

An Investigation of the influence of single family type on students' academic performance in public secondary schools in Kenya

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Abstract: The study sought to investigate the influence of single family type on students' academic performance in public secondary schools in Kangundo Sub-county. It adopted a descriptive survey research design. It targeted all (27) public secondary schools in Kangundo Sub-county, all (27) school heads, all (27) parents' association chairpersons, all (339) teachers and all (2,663) form three students. The study employed a census technique to include all schools; 24 in the main study and 3 in the pilot study. All the 24 school heads as well as all the 24 parents' association chairpersons of the participating schools were included in the study. It sampled 30.0% of teachers that gave 102 teachers. Stratified random sampling technique was employed to select participating teachers where a proportionate weighted sample was identified per school using proportional allocation method. Then, simple random sampling technique was adopted to select the participating teachers in each school. Yamene (1967) formula was used to give a sample of 348 students. Stratified random sampling technique was employed to identify and select weighted random samples per school. In total, 498 respondents participated in the study. Data collection instruments included questionnaires for school heads, teachers, students and an interview guide for parents' association chairpersons. Validity of the research instruments was ascertained through expert judgment and piloting. Reliability was achieved through test re-test method where the instruments were piloted in schools at a time interval of two weeks and the two results were correlated using Pearson's Product Moment Correlation method. Data were entered into Statistical Package for Social Sciences (version 26.0) for analysis. Further, inferential analysis was employed that involved correlational analysis at a 0.05 level of significance. The hypothesis was accepted or rejected at a 0.01 level of significance. Results showed a weak correlation between single parent family type and students' academic performance which was not statistically significant ($R=0.149$; $p=0.508$). It was recommended that the government should initiate educative and enlightenment programs on how to improve and sustain intact parenthood.

Keywords: Single Family Type, Academic Performance

Introduction

According to Narad and Abdullah (2016), academic performance refers to acquired knowledge that is measured through marks by a teacher and/or a set of educational goals which are assessed through examinations. Academic performance is influenced by many factors one of them being single family type which is of interest to this study. Parents play a crucial role in the academic success of their children. In support of this line of argument, Naite (2021) stated that parents exert a significant influence on the performance of their children because of the authority and skills they have to shape and develop their children into motivated, inspired, and lenient people. Parents can influence the academic performance of their children by investing their time and money (Bengesai & Nzimande, 2020). Previous research has shown that family type is an important predictor variable for academic success (Naite, 2021). Thus, this study investigated how this variable is of consequence to students' academic performance. On what could be contributing to low performance, Burns, Darling-Hammond, and Scott (2019) in a study done in California contend that children born to low-income parents perform poorer than their peers from high-income parents. In addition, Amato, Petterson, and Beattie (2016) in their study done in the US point

out that children in single-parent households score below children in two-parent households. In the African region, the problem of poor performance persists. Concerning this, a study done in Nigeria by Ogunde, Olanipekun, and Aina (2014) lamented that the academic performance of Nigerian students in the West African Examination Council (WAEC) was not only pathetic but also shameful.

A study done by Azumah, Krampah, and Nachinaab (2018) in Nigeria established that 13% of Nigerian children came from single parent family type which is associated with poor educational outcomes. Thus, there was a need to investigate the influence of single family type on students' academic performance in public secondary schools in Kangundo Sub-county. As the cornerstone of civilization, the family is crucial to a child's whole development (Bartolome, 2021). Amato (2010) claimed that single parent families have lower levels of income, are headed by mothers with lower educational attainment, and who are less likely to be in the labor force. However, a study done by Kimaru, Mukolwe, and Kimani (2020) in Kiambu County, Kenya did not establish any significant statistical difference in the academic performance of children from single parent families and those from both parent families. The findings suggested that the type of family did not affect academic performance. Thus, it was important to conduct a study in public secondary schools in Kangundo Sub-county to establish whether this contradiction holds.

Theoretical Framework

This study is anchored on Epstein (1995) Framework of six types of parental involvement model developed from Epstein's theory of Overlapping Spears of Influence. Epstein developed a model that conceptualizes six major types of parental involvement that are common in school – home (parent) partnerships across home, school and community settings (Epstein, 1995; Epstein, 2011; Epstein et al., 2019). Epstein opines that schools should partner with parents to create family-like schools where each child feels special and included. She also points out that parents should partner with schools to be helped to create school-like families where the importance of school, homework and other activities is reinforced. Epstein identifies six types of parental involvement which include: Parenting, communicating, volunteering, learning at home, and decision making and collaborating with community. The framework has been revised to give specific practices that schools can do to help parents to increase each of the six types of involvement (Epstein, 1995; Epstein, 2011; Epstein et al., 2019).

According to Epstein (1995), parenting addresses the responsibilities that parents have to create a supportive home learning environment. Under this obligation, parents are supposed to provide a safe and healthy home environment, adopt positive parenting practices, and establish conditions that support learning at home. Epstein stipulates that schools should offer parents support on how they can create a supportive home leaning environment. Applying this model, principals in Kenya public schools can, for instance, discharge this important duty by holding parents' meetings and seminars to train and educate parents on how can create a positive home learning environment. By doing that, schools will help parents to create family like schools where the importance of education is reinforced (Epstein et al., 2019).

Literature Review

The type of family a student comes from can be a risk factor for their academic performance. Regarding this assertion, Bengesai and Nzimande (2020) and Musili, Mwanja, & Mulwa (2020) maintained that the type of family influences the availability of educational resources. For instance, children growing up in single parent family set-ups are educationally disadvantaged. This is because single parent families are more likely to be headed by mothers with low educational qualifications, poor, and who might lack sufficient time to be fully involved in their children's academic activities (Makewa, Role & Otewa, 2010; Uwaifo, 2012). These sentiments are supported by Amoakohene (2013) who stated that single parenthood may affect academic outcomes negatively because single parents are more likely to be poor and lack adequate time to be involved in their children's learning activities.

Moreover, Videnovic and Lazarevic (2017) warn that an uneducated single mother may lack the academic ability to support her children leading to poor academic outcomes. On the contrary, Abuya, Mutisya and Onsomu (2019) opine that children from two parent families are educationally advantaged because the two parents may have more income and adequate time to be fully involved in their learning activities. Thus, low levels of parental involvement,

education, and income are contributory factors to the low academic performance of students from single parent families.

Furthermore, single parenting harms children's mental, emotional and psychological well-being. On this point, Ntumi, Larbi and Yirenkyi (2016) lamented that children from single parent families are occasionally dejected and emotionally disturbed and hence they are uncomfortable in their learning activities. Oke (2015) noted that children from single parent families sometimes suffer from personality issues and may as a consequence become antisocial. Similar sentiments were echoed by Kimani and Kombo (2020) who asserted that children who grow up in a family where the father is absent suffer from an identity crisis and disciplinary problems.

It is not the children who are affected psychologically by the absence of one parent. On this note, Hamid, Rafiah and Sakina (2013) observe that single mothers may experience psychological distress due to the resultant pressure of raising their children alone which may affect their children social behavior. Moreover, children growing up in a household headed by a mother often lack a role model (Clowes, Ratele & Shefer, 2013). Children require a parent role model to emulate. Due to the reasons advanced here, students from single parent families perform poorly relative to their peers from two parent families. Several studies have been undertaken to investigate the influence of family on students' academic performance. For instance, Johnson (2015) investigated the effect of family structure on student academic achievement. The study involved 96 students. Students' data was generated from Student Information System (SIS) of the selected school district of Southeast Missouri. The study results indicated that students from both parents performed far better than their counterparts from single parent families. However, this study involved a smaller sample of 96 students while the present study included 498 respondents. Again, this study was done in a foreign context while the current study was done locally in Kenya.

Just like in many other countries, the proportion of single parent families resulting from divorces has increased in Japan (Zhou, 2014). In addition, children from these poor single parent families tend to have poor academic outcomes. To further these findings, Tobishima (2018) using data from Programme for International Students Assessment (PISA) examined the effect of single parenthood on children's academic performance in Japan. Results of the study showed that there was a statistically significant difference in academic performance between students from two parent households and single parent households. The study concluded that the academic performance of students from single parent households was low because mothers had a low level of education and income. This was probably true because lack of income affects a parent's ability to provide educational resources while the level of education may affect the academic support offered to a child. This study employed secondary data while the present study gathered secondary data.

In a study that investigated effects of family structure on the academic performance of children in Kumasi Metropolis, Ghana, Azumah, Krampah, and Nachinaab (2018) showed that there was no significant difference in academic performance between children from both parent families and single parent families. The findings of this study conflict with existing empirical evidence which indicates that students from single parent families are academically disadvantaged relative to their peers from both parent families. This study employed a case study design and used a stratified random sampling technique to include a sample of 80 students. This study is however different from the current study because it employed a descriptive research survey design as opposed to a case research design. While the reviewed study is foreign, the present study was conducted locally.

By employing an ex post facto research design and including a sample of 34 students, Maposa, Zirima and Mushauri (2020) undertook a quantitative study in Kuwadzana, Harare, Zimbabwe to ascertain the influence of single parenting on academic achievement. Results showed that children from single parent families had low achievement scores when compared with their counterparts from both parent families. The study results are consistent with existing literature which asserts that single parenthood is of negative consequence on academic performance (Amato, 2010). The reviewed study employed an ex post facto research design while the present study adopted a descriptive survey research design. In terms of data analysis, the present study employed inferential analysis methods to establish the relationship between variables which is completely absent in the reviewed study.

Studies on the influence of single parenthood have also been undertaken in Kenya. On this note, Nato (2016) explored the influence of family structure on academic performance among secondary school students in Bungoma East Sub-County, Kenya. This study employed an ex post facto research design and included a sample of 323 respondents who were selected through a simple random sampling technique. The study results revealed a weak negative relationship between single parent families and students' academic performance. The study findings support assertions that single parenting is of negative consequence on students' academic performance. Although this study was implemented in Kenya just like the present study, it adopted an ex post facto research design while the current study adopted a descriptive survey research design. Kimaru, Mukolwe and Kimani (2020) investigated the influence of family structure on students' academic performance in public secondary schools in Kiambu County, Kenya. The study employed a descriptive survey research design and stratified random sampling technique to identify the participating schools where a sample of 385 students was selected using a simple random sampling technique. The study did not report any significant statistical difference in the academic performance of children from single parent families and those from both parent families. The findings are inconsistent with studies conducted in Western countries that indicate that students from two-parent families perform better in academic performance than their counterparts from single parent families (Sun & Li, 2011). The inconsistencies warranted further investigation and therefore, this study was conducted in public secondary schools in Kangundo Sub-county where a study of this kind had not been conducted.

Research Design

This study adopted a descriptive survey research design. To Cooper and Schindler (2013), this design involves collecting data to answer questions on current status of subjects of the study. The independent variable of this study was single family type while the independent variable of the study was students' academic performance. Therefore, this research design helped the researcher to collect data on the single family type (the independent variable) to describe how it influenced the academic performance of students in Kagundo Sub-couty public secondary schools.

Participants

According to the Kangundo Education Office (2020), there are 27 public secondary schools, 2,663 form three students, 339 teachers and 27 Parent Association Chairpersons (PAC) in Kangundo Sub-county. This study targeted all 27 school heads, all 339 teachers, all 2,663 form three students and all the 27 PAC in Kangundo Sub-county. It included form threes only because they were considered to have considerable experience regarding their school life. It was also anticipated that they would be free compared to their seniors in form four who were expected to be busy preparing for their KCSE examination.

A census technique was employed to include all the 27 schools although 3 were used to pilot the study instruments. The entire population of schools was 27, and therefore below 30. Thus, a census method was justified. With the exclusion of 3 pilot schools, the main study involved 24 schools where all the 24 school heads as well as all the 24 PAC of the participating schools were included in the study. Out of the 339 teachers, the study included a sample of 102 teachers representing 30% of teachers' population recommended by Mugenda and Mugenda (2003). Stratified random sampling technique was employed to identify the 102 teachers. Because teachers' population was not the same in each school, the 24 participating schools formed the strata from where weighted random samples were drawn. Thereafter, the desired sample of 102 teachers was drawn from each school using proportional allocation method as follows:

$$\text{Sample per school (S)} = \frac{n}{N} \times 102$$

Where S is sample per school, n is teachers' population in a school, and N Sub-county teachers' population.

After establishing the required sample per school (S), simple random sampling technique was employed to select the participating teachers. Names of all the teachers in each school were written on pieces of paper, folded and

shuffled in a cup. Then, the required number of folded pieces was selected to give the names of the participating teachers.

As for students, the study employed Yamene (1967) formula to determine the appropriate sample for students as follows:

$$n = \frac{N}{1 + N(e)^2} \quad n = \frac{2,663}{1 + 2,663(0.05)^2} = 347.7 \approx 348 \text{ students}$$

Where n is sub-county sample size, N is sub-county Population and e is sample error at 95% confidence level.

Because students’ population was not the same in all the 24 participating schools, the study used stratified random sampling technique to select the 348 students proportionally according to their school’s populations relative to the overall Sub-county population. Thus, proportional allocation method was used to allocate the 348 students per school as shown as shown:

$$\text{Sample per school} = \frac{M}{2,663} \times 348$$

Where m is the form three students’ population in each school

After determining the sample per school, simple random sampling technique was used to select the participants in each school. Like it was done with teachers, all the names of form three students were written on pieces of paper and folded. The folded pieces were put in a bowl and shuffled. The required number of pieces was drawn from the bowl to give the actual names of the students. In mixed gender schools, an equal number of boys and girls were chosen. To achieve this, the population was first stratified into boys’ strata and girls’ strata. Then, all the names of boys were written on pieces of paper, folded, put in a cup and shuffled. The required number of pieces was chosen to give the actual names of the boys. Similarly, all the names of the girls were written on pieces of paper, folded and then shuffled in a cup. The required number was drawn to give the names of the participating students.

Table 1: Sample Size

Description	Population(N)	Sample Size (n)
School Heads	27	24
Parents’ Association Chairpersons	27	24
Teachers	339	102
Students	2,663	348
Total	3,056	498

Source: Kangundo Sub-County Education Office, 2022

Measures

The study used 3 sets of questionnaires and an interview guide to collect data. Creswell (2014) opines that a questionnaire can be designed to have both closed ended and open ended questions. According to Mugenda and

Mugenda (2003), questionnaires are preferred because they save time and uphold respondents' confidentiality. Due to the advantages questionnaires have, they were preferred in this study.

Data Analysis

Data was coded and captured through Statistical Package for Social Science (SPSS) computer program (version 26.0) for analysis. Data that were to be correlated were transformed to create new variables, academic performance (A), family type (E). The intention was run Pearson's Correlation. Spearman rank order correlation was performed at a 0.05 level of significance.

Ethical Considerations

Before the study, the researcher wrote a letter to the Board of Postgraduate Studies (BPS) at the South Eastern Kenya University to have the proposal reviewed. The researcher was issued with an introduction letter that was used to apply for research license at the National Commission for Science and Technology Innovation (NACOSTI) online portal. After a few days, the researcher was issued with a research license to proceed with the study. While attaching the license, the researcher wrote letters to Kangundo Deputy County Commissioner and Kangundo Sub-county Director of Education seeking permission to collect data in Kangundo public secondary schools. At the beginning, the purpose of the study was disclosed to the study participants verbally and it was also printed at the introduction part of the instruments. Voluntary participation was sought from the study participants. Respondents were informed that they had a right to choose to participate or not to participate. They were also informed that their participation or non-participation would not affect them in any way. Respondents were not required to indicate their names, the names of their schools, their phone numbers or anything that could identify.

Results

The objective of the study sought to determine the influence of single family type on students' academic performance in public secondary schools in the Kangundo sub-county. To achieve this, a null hypothesis was formulated as follows:

"H04: There is no statistically significant influence between single parent family type and students' academic performance in public secondary schools in Kangundo Sub-county."

A Spearman's order correlation was performed at a 95% confidence level. The results are presented in Table 2.

Table 2: Correlation between Single Parent Family and Students' Academic Performance.

			Academic Performance	Single Parent Family
Spearman's rho	Academic Performance	Coefficient	1.000	.149
		Sig. (2-tailed)	.	.508
		N	22	22
	Single Parent Family	Coefficient	.149	1.000
		Sig. (2-tailed)	.508	.
		N	22	22

Results obtained in Table 2 show that there was a weak positive correlation between single parent family type and students' academic performance which was not statistically significant ($R=0.149$; $p=0.508$). The hypothesis was accepted when the level of significance was larger than the critical level of 0.05. On the other hand, the hypothesis was accepted when the level of significance was larger than 0.05. In this model, the level of significance was 0.508 which was higher than the critical value of 0.05. Using the criteria set, the null hypothesis that stated, "There is no statistically significant influence between single parent family type and students' academic performance in public secondary schools in Kangundo Sub-county." was accepted at a 0.05 level of significance. Thus, it was inferred that single family type does not have a statistically significant influence on students' academic performance in Kangundo Sub-county public secondary schools.

Discussion

The objective of the study sought to determine the influence of single family type on students' academic performance in public secondary schools in the Kangundo sub-county. Inferential results established a very weak positive correlation between single parent family type and students' academic performance which was not statistically significant ($R=0.149$; $p=0.508$). Based on the results, the null hypothesis was accepted and a conclusion was drawn that single parent type did not have a statistical significance influence on students' academic performance in public secondary schools in Kangundo Sub-county. The results conflict with a study done in the USA by Johnson (2015) which indicated that students from both parents performed far better than their counterparts from single parent families. The results are inconsistent with Tobishima's (2018) study done in Japan which showed that there was a statistically significant difference in academic performance between students from two parent households and single parent households. The results are inconsistent with a study done in Zimbabwe by Maposa, Zirima, and Mushauri (2020) which showed that children from single parent families had low achievement scores when compared with their counterparts from both parent families.

The results support a study done in Kumasi Metropolis, Ghana, by Azumah, Krampah, and Nachinaab (2018) which showed that there was no significant difference in academic performance between children from both parent families and single parent families. The findings are inconsistent with Nato's (2016) study done in Kenya which revealed a weak negative relationship between single parent family and students' academic performance. The findings are consistent with Kimaru, Mukolwe, and Kimani's (2020) study done in Kiambu County, Kenya which did not report any significant statistical difference in the academic performance of children from single parent families and those from both parent families.

Recommendations

The study recommends that the government should initiate educative and enlightenment programs on how to improve and sustain intact parenthood through the radio, television, and other mass media. The study recommends schools to offer effective guidance and counseling interventions. This is because it established that about a quarter of the student population will come from a single parent family. The schools should also hold workshops and seminars to create awareness for single parents on how they can be responsible towards their children's education and also offer the required support.

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