

Influence of Number of Siblings and Learning Resources at Home on Students' Academic Performance

Korir Walter

Moi University, School of Education, Kenya

Abstract

Kipkelion Sub-county academic performance has been dismal for the last five years (2007 - 2012). Study investigated the influence of home environment on students' academic performance on the influence of number of siblings and learning resources at home on students' academic performance in public day secondary schools, based on Ecology System Theory by Bronfenbrenner. The sample was 210 form four students selected using stratified and simple random sampling based on the causal-comparative research design, since manifestations of independent variables on dependent variable had already occurred. A questionnaire was used to solicit information on students' home environment. Whereas, document analysis was used to collect information about the students' academic performance based on Mock Examination. Data was analysed using descriptive and inferential statistics such as: t-test and ANOVA, Study revealed that, home learning resources significantly influenced students' academic performance. However number of siblings had no effect on students' academic performance. Therefore, this research determine the influence of number of siblings and learning resources in which learning resources at home had significant influence, this will sensitise the parents, teachers and stakeholders on how address these factors so as to improve students' academic performance. Study recommends active participation of parents on students' academic affairs by providing adequate learning materials for example: text books, furniture, lighting, and ample study space at home.

Keywords: Influence, home environment, learning resources, number of siblings, academic performance.

INTRODUCTION

Education is the development of the endowed capacities in the individual which will enable him to control his environment and fulfill his responsibilities to a major extent (World Bank, 2004). Over the past several decades, scholars have been concerned with the poor academic performance of children. Studies revealed that various factors are responsible for scholastic failure of students, such as low socio-economic background, student's cognitive abilities, school related factors, environment of the home, or the support given by the parents, and other family members (Fan, 2001).

Parents can create a home environment suitable for learning by among other things: Designating an area to do homework, providing access to reading material, and assisting with the organisation of homework and studies (OECD 2011). Family background is the foundation for children's development, as such family background in terms of family structure, size, socio-economic status, and educational background play important role in family background is the foundation for children's development. This is because providing a supportive learning environment at home requires parents' time as much as financial resources, students' educational attainment, and social integration (Osunloye, 2008). In the view of Ajila and Olutola, (2000) the state of the home affects the individual since the parents are the first socializing agents in an individual's life.

In Romania, a study was conducted in Bucharest on impact of socioeconomic status on school performance. A sample of 100 young students age between 18 and 24 years old ($M = 20.19$; $SD = 1.54$), all of them aged over 18, being in their fourth year of high school were used. Questionnaire was used to collect data on several financial factors such as family, parents' academic level, lifestyle, family influence, the number of people in the house. The results indicated that students' performance were influenced by the hours spent learning, free time, the presence of siblings in the family and the family home place, (in the rural or urban area), all of which are metrics for the socioeconomic status (Teodor, 2012).

In Nigeria, a study was conducted to find out the influence of family size on academic attainment of adolescents in higher institution. Participants were 102 students, out of 1000 males and females pre-degree students of University of Ado-Ekiti. Survey method was used to elicit information from the subjects. The data was subjected to Analysis of Variance (ANOVA). The results showed that family size had no influence on students' academic performance (Tenibiaje, 2009).

In Kenya, a study was carried out to investigate selected parental factors that affect the academic achievement of grade six pupils in Kisumu City in Kenya. A causal comparative research design was used. Questionnaires were administered to the grade

six pupils and their parents, whereas Document analysis was used to determine the pupils' academic performance. Data were analyzed using descriptive and inferential statistics. Out of the 115 schools, 12 public schools and 8 private schools were selected using stratified sampling technique. Four hundred (400) pupils of grade six and 400 parents were selected to participate in the research. The findings revealed that socio-economic status and family size, family type affect the academic performance of pupils (Makewa, Role, & Otewa, 2012).

In Kenya, a study was conducted to investigate the relationship between academic achievement motivation and home environment among standard eight pupils. 235 standard eight Kenyan pupils from six urban and rural primary schools randomly selected from Machakos district. Their age ranged between 13 and 17 years. Two questionnaires: The simple profile (SP) and home environment questionnaire were used. A significant ($p < 0.05$) positive relationship was found on the home environmental factors, that is family size ($r = 0.26$) and learning facilities at home ($r = 0.23$) and academic achievement motivation. Although these correlations are low, they showed that pupils' motivation to do well in academic work is to some extent dependent on the nature of their home environment (Muola, 2010).

A study was conducted in India, which investigated the academic learning environment at home and school, of coeducational high school students from English and Kannada medium schools, and its influence on academic achievement, and influence of socio-economic factors on academic learning environment at home, and school. A sample of 240 students was selected from 8 coeducational high schools. The results revealed that students with English medium of instruction were significantly higher in students' involvement, which had significantly better facilities in home (separate room to study, table, light, ventilation, and surrounding environment), had significantly better academic achievement than students of Kannada medium schools. (Sunitha, & Khadi, 2007).

In Nigeria, a study was conducted to investigate the influence of having study facilities at home on academic performance among all public secondary school students in Ondo State. A sample of 240 students from 6 randomly selected schools, participated the study. A questionnaire was used to collect data. Test-retest method was used to determine the reliability, and a reliability coefficient of 0.72 was obtained. Data were analysed using t-test. The results revealed a significant difference between, having study facilities at home, and no having study facilities at home. (Alokan, Osakinle, & Onijingin, 2013). Also, a study by Muola, (2010) in Kenya

found a positive relationship between learning at home and students' academic achievement.

The studies on related home factors under the study revealed that some contradict, whereas others concur to each other. Hence the present study will attempt to determine whether home factors concur or contradict with the past studies. However the study has departed from already conducted studies. First, it revealed that the past studies were not based on home settings, in that the studies were carried from school setting perspective, thus the present study attempts to determine how home factors influence students' academic performance based on home setting perspective. Secondly, students academic performance was based on few selected subjects, whereas the present study was based on all subjects, students' registered for in the national examination, so as to reflect the general academic performance. Thirdly, most studies were conducted in boarding schools, as this did not reflect the of home setting where students come from, as students commute daily from home to school and back to home, whereas this study focused only day schools, so as to determine how home factors under the study influence students' academic performance.

The Bronfenbrenner (1979) Ecology system theory (Witt, 2008) on environmental interconnectedness and its impact on human development and growth was utilised in this study. Which suggests that individual's ecological environment can be described as having different structures that are nested together, resulting in the total environment. The inner level consists of the individual and his or her immediate setting, with subsequent levels following in an interconnected manner. This inner level is referred to as the micro-system, which is followed by the mesosystem, exosystem, and macrosystem. The microsystem includes all the activities, roles, and personal experiences of an individual within a particular setting with certain characteristics. A setting can be any place where an individual interacts daily with other humans. The events that take place within that setting can be recorded as being similar for many different people. However, students' microsystem level is the individual meaning or interpretation assigned to each event that makes environmental factors relevant in the study of human ecology.

The second level is referred to as the mesosystem, which combines the activities of two or more settings for the individual. Settings such as work, and school would be included in this category. When a person moves in to a new realm in society he or she is operating within the mesosystem. Thirdly, the exosystem includes settings that do not necessarily involve the developing individual, but may still manage to affect that person from more distant

channels. Examples of this would include events in the lives of relatives or peers that do not affect the individual directly, but influence a person who has a close relationship with the individual. The effects will generally trickle through to the center individual. The educational implication of this theory was that a public day secondary school students operate within the two systems (microsystem and mesosystem).

During the school hours, a student interacted with teachers, students, and other school staff this constituted a micro-system. In the student's home environment, interactions involved that of the parents, relatives, and neighbours, these were the features of a mesosystem. If the two interactions were healthy, there would be good performance, and vice versa. Bronfenbrenner's ecological systems model was suitable because it focused heavily on environmental, and external factors, Bronfenbrenner admitted that, while a person ecological environment had a great effect on individual development, it was the individual perception of the environment that really matter and not how the environment actually existed in reality.

Lastly, ecological systems theory had one demerit in which it did not address individuals who developed within extremely difficult environmental circumstances, such as severe poverty or abuse and still go on to become a well-adjusted, successful members of the larger society. These individuals would appear to be anomalies within the system. How can ecological systems theory explain these individuals' immunity to harsh external influences, while the majority of humans are irreversibly influenced, if not altered, by negative environments? Even with its unanswered questions, ecological systems theory provided a solid, common-sense approach to the study of human development. Researchers in the field of education can apply Bronfenbrenner's work to a variety of topics, such as the effects of a student's external environment on his or her academic performance.

A conceptual Framework in this study, is that the independent variables were home factors which included: number of siblings and learning resources at home which predicted the students' academic performance in mean points(12 - 1) and grades(A - E) attained, which was the dependent variable, which were categorised into four as follows: Excellent(A to A-); Good(B+ to B-); Average(C+ to C), and Below average(C- to E). The extraneous/intervening variables included; student's aptitude, school administration, school facilities, and class size. These variables were controlled through randomization, in order to create representative samples that were similar in all the aspects that could influence the dependent variable.

This conceptual framework forms the various concepts that are related with theoretical framework in that home environment under investigation was within micro system included: number of siblings the student interacts with, influenced him in one way or another, and variety of learning resources at home the student utilises during study at home like: study room, text books, and revision books, studying furniture, and time.

Ndiga, Mumuikha, Fedha, Ngugi, and Mwalwa, (2013) observed that in KCSE 2012 results 308,739 (72.2%) students scored grade C-, and below; whereas only 123,704 (28.6%) students scored grade C+, and above. The same trend was observed in 2011, and previous years. According to Kaimenyi (2014), out of 446,696 candidates, who sat for KCSE 2013, 123,365 (27.62%) obtained minimum university entry qualification of C+ compared to 28.36% in 2012, a slightly drop of 0.9%, whereas 323,331 (72.38%) attained C, and below.

According to Kipkelion, SCDEO Annual Report (2012) the performance of Kipkelion Sub-County in KCSE has been dismal for the last five years (2007 - 2012). In which out of 7238 candidates for the period (2008-2011), those who scored C+, and above constituted 1731 (23.92%) while those scored C (plain), and below are 5507 (76.08%). Thus, out of this statistics it showed that the overall performance was very low with the whole Sub-County producing only 1731(23.92%) out of 7238, in which boarding schools produced a significant number of 724(38.82%) out of 1865 candidates enrolled in KCSE examinations compared with 1007(18.74%) out of 5373 candidates from day secondary schools who did the same examination.

Further, from the same statistics, students who attained B+, and above for direct entry to university in the whole district were 221(3.05%) out of 7238, in which boarding schools produced a significant number of 106(5.68%) out of 1865 candidates enrolled in KCSE examination compared with 115(2.14%) out of 5373 candidates from day secondary schools who did the same examination. From this statistics, one could falsely conclude that day secondary schools were leading in producing students to university having a number of 115 students, whereas boarding school with a number of 106 students. This was also more worrying that 3.05% students joined university through direct entry, and the larger percentage of 96.95% did not join direct university for higher education.

These statistics bore a serious implication on students' academic performance in the sub-County. In that, day-scholars who form the majority of Sub-County secondary school students, face more challenges which affected their performance, other

than those faced by boarders. This study intended to determine how number of siblings and learning resources at home influence academic performance of day-scholars in public secondary schools guided by the following objectives, questions and hypotheses.

The objectives of the study were:

- i. The influence of number of siblings on students' academic performance.
- ii. The influence of learning resources at home on students' academic performance.

The study was designed to answer the following questions:

- i. Does number of siblings influence students' academic performance?
- ii. Does learning resources at home influence students' academic performance?

The research hypotheses of the study were:

HO₁: There is no significant influence of number of siblings on the students' academic performance.
HO₂: learning resources at home have no significant influence on the students' academic performance.

In Kenya, performance in national examinations determines the type of training, work, and future opportunities for further education of the student. However there are many factors that might hinder the academic performance of a student. This study sought to determine the influence of home environment on performance in public day secondary schools, because majority (85%) of schools in Kipkelion Sub-County are public mixed day secondary schools, in which both boys and girls learn in same environment and commute daily from their homes to school and more so they registered low academic performance. It was therefore, imperative to determine the magnitude of the problem of low academic performance in order to address factors that militated to poor students' academic performance in the Kipkelion Sub-County.

The study findings would be significant to education stakeholders and policy makers in formulating policies that are geared toward enhancing education for day-scholar students. This would benefit Teachers by making teaching and learning process more effective and early syllabus coverage, since students would have enough time, learning resources at home, parental assistance, and conducive home learning environment to continue with studies at home, or do assignments. This will enable teachers to monitor students' academic performance. While Parents, would be made aware of requirements and the roles they need to play in providing conducive home environment for example shelter, pay school fees for student. Lastly, students would appreciate the value of education beyond classroom and thus do extra assignments at home, because learning occurs anywhere provided the conditions are favourable. It

will also provide information on improvement of academic performance by bring all stakeholders together through collective policies and teamwork to ensured each one, play their roles and consequently improve quality of education.

The study was conducted in Kipkelion Sub-County, and focused on public day secondary schools, since the students commute from their home to school daily. It focused on the following variables: number of siblings and learning resources at home in order to determine the extent to which they influence students' academic performance. The study comprised of 210 participants in form four from 10 public mixed day secondary schools within the study area that presented 2132 candidates for the 2013 National Examinations under the 8-4-4 syllabuses. The findings of the study would be generalized to schools in the districts, and the whole country with the same characteristics of being public mixed day secondary schools.

Due to inaccessibility of those students who have sat for KCSE examination in the previous years, the study focused on 2013 form four candidates using their mock results from 10 public mixed day secondary schools in Kipkelion sub-County to solicit the responses on home factors, since they have been in day schools for more than three years. Also, the use of questionnaires might cause anxiety, due to examination related phobia. However, the researcher explained to the respondents the significance of the study and that their responses should be treated with confidentiality and used for the study only. The assumptions were that, the respondents would cooperate during the study, give the required information, sample came from the various environmental/home settings and responses would be true and reliable concerning factors affecting students' academic performance and the records of the sampled schools would be true and accurate.

METHOD

Participants

The study had, 2132 form four students selected as the accessible population, as they had been in the system for the last three years and were therefore considered able to provide appropriate responses. Furthermore, they were preparing for KCSE examination which would reflect how they had been studying in various home environments, they were also considered mature enough in terms of age and education, to understand their family background. Kipkelion Sub-County had 42 public secondary schools, out of these, 9 (21.45%) were girls' schools, 3 (7.13%) were boys' schools, while 30 (71.42%) were mixed schools. Out of these, 11 (26.19%) were boarding schools and 31 (73.81%) were day schools

with 2132 form four students attending public mixed day secondary schools.

The researcher used 10 (32.25%) schools out of 31 public mixed day secondary schools. These represent thirty 30% of the 31 district public mixed day secondary schools which concurs with Kombo, & Delno (2006) that says that a sample of 30% is a representative of a population to be studied. Stratified random technique was used to identify sample size of respondents, where respondents were divided into two strata on the basis of gender (boys and girls), from each stratum of (804 girls and 1328 boys) which presented a ratio of 2:3. This ratio was used to calculate a proportionate number of students from each gender to participate in study.

Hence, from the accessible population of 2132, approximately 210(10.33%) students were sampled, which concurred with Mugenda, & Mugenda (2003) that sample size of 10% is appropriate for the study. Then, using the ratio of 2 girls to 3 boys, the number of students from each gender that were selected to participate in the study was calculated, which were 84 girls and 126 boys, which was then divided by 10 to get representatives from each gender. Remarkably, in every school 8 girls and 13 boys

Materials

Data was collected from students in the 10 selected secondary schools using questionnaire and a document analysis guide. Questionnaire was suitable because a lot of information was collected over short period of time and population was literate. Both closed and open-ended questions were used in the questionnaire. Closed – ended questions required the respondent to respond to items either by ticking [✓] or choosing alternatives provided. Open – ended questions had no alternatives to choose from and the answers had to be written in full in order to support and check the alternative choice responses given by the respondent.

Document analysis was used to determine the student's academic performance, which was obtained from Mock analysed results sheets. The information on dependent variable helped to compare the academic performance between students from different home environment. This was a reflection of final KCSE Examination. The scoring method used in the questionnaire required the participants to write either YES, NO or a tick [✓] against the box with the suitable response in the item. The scores evaluated the extent to which the variables of factors under study relate to the respondents that participated in the study. Hence, a sample size of 210 respondents were selected from form four 2013 KCSE candidates.

Research Design

This study employed causal comparative design, because home environment (factors) which served as the independent variable could not be directly controlled by the researcher because their manifestations had already occurred and were not manipulatable (Mugenda & Mugenda, 2003).

Procedure

The researcher employed multistage sampling technique, as follows: purposive sampling technique was used to select only all public mixed day secondary schools from a list of secondary schools in Kipkelion Sub-County. Simple random sampling method to sample 10 public mixed day secondary schools by writing all names of public mixed day secondary schools in small pieces of papers, fold and put in a box, then pick at random 10 schools, this gave each school equal and independent chance of being selected to participate in the study.

From 10 schools, purposive sampling method was used to select form four students. In each sampled school the researcher employed stratified random sampling method by dividing population of respondents to sub-groups of boys and girls, then from each sub-group the researcher used simple random sampling method to select students who participated in the study by picking the first 8 girls' and 13 boys' names in class list with odd serial numbers from both boys' and girls' class list.

Questionnaires were pre-tested before the commencement of the real study to establish the reliability of the instruments. The piloting involved trying out the designed instruments on a few students bearing similar characteristics to those of the large group of the respondents. The researcher carried out pre-testing of the instruments in three of the identified public mixed day secondary schools and these schools were excluded real research study. The researcher visited the schools to sought permission from either school principal, or class teacher, and briefed them about the purpose of the pilot. The school authority either introduced researcher to students, or they administered questionnaires by explaining to students on how to answer the questionnaire. After which students were divided into sub-groups of boys and girls, and from each sub-group, 8 girls and 13 boys were randomly selected by picking the first 8 girls and 13 boys from the class list having odd serial numbers to participate in the pilot study.

The questionnaires data obtained from pilot study were used to determine the reliability of the researcher instrument by using Pearson product moment correlation to measure the reliability of the items in the questionnaire, which yielded a reliability coefficient of $r = .78$ which concurred with Coolican, (2007) that test - retest with a range between .75 and

.80 was reliable and then revised accordingly upon receiving the pilot study feedback.

The content validity of the instrument was determined by the researcher by discussing the items in the instrument with the supervisors, colleagues and other lecturers in the Department of Psychology. For the research instrument to be considered valid, the content selected and included in the questionnaire must also be relevant to the variables being investigated. Construct validity was assimilated to the research tools by thematically arranging related items in the questionnaire with reference to already used and related questions.

The researcher visited sampled schools to administer the questionnaire and explained the purpose of the study and clarified where necessary. The researcher ensured the sampled respondents were the ones supplying data. Before the questionnaire was administered to students in each school, either the School Head or the Deputy Head introduced the researcher to the respondents in their respective classrooms. Then the researcher explained to the students the purpose the study and thanked the students in advance for accepting to fill in the questionnaire.

The questionnaire was self administered type where it was presented to the students and responded to it by reading through the questionnaire. The purpose of inquiry was explained and then left to the respondents alone to complete the questionnaire. Since the questionnaire had both open and closed-ended items, the way of answering varied. The closed – ended items required the student to check from alternatives and put a tick [$\sqrt{\quad}$], or write YES, or NO where applicable to the student. The researcher asked the students to use permanent ink pens. The researcher collected the questionnaire after one hour, when all respondents had answered all questions.

The data collected was coded and keyed in into the computer using the statistical package for social sciences (SPSS) as follows: students' bio-data was used to compile the of the students in which male and female were coded 1 and 2 respectively, whereas age was coded 1 for below 15 years, 2 for 16-17 years, 3 for 18-19 years, and 4 for above 20 years, and home environment was coded 1,2, and 3 for rural, peri-urban, and urban respectively. Students' academic performance was based on Kipkelion Sub-County Mock Examination which was categorised on mean grade points range from 1 to 12 points (E to A grades) as follows: 1-5(E to C-) below average, 6 - 7(C to C+) average, 8 - 10(B- to B+) good, 11 - 12(A- to A) excellent which were coded 4, 3, 2, and 1 respectively, in order to understand the students' academic performance in mock examination.

In responses on number of siblings were categorised into four as follows: 0-3(small) coded 1, 4-7(medium) coded 2, 8-11(large) coded 3, and above 12(very large) coded 4 and compared against the students' academic performance. Learning resources at home were grouped into two as follows: students with learning resources at home (YES) coded 1, and students without learning resources at home (NO) coded 2 and compared against the students' academic performance.

Descriptive statistics and inferential statistics was calculated and summarized for presentation and analysis of the data. A 0.05 significance level (95% confidence) was used in the study. The responses from the samples were summarised using of descriptive statistics; frequency, percentages and means. Inferential statistics used were, t-test and ANOVA, so as to compare how independent variables influence dependent variable.

The researcher sought introductory Permission letter to carry out the study from the Dean, school of education and Department of Education Psychology of Moi University after clearance from the supervisors. This was used to process an official permit from the Ministry of Education, under National Commission for Science, Technology and Innovation-NACOSTI. On acquiring the permit the researcher reported to the County Commissioner, and County Director of Education. An introductory letter by the researcher explaining the nature and the purpose of the research was availed to the SCDEO, and principals of the sampled schools.

The respondents were asked to give consent before participating in the study and assured of confidentiality and anonymity were observed by the researcher by exercising respect for individuals' rights so as to safeguard their personal integrity. No names or personal identification numbers were reflected on the questionnaires except the numbering for questionnaires, which is for purposes of coding and thus, data editing and analysis. The researcher tried to avoid any psychological threats by reassuring respondents of availability of results of the study for their own consumption. Consequently, a copy of the findings was to be given to Kipkelion Education Office and any educational stakeholders interested in the results of the study.

RESULTS

The rate of return of completed and usable questionnaires and document analysis were 210(100%). The students' data on gender, age, and home environment of their residence revealed that 130(61.9%) males and 80(38.1%) females, were sampled, males performed better, ($M = 5.03$) than females ($M = 4.20$). Majority of students 151(71.9%) were aged between 18-19 years, followed by

40(19%) students aged 16-17years, those above 20 years were 18(8.6%), whereas those below 15 years was 1(0.5%), and students above 20 years performed better ($M = 4.97$) compared to other age categories. In terms of residence, majority of students 186(88.6%) were from rural settings, whereas a small proportion were from both peri-urban 16(7.6%) and urban 8(3.8%), in which those students from peri-urban had better academically, with a ($M = 4.92$) than students from other home environment.

The general students' academic performance was categorised into four groups as follows: excellent, good, average, and below average based on grading system of mean scores points(1 to 12) and mean grade (E to A) in which majority of students 148(70.5%) performed below average ($M = 3.62$, $SD = 1.174$), followed by average students 38(18.1%), ($M = 6.46$, $SD = 0.502$) and small proportion of students 23(11%) attained good grades of ($M = 8.55$, $SD = 0.798$), and only 1(0.5%) student attained highest grade of excellent, ($M = 11$) an indication that the general students' academic performance was below average. Generally, students' academic performance is below average with ($M = 4.71$) as categorised in the conceptual framework that a ($M = 5.00$, C-) and below are academic performance below average.

To address objective one of the study which stated: to find out the influence of number of siblings on student's academic performance, students' responses were categorised into four groups according to number of siblings in the household as follow: 0 – 3(small), 4 – 7(medium), 8 – 11(large), and above 12(very large) and analysed to determine whether number of siblings had significant influence on students' academic performance, revealed, 71(33.8%) of students were from households with small number of siblings, with a highest ($M = 4.93$, $SD = 2.270$) whereas, 98(46.7%) of students were from medium number of siblings, with a ($M = 4.76$, $SD = 2.071$), and 37(17.6%) of students were from household with large number of siblings, with a ($M = 4.25$, $SD = 1.640$) and 4(1.9%) of students were from very large number of siblings, with a ($M = 3.96$, $SD = 1.402$).

To test the null hypothesis, HO_1 which stated: there is no significant influence of number of siblings on the student's academic performance. The students' responses on number of siblings were analysed using ANOVA, revealed that $F(3, 206) = 1.071$ significant at $0.362 > p = .05$ implying that number of siblings has no significant influence on students' academic. Thus, the null hypothesis was accepted which stated: there is no significant influence of number of siblings on the student's academic performance. This implied that the number of siblings in the home had no influence on a students' academic performance.

To address the objective two, which stated: to investigate the influence of home learning resources on students' academic performance. The students' responses were categorised into YES to mean the availability of learning resources at home and NO to mean the lack of learning resources at home and analysed to determine whether availability or lack of learning resources at home had significant influence students' academic performance, revealed that, majority of students 158(75.24%) lacked learning resources at home, with a ($M = 4.54$, $SD = 2.019$), as compared to 52(24.76%) with home learning resources with a better ($M = 5.23$, $SD = 2.145$).

To test the null hypothesis HO_2 , which stated: learning resources at home have no significant influence on the students' academic performance, a t-test was used to determine whether home learning resources have influence on academic performance, by comparing responses of students on learning resources at home against the students' academic performance, which revealed $t(0.017)$, $df = 208$, $< p = 0.05$, thus the null hypothesis was rejected and alternative hypothesis was accepted which stated: learning resources at home had significant influence on the students' academic performance. This implied that the availability or lack of learning resources at home have influence on students' academic performance.

DISCUSSION

This research focused on influence of home environment on home factors which included: parental occupation, parental level of education, parental income, number of siblings, and learning resources at home on academic performance in public mixed day secondary schools in Kipkelion Sub-County on 10 sampled schools, each with 21 students from 2013 form four candidates. Generally, students' academic performance was below average ($M = 4.70$, C-), an indication that kipkelion sub-county students' academic performance was worrying. This observation concurred with Kipkelion, SCDEO Annual Report (2012) that the performance of Kipkelion Sub-County in KCSE had not been very encouraging for the last over four years (2007 - 2012). Thus, the study was aimed at determining the root causes of low students' academic performance among public day secondary schools in Kipkelion Sub-County.

The Study found that households with small number of siblings performed better than other categories, an indication that households with small number of siblings can afford to provide sufficiently the needed educational materials, and enough space to utilise during studying, which reduced overcrowding, thus better academic performance. On testing the null hypothesis, ANOVA results were not significant, thus null hypothesis was accepted. This implied that there

was no significant influence of number of siblings on student's academic performance. This concurred with Tenibeaje, (2009) in a study conducted in Nigeria that revealed that family size had no influence on students' academic performance of pre-degree students.

But, Teodor, (2012) in a study in Romania, disagreed with these findings, in that there was influence of the presence of the siblings in the family on students' academic performance. Similarly, Makewa, (2012) disagreed with the study findings, in that there was a positive correlation ($r = 0.26$) between family size and students' academic performance. Students who had learning resources at home were few, and had low academic performance, compared to majority of students without learning resources at home with high academic performance, an indication that they struggled, or optimised the available learning resources at school, or from friends, whereas students who had learning resources at home could have underutilised the learning resources at home as reflected in low students' academic performance.

Testing null hypothesis using t-test, the results was significant. Hence null hypothesis was rejected, and alternative hypothesis was accepted which stated: learning resources at home have significant influence on students' academic performance. This concurred with Alokun, et al. (2013) findings in Nigeria, which revealed availability of study facilities at home, had influence on academic performance.

Study in Kenya by Muola, (2010) found that a positive correlation between learning facilities at home ($r = 0.23$), and students' academic performance. Sunitha and Khadi, (2007) in a study in India found that students with separate room to study, table, light, ventilation, and positive home learning environment had a significant influence on students' academic performance. From the findings of the study, it was concluded that, student's academic performance was influenced by access to home learning resources. This pointed on one common denominator: income. Thus, all stakeholders should strive to ensure that students have a conducive home environment that supports the realisation of best students' academic performance. Which concurs with OECD (2011) that Parents can create a home environment suitable for learning by, among other things: designating an area to do homework, providing access to reading material, and assisting with the organisation of homework, and studies. In which parents have a major role in ensuring that adequate learning resources are available at home, with enough time for extra learning at home.

This study recommends that government, local leaders, religious sects, MOE, teachers, and parents need to cooperate and strive to bring about change in

creating a conducive home learning environment, where students can study at home, just as in school, which include: Learning resources at home had a significant influence on students' academic performance; therefore, parents need to avail adequate learning resources at home to enhance learning process after school sessions, either by including study rooms or mini-libraries when constructing their household structures.

The study suggests further research on the influence of home environment on academic performance on boarding secondary schools.

REFERENCES

- Alokun, B. F, Osakinle, E. O, & Onijingin, E.O. (2013). The Influence of Parents Educational Background and Study Facilities on Academic Performance Among Secondary School Students. *Ozean Journal of Social Sciences* 6(2), 2013.
- Ajila, C, and Olutola, A. (2000). Impact of Parents' Socio-Economic Status on University Students' Academic Performance. *Ife Journal of Educational Studies*, 7 (1), 31-39.
- Coolican, H. (2007). *Research Methods and Statistics in Psychology*. 4th edn. Hodder Arnold, India.
- Fan, X. (2001). Parental Involvement and Students' Academic Achievement: A Growth Modeling Analysis. *The Journal of Experimental Education*, 70(1), pp. 27-61.
- Kaimenyi, J. (2014). *Kcse 2013 Results Release Speech, 3rd march, 2014 KNEC Mithiani House: Nairobi.*
- Kombo, D. K. (2006) *Sociology of Education*. Nairobi: Ad Print Company.
- Makewa, L. N, Role, E, and Otewa, F. (2012). Parental Factors Affecting Academic Achievement of Grade Six Pupils in Kisumu City, Kenya. *International Journal of Asian Social Science* 2(11):1984-1997.
- Mugenda, M.O, and Mugenda, A.G. (2003). *Research Methods: Quantitative and Qualitative Approach*. Nairobi: Acts Press.
- Muola, J.M. (2010). A Study of The Relationship between Academic Achievement Motivation and Home Environment among Standard Eight Pupils. *Educational Research and Reviews* Vol. 5 (5), pp. 213-217, May, 2010.
- Mwituria, S. M. (2012). *Qualitative and Quantitative Research Methods*. Simplified. Nairobi. Frajopa Printers Mall.

- Ndiga, B; Mumuikha, C; Fedha, F; Ngugi, M, and Mwalwa,S. (2013). Principals' Transformational Leadership Skills in Public Secondary Schools, A case of Teachers' and Students' Perceptions and Academic Achievement in Nairobi County, Kenya. *American Journal of Educational Research* (2013) (9) pp800-810 doi:10.12691/education 2-9-5.
- Ogunshola, F. (2012).The Effects of Parental Socio-Economic Status on Academic Performance of Students in Selected Schools in Edu Lga of Kwara State Nigeria *International Journal of Academic Research in Business and Social Sciences July 2012,Vol. 2,No 7.*
- Ogweno, P.O, Kathuri, N.J, &Obara, J, (2014). Influence of Family Characteristics on Academic Performance of Students in Secondary Agriculture, in Rachuonyo North Sub County, Kenya *international Journal of Education and Research Vol. 2 No. 2 February 2014.*
- Osunloye, A. (2008). *Family Background and Student Academic Performance.* Retrieved from;<http://socyberty.com/education/family-background-StudentAcademicPerformance>.
- Oso, Y, and Onen, D. (2008). *A General Guide to Writing Research Proposal and Report.* Kampala, Makerere University printer.
- Sunitha N. H., and Khadi, P. B, (2007). *Academic Learning Environment of Students from English and Kannada Medium High Schools.* University of Agricultural Sciences, Dharwad - 580 005, India.
- Tenibiaje, D.J. (2009). Influence of Family Size and Family Birth Order on Academic Performance of Adolescents in Higher Institution *Pakistan Journal of Social Sciences* Year: 2009 | Volume: 6 | Issue: 3 | Page No.: 110-114.
- Teodor, M. (2012).The Influence of Socio-economic Status on School Performance. *Romanian Journal of Experimental Applied Psychology..Vol.3 issue2- 2012.*
- Witt, S.D. (2008). Urie Bronfenbrenner. *Developmental Parent and A child Interaction*OnlineRetrievfrom<http://gozips.uakron.edu/~susan8/devparch/theorists.htm>.
- World Bank Report. (2004). *International capital and economic development world development indicators.* Washington D.C: Oxford University Press.