailed).

Conclusions

Based on the aforementioned data result and discussions, the following conclusions were drawn: From the data analysis (quantitative and qualitative), it was able to be concluded that male students were higher achievers as compared to their female students’ counterparts.

From the Spearman rank order of coefficient of correlation, one was able to conclude that there was no statistically significant effect between fathers’, mothers’, sisters, and brothers’ levels of education and students academic achievement in CEBS, \((r = 0.02, r_m = 0.12, r_s = -0.03, r_b = -0.07, n = 172)\), \(p > 0.05\), two-tailed. Furthermore, the relative effect of fathers, mothers, brothers and sister level of educations was found not to be statistically significant effect on sex (female and male students), \((n = 172, r = 0.09, r_m = 0.06, r_b = 0.01, r_s = 0.04, p > 0.05\), two-tailed. However, this does not mean that there is no effect of these stake holders on both sexes.

It was also found that, there were weak positive relationships between both sexes and family level of education. However, it could be concluded that there was statistically significant negative relationship between sex and students academic achievement, \((n=172, r = -0.37), P < 0.01\), two-tailed.

Also, there was a weak positive relationship between Total Family Income Per Month (TFIPM) and student academic achievement measured by CGPA with the Spearman rho \((r = 0.07)\). Therefore, no statistically significant relationship between Total Family Income Per Month (TFIPM) and student academic achievement, \((n = 172, r = 0.07), p > 0.01\), two-tailed was observed.

It was found that 73.60% of the sampled students (both female and male) agreed that “families who are educated enhance their sons’ academic performance through guidance and counseling and effective supervision. On the other hand, 46.6% of the students (both female and male) disagreed that families who are not educated do not contribute to their sons’ academic performance in any way.” Moreover, the stepwise multiple regression analysis coefficients \((R^2)\) showed us that the magnitude of the families’ level of education influence students’ Academic Achievement respectively was (11%, and 14%); (1) families who are educated enhance their sons’ academic performance through guidance and counseling and effective supervision rather than their daughter.” (2) Families who are not educated do not contribute to their sons’ and daughters academic performance in any way. Moreover, the t-value was found to be statistically significant for the two issues mentioned in the analysis. These indicated that 89% and 86% respectively of the influence of students’ academic achievement were not from educated and non educated family’s contribution as indicated by coefficients of determinations \((1-R^2)\).

Moreover, the stepwise multiple regression equation for dependent variable- Students’ Academic Achievement-measured by CGPA \((Y)\) could be expressed in terms of these statistically significant independent variables- was given by: \(Y = 1.95 + 0.28X_1 - 0.16X_2\) where 1.95 is constant. The positive sign in the slope (+0.28) showed us that those families whose level of education were better- guidance and counseling and effective supervision sons over daughters \((X_1)\) tends to have an increment of an average of one point in students’ academic achievement- CGPA. The negative sign in the slope (-0.16) showed us that those families- who were not educated \((X_2)\) tends to have a decrease of an average of one point in students’ academic achievement- CGPA. It was found that 66.93% of the sampled students (both female and male) were agreed that “sex” that is being a female and male could matter their academic achievement. Moreover, 60.40% of the students (both female and male) agreed that “Both their families and guardians who support them to do their homework in a number of subjects,” has contributed to their academic performance in many ways.” Besides, the stepwise multiple regression analysis coefficients \((R^2)\) showed us that being a female and a male was resulted in a variation of their Academic Achievement (12%, and 14%) respectively; (1) being a female and a male.” (2) Both their families and guardian help them do their homework in a number of subjects which in turn contributed to their
children's academic achievement in many ways. The t-value was found to be statistically significant for the two issues mentioned in the analysis. These indicated that 88% and 86% respectively of the influence of students' academic achievement were not from sex and family's contribution as indicated by coefficients of determinations (1-R²).

Therefore, the stepwise multiple regression equation for dependent variable- Students' Academic Achievement- measured by CGPA (Y) could be expressed in terms of statistically significant independent variables which was found to be;

\[ Y = 4.59 - 0.79X_1 - 0.11X_2 \]

where 4.59 is constant. The negative sign in the slope (-0.79) showed us that sex (X₁) tends to have a decrement of an average of one point in students' academic achievement- CGPA; moreover, the negative sign in the slope (-0.11) also showed us that those families and guardian help them do their homework in a number of subjects (X₂) tends to have a decrease of an average of one point in students' academic achievement- CGPA.

It was also concluded that there was statistically significant mean differences between birth date order and students' academic achievement measured in CGPA, F(8, 163) = 2.09, p < 0.05, two tailed respectively.

**Recommendations**

On the bases of the conclusions drawn from the aforementioned data, the following recommendation is advisable.

The government should sensitize families on need and importance of supporting their children (female and male) education for better achievement. University leaders, school supervisors, school principals, home room teachers and woreda educational supervisors should advice families on how to properly use their resources on supporting their children's (male and female) academic achievement in any level of education.

Stakeholders in education, that is, NGOS, Ministry of Education, teachers, families, teacher-parent associations (PTA) and politicians should sensitize families on the need for family planning so that every child cannot be vulnerable to enhance her/his participation in education.

Family life programmes should focus on encouraging families not to have more than four children and place emphasis on them as the ideal family size for people living above poverty line. The government should also balance the effect of affirmative action in education by providing equal chances for both female and male students even though education of females, in particular, contributes to various aspects of their lives such as increased productivity, family health and nutrition, reduced fertility rates and reduced related child mortality rates. Therefore, familial influence should be taken into account that it has been an important factor affecting both female and male students' academic achievement in any level of learning institution.

Children whose families are of high educational scales have a far better statistical chance of participating in Tertiary Education in Ethiopia. Therefore, the government should develop a succession plan to educate its nation for the betterment of economical, social, intellectual, political and development of the next generations' life.

Explanations for the relationship between socioeconomic background and students' educational outcomes must be considered in order to identify the most theoretically appropriate indicators for application to school students. Educators, researchers, curriculum designers, politicians, leaders, media personnel and policy makers should talk about the degree to which students from non educated family backgrounds are critically disadvantaged in regard to achievement at school, school completion, and participation in post-secondary education and training.

It was evidenced that the human capital of the mother is usually more closely related to the attainment of the child than is of the father. Therefore, the Ethiopian government bodies should encourage mothers' in general and female education in particular for the betterment of children in schools.

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