

# **THE EFFECTS OF ENVIRONMENTAL BASED SOCIO-ECONOMIC FACTORS ON ENROLLMENT OF MALE STUDENT IN SECONDARY SCHOOL IN KIRINYAGA COUNTY CENTRAL REGION OF KENYA**

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**International Academic Journal of Social Sciences and Education (IAJSSE) | ISSN 2518-2412**

**Received:** 17<sup>th</sup> July 2017

**Accepted:** 24<sup>th</sup> July 2017

Full Length Research

**Available Online at:**

[http://www.iajournals.org/articles/iajsse\\_v1\\_i5\\_36\\_46.pdf](http://www.iajournals.org/articles/iajsse_v1_i5_36_46.pdf)

**Citation:** Wamichwe, J. M., Gichuhi, L., Mari, N. & Muriithi, M. (2017). The effects of environmental based socio economic factors on enrollment of male student in secondary school in Kirinyaga County central region of Kenya. *International Academic Journal of Social Sciences and Education*, 1(5), 36-46

## **ABSTRACT**

The male student enrollment in Kirinyaga County, Central region of Kenya has been increasing at a decreasing rate. It has been observed that more females than males are participating in education in secondary schools. This situation is unique and peculiar and a reversal of the gains made at primary levels where more male students than female students were enrolled. According to research, student's enrollment is attributed to socio-economic factors that are environmental in nature. Thus, this study was an attempt to determine the socio-economic factors that influence the enrollment of male students at the secondary level of education in Kirinyaga County, Central region of Kenya. The objective of this study was formulated to find out the relationship between environmental based socio-economic factors and enrollment. The study employed cross sectional survey as a research design based on primary data collected among the participating standard eight students who completed school in the year 2014. The target population consisted of 12195 standard eight students, (2014 cohort) from 195 public primary schools.

The research was based on literature review of studies and reports from different scholars, which affirmed that certain issues affecting male student enrollment were closely correlated to socio- economic (environmental based factors). Data collection was based on sample size of 391 of which 391 questionnaires were administered and 352 responded. The analysis applied inferential statistics and descriptive analysis in analyzing and interpretation of the data. The results from the findings indicated that environmental based factors influenced the low enrollment of male students in secondary schools in Kirinyaga County. The study recommended that school managers, teachers, stakeholders should be trained on the need to enhance guidance and counseling to the boy child on the importance of education. Further, there is urgent need to eradicate manufacturing and consumption of illicit brews, as well as the requirement of tuition free secondary education.

**Key Words:** *student enrollment, environmental based socio-economic factors, guidance and counseling, illicit brew*

## **INTRODUCTION**

Education enrollment refers to the act or the process of being involved in the learning process. According to UNESCO (2008), reasons for enrollment in school are multiple and may depend on a country's level of development. The report indicates that students may drop out of school due to environmental factors (youth based economic activities, overcrowding, alcohol and substance abuse, joining gangs). Bella and Mputu (2004) in the UNESCO report (2008) noted that lack of enrollment will occur when environmental based factors coincides with students' lack of confidence in the schools ability to give them adequate support. Thus the school environment has the potential to act as a powerful support mechanism to sustain students in school and be able to deal with external difficulties without making the students drop out of the school environment.

A study conducted by the Jamaican Education Department (2004) Bailey and Parry (2000) found that the ratio of boys to girls enrollment have been shifting steadily in favour of girls, especially in upper high school and beyond. The cause of the shift was identified as the function of the “modern male role model”, which Bailey (2000) referred to as “Feminization of Education”. Parry (2000) and Samms-Vaughan (2006) argued that the modern male role model has two distinct function. That is, the decline of “appropriate male role model” and the rise of “inappropriate male role models”. The appropriateness versus inappropriateness of role model has been generally found to be a leading cause of negative and positive enrollment rate in high school students (Leo-Rhynie, 1993). According to Samms-Vaughan (2006), children and young person groups up in communities where there are wide choices in role models, such as ministers, leaders, and other professionals.

Young persons observe the life styles of the persons and makes choices on the “wealthy and power” and the “modest life of others”. In a study conducted by Leo-Phynies (1992), it was found that the role models influence education enrollment and career choices. Bryant and Zimmerma (2003) conducted a research study involving 700 adolescences 90% of the respondent named their parent and other relatives as primary role models in addition to famous and successful personalities. These finding were also supported by Oberles (1974) who investigated gender differences in role model among rural Texas adolescents. According to his finding more boys than girls endorsed famous and glamorous figures such as movie stars, athlete, TV presenters and high profile public figures; while the girls endorsed less glamorous figure such as teachers, and school counselors, extended families and friends. The personalities endorsed by the boy were “talent oriented” as compared to those endorsed by girl student who in turn were educated (Teachers). This implies that the male student put more emphasis on personalities regardless of their education background which may have had a trickle-down effect on male enrollment and career choices (Leo-Phynic, 1993).

Traditionally, men are generally expected to be more aggressive, both physically and verbally and also the bread winner and “protector.” According to Sayer (1982), men enjoy taking risk and play fighting games and enjoy “dares”. More men than women are convicted for crimes especially crimes of violence. Thus, the traditional set-up has influenced men to take risks in order to accomplish the societal expectation. Many male students are expelled from school since they dare to go against the school rules and regulation. Besides, the male students also take the risk of dropping out of the school in order to venture in economic activities that will make them economically empowered (Knut, 2009). Thus, the male students may not value education, as much as they would value money. The fact that the tradition values the economic status of man more than educational status, male students at an early age will opt to drop out of school, find gainful employment, get married , become the head of the family, provide the household necessities and eventually raise the family. In addition, they will struggle very hard to gain more money thus seeking recognition in the society, since a rich or wealthy person is more recognized than an educated man in our social cultural set-up. This concept may trickle down to school enrolment, leading to a situation where retention, completion and graduation rate for female students will be higher than that of male students, like it is in the Central region secondary schools in Kenya (Ongeri, 2010).

Socio-cultural factors may influence the enrollment of male student. A study conducted by Fatuma, Ilikoye, Nyambura and Guantai (2013) revealed that the contemporary family was characterized by parent, mainly mothers who made explicit effort not only to keep their daughters in school but also motivate and support them to attain educational successes both in the process of the school cycle and in the benefits of the outcome. The findings also revealed that many parents constructed their daughters as worthwhile economic investment whose economic and material returns to the parent were guaranteed. Boys were constructed as self-centered and less likely to support their parent economically after completing school. In the same study it was also found out that, the schooling culture has increasingly made the girl-child self- confident, both socially and economically and also in academic performance. For example, the school workforce was mainly made up of females rather than males which portrayed an explicit enthusiasm of empowering the girl child through education.

Outlawed social grouping has far reaching effects on enrollment of students (American Journal of Public Health, 2014). In the report study by the American Journal of Public Health, it was found out that student who join outlawed groups (gangs) were not only faced by the risk of being incarcerated, receiving illegal income but also less likely to finish schooling and more likely have poor health. Amuda (2014) in his study found out that, joining a “gang” served as turning point, creating consequences that cascade into other areas of life for years afterward. Researchers have identified a number of factors that it is there put youth at risk of gang involvement. According to research conducted by Snyder and Sickmund (1995) the school failure was found as a leading cause of youth joining outlawed groups. The study shows that, easy access to illicit drugs, and the perceived financial rewards of drugs dealing posed as attractive alternative for youth with inadequate education and limited employment opportunities. It was also found out that, most recruits have poor self-image, low self -esteem, and attempt to seek the recognition they failed to receive from home or school this result to low enrollment in school. Knut (2009) observed that the society in central Kenya has neglected the boy child. The negligence has made the boy child to join illegal groups in order to have economic gains such undertaking, include unlawful manning of bus station, extortion of money and other dangerous assignment. The aforementioned illegal economic activities are undertaken at the expense of schooling hence law enrollment (MOE Central Region, 2009).

## **STATEMENT OF THE PROBLEM**

In Kirinyanga County central region of Kenya, the male students’ enrolment is increasing at a decreasing rate while that of female is increasing at an increasing rate. The situation in Kirinyaga County in Central region of Kenya is peculiar. The number of male students participating in secondary school is low as compared to the same number that graduated from primary school. This contrasts the natural expectation as explained by the following facts. The population of females (school going age) is lower in Kirinyaga County, Central region of Kenya yet more females than males are enrolled against the normal distribution of the population of the official school going age, (Ministry of Education, 2009). Further, the enrolment of females at primary school is low in most regions of Kenya, but their enrolment has not shifted in transition to secondary school as indicated by their enrolment trend. The

enrolment indicators at the primary level show that more males than females are enrolled against the population trend in Kirinyaga County Central region. One would expect the same trend to continue from primary to secondary level. The fact that there is a continuous trend of female students outshining male students at secondary level enrolment attracts concern. In addition it is only in Central region where, with the exception of North Eastern, there is a consistent trend of female students outshining male students in secondary school enrolment. Lastly, the regional leadership outcry (KNUT, 2014; Mwai, 2010; Onger, 2011) on male enrollment trend is weighty and shows that there is a problem in male enrolment and therefore a gap to fill. According to regional educationists, the male students' enrolment in Kirinyaga County (central region) is unique. This situation attracts attention and concern as to why it is happening. Thus this study attempted to determine whether or not environmental based factors affects the enrolment of males in secondary schools in Kirinyaga County with a key concern that environment based factors could be a key driver to low enrolment as supported by various pronouncements by community leaders that young boys are continuously engaging in "bandits militia" in the region and engaging a lot at taking illicit brew.

### **OBJECTIVES OF THE STUDY**

The objective of this study was to determine whether or not environmental factors (adult based economic activities, youth based economic activities, role model, drugs and substance abuse, social grouping) affect the enrolment of male students in secondary school in Kirinyaga County, Central region of Kenya.

### **SIGNIFICANCE OF THE STUDY**

The study provides a basis for government decision making regarding factors that influence low enrolment of male students in secondary school, and hence come up with concrete means to address the problem appropriately. The results of this study will assist the schools in discerning the variables that are likely to undermine gender parity in the provision of education. The variables discerned will be used to formulate and implement policies friendly to gender parity in education. In addition, the findings from the study will be an incentive to other scholars who will be motivated to carry out further research in the areas being addressed by the study.

### **RESEARCH METHODOLOGY**

#### **Research Design**

The study adopted a cross-sectional research design. The target population was 12,915 (standard 8 students 2014), from 195 public primary schools in Kirinyaga County Central Region. This was derived from statistical abstracts in the county Education Office (Kirinyaga). The tracer method of data collection was used to collect data from students and from among the 195 public primary schools. The students were traced from schools to their homesteads. The headteachers from the selected 6 schools were used to identify the students. Data collection instrument was based on a structured questionnaire that solicited responses from individual students and the head of the institutions from the sampled students.

To validate the instrument, the sampling validity was used as prescribed by Mugenda and Mugenda (1999). The instrument was given to two groups of experts; one group was required to assess what concept the instrument was trying to measure. The other group was asked to determine whether the set of items or check list accurately represented the concept under study, when the two groups concur, then the instrument was considered valid. The pilot study was done in Laikipia West Sub County, this is because the region has a similar socio-economic set-up to Kirinyaga County. To test reliability, Cronbach's alpha reliability coefficient was used, which indicated 0.792 co-efficient which is recommended for newly developed question (Sekaran, 2003).

### **Data Analysis**

The tracer method of data collection was used through questionnaires, while the head teachers from the selected 6 schools out of the 195 public primary schools were used to identify the students who completed standard 8 in 2014. The data was collected coded, cleaned and entered into a computer program where Binary Logit Regression and Principal Component Analysis was performed to analyse the data using Statistical Package of Social Sciences (SPSS) in order to test the strength of the dependent variable. The choice of Binary Logit Regression Model was guided by the fact that the dependent variable is a discrete and dummy which required maximum likelihood estimation (Pindyck & Rubinfeld, 1985). To perform both descriptive and inferential statistics, SPSS and STATA computer packages were used. SPSS was mainly used for descriptive statistics while STATA was used for inferential statistics which included odd ratios and P-values. Descriptive statistics included percentages, frequencies, mean and standard deviation while the inferential statistics included chi-square, cross-tabulation, and Binary Logit Regression.

### **FINDINGS AND DISCUSSION**

The analysis done on the effects of environmental factors on the male enrollment indicated a positive effect on the two variables. That environment factors have high effect on the enrollment of male student hence male student enrollment is dependent on environmental factors as indicated by both descriptive and logit regression analysis respectively.

#### **Descriptive Analysis on Environmental Based Factors and Male Students' Enrolment**

The respondents were asked to state as to what extent environmental based factors influenced individuals to join or not to join secondary schools. Table 1 shows that 51.4% of the respondents indicated that availability of adult based economic activities influenced school enrollment to a great extent, and another 22.4% indicated to a very great extent, this brings to a total of 73.8% of those who indicated to a great extent while 2.6% indicated to a fairly extent. Twenty one percent of the respondents indicated that availability of adult based economic activities influenced school enrollment to a fairly great extent and 3.1% indicated that it does not influence school enrollment at all. This is in line with Amuda (2014) who in his study, he found out that, joining a "gang" served as turning point, creating consequences that cascade into other areas of life for years afterward.

**Table 1: Environmental Based Factors and Male Enrollment Descriptive**

Statement	Not at all	Little extent	Fairly great extent	Great Extent	A Very Great Extent	Mean (S.D.)
Availability of adult-based economic activities	3.1%	2.0%	21.0%	51.4%	22.4%	3.88 (0.885)
Availability of youth based economic activities	3.1%	1.7%	25.0%	45.5%	24.7%	3.87 (0.912)
Role model	3.7%	3.4%	46.3%	29.3%	17.3%	3.53 (0.942)
Alcohol and substance abuse	3.7%	1.7%	7.4%	14.8%	72.4%	4.51 (0.973)
Average	3.4%	2.2%	24.9%	35.3%	34.2%	3.95 (0.928)

Notes: Standard deviations in parentheses

In addition 45.5% of the respondents indicated that availability of youth based economic activities influenced school enrollment to a great extent while 24.7% indicated to a very great extent. This brings to a total of 70.2% of those who indicated availability of youth based economic activities influenced student’s enrollment to a great extent. This conforms to Knut (2009) who argue that the male students also take the risk of dropping out of the school in order to venture in economic activities that will make them economically empowered

The study findings further indicated that 46.3% of the respondents were in agreement that role model influenced student’s enrollment to a fairly great extent, while 29.3% indicated to a great extent and 17.3% indicated to a very great extent. Majority (72.4%) of the respondents indicated that alcohol and substance influenced student enrollment in secondary schools to a very great extent and another 14.8% to a great extent, this brings to a total of 87.2% of those who agreed to a great extent that alcohol and substance abuse influences student enrollment in secondary schools. This is similar to Samms-Vaughan (2006) who noted that the children and young person groups up in communities where there are wide choices in role models, such as ministers, leaders, and other professionals.

A mean of greater than 1 and less than 1.5 implied that the environment based factors influenced student enrollment to no extent. Means of greater than 1.5 and less than 2.5 implied that environment based factors influenced student enrollment to a little extent. Means of greater than 2.5 and less than 3.5 implied that environment based factors influenced student enrollment to a moderate extent. A mean of greater than 3.5 and less than 4.5 implied that environment based factors influenced student enrollment to a greater extent. A mean of greater than 4.5 implied that environment based factors influenced student enrollment to a very great extent. These finding were also supported by Oberles (1974) who investigated gender differences in role model, among rural Texas adolescents where according to his finding more boys than girls endorsed famous and glamorous figures such as movie stars, athlete, TV presenters and high profile public figures; while the girls endorsed less glamorous figure such as teachers, and school counselors, extended families and friends.

The standard deviation on the other hand describes the distribution of the response in relation to the mean. It provides an indication of how far the individual responses to each factor vary from the mean. A standard deviation of near 1 indicates that the responses are moderately distributed, while that near 0 indicates that there is no consensus on the responses obtained. An average of 0.928 for all statements on environment based factors indicates that the responses were moderately distributed. This corresponds to Kibiego (2010) who in his research study found out that culture attributes such, as respect and manners are more pronounced in the conservative African Society, than the values of education and further argues that, the members of immediate family are child’s first teachers.

### **Logistic Regression Model**

Marginal effects of environmental factors were jointly significant since the calculated Chi-square was 0.798 significant at 5%. Similarly model power was good with a 99.4% of respondent enrollment status correctly predicted. Results of environmental factors indicated that, availability of youth based economic activities emerged as an important influence of enrollment status of male respondents to secondary schools. This corresponds with Amuda, Ali and Durkwa (2016) conducted research on gender difference in academic performance in economics subject among senior secondary school students in Maiduguri Metropolis, Borno State, Nigeria. Their intention was to determine whether there were gender differences in performance of the subject. Findings revealed that indeed, male students had better grades than the female counterparts and environmental factors are likely to play a role.

**Table 2: Perceived Effect of Environmental Factors on Enrolment**

Independent variable	Enrollment status (1=enrolled, 0= not enrolled)	
	dy/dx value (odds ratio)	Marginal effects (Change in probability)
Availability of youth based economic activities	-.2430534**	-.0013631**
Availability of a role model	-.1869056*	-.0010482**
Alcohol and substance abuse	1.137694**	.0063806*
Constant	1.649893**	-

*Notes:*

$$y = Pr(enrolment) (predict) = .9943598$$

(#) *dy/dx is for discrete change of dummy variable from 0 to 1*

\*\*\*, \*\* and \* indicate statistical significance of parameters at 0.01, 0.05 and 0.10 levels respectively

$$Number\ of\ obs = 351$$

$$Pseudo\ R2 = 0.1823$$

$$LR\ chi2\ (2) = 7.98***$$

Similarly, availability of a role model and influence from alcohol and substance abuse emerged as important predictors of male student enrollment to secondary schools for both models (that is for both change in odd ratio and change in marginal effects). Igbinedion (2011) was supportive of the view that inequality in education access was partly due to differential treatment of boys and girls in schools. According to the study, one-gender dominance in enrollment to academic programs could be attributed to biased processes or socialization and stereotyping.

## **CONCLUSIONS**

On the basis of the foregoing findings the following conclusions were drawn. The study concluded that, many students completing primary education do not progress to secondary school due to high levels of poverty among the parents probably due to low levels of household income coupled by ungainful parental occupation.

The study established that the cost of education is a hindrance toward transition to secondary schools in the county. Many poor households had difficulties meeting the requirements for enrolling their children in form one. There is need for more government support on the issue of education, targeting the poor households since is an effective way of breaking the vicious cycle of poverty.

The study further concluded that environment based factors influenced students enrollment in secondary schools. This study also confirms that improved school environment is critical for quality education delivery through improved teaching and learning process. Kenya Education Support Programme interventions should aim at increasing funding and provision of basic schooling facilities with an aim of improving the learning teaching environment.

## **RECOMMENDATIONS**

1. The households should be made aware of the importance of boy-child education through compulsory education meetings in school and at the County level.
2. The heads of educational institutions should come up with strategies to promote transition and completion rate among boys in secondary schools like motivating the boys, guiding and counseling them and starting boy-child welfare that will check in the vices faced by boy child in school.
3. The government, private sector and Non- governmental organizations should intervene and provide more funds in the schools as bursaries so as to help boys from low income families finish their education. The study recommends intervention and implementation of an effective framework for participatory rural development that will ensure access, retention and completion rates of secondary school students. They include provision of bursaries to students from the Constituency Development Fund, commercial banks and civil society.
4. Measures should be put in place to protect, promote and enhance male student education at all levels.
5. The state and non-state actors should institute measures aimed at improving economic conditions at household level, thus improving household income.

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