

Family Size as a Predictor of Kenya Certificate of Secondary Education Performance in Lunga Lunga Sub-County, Kwale County, Kenya

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The research is financed by the Author

Abstract

The study purpose was to investigate how family size influences performance of KCSE in Lunga Lunga sub-county, Kwale county, Kenya. This study aims to examine the influence of family size on performance of KCSE in Lunga Lunga sub-county, Kwale County, Kenya. Quantitative research method and cross-sectional descriptive research design was adopted in this study since they are appropriate for studies seeking to assess relationships between two or more variables. The population of the study was 21 head teachers, 12,117 student and 11,070 parents. All deputy head teachers, being the main informants, were selected to participate in the study. A sample of 10% was derived resulting to a sample size of 1,211 students and 1,107 parents respectively who were selected randomly in proportion to the 21 schools. Quantitative data was gathered by a questionnaire, interview schedule and collection form. Quantitative data was analyzed using descriptive statistics and presented on tables and graphs. Regression analysis was conducted to test the study hypothesis. Findings inform the policy makers in the education sector on best ways to equip schools and actively engage parents in school development agenda to steer performance. Findings are also contributed to literature development in the education sector.

Keywords: Family size, KCSE performance

DOI: 10.7176/JEP/15-8-03

Publication date: July 30th 2024

1. Introduction

Education is seen as a process that aids people in realizing their inherent potential in order to operate well and fill their respective roles in the society to which they belong. According to Cabrera, Peralta, and Kurban (2018), culture is transmitted in terms of continuity and growth, as well as for the purpose of spreading information and ensuring social cohesion as a social institution of man. As a result, families have a huge and important impact on how well their kids do in school. For example, educated parents would place a greater focus on academic performance because they are able to recognize the value of the connections between parents, students, schools, and communities as a result of their education. As a result, these parents prioritize education partnerships in order to support their children's educational aspirations and academic success (Benner, Boyle, & Sadler, 2016).

Appropriate student development and sustenance depend on the home environment, where educated parents work hard to give their children a supportive learning environment at home while uneducated parents frequently fail to do so. The idea is that parents who are educated encourage their kids to work hard on their personal growth. The basic amenities in students' homes, which are connected to their parents' educational levels, have a direct impact on their academic performance (Shamah et al., 2022). The amenities and surroundings at home equip children to meet the looming problems of the upcoming social, political, spiritual, and educational spheres of life. The attitude of parents toward their children and their development instills permanent values, such as diligence, honesty, optimism, integrity, and hope, and the children grow up to become the greatest future asset of the society in particular and the nation in general (Azhar et al., 2019). This is in addition to the family environment and the parents' educational status.

1.1 Statement of the Problem

All Kenyans will have access to equitable, high-quality education, according to the country's Education Sector Performance Vision 2030 (MoE, 2016). Despite the complexity of the process, academic success is one of the

key components (UNESCO, 2019). The importance of education in improving Kenya's economic outlook needs to be emphasized further. Therefore, it is a concern for all parties involved in education, including donors, the government, and NGOs, to invest a suitable number of resources in the field to boost learning and, eventually, Kenya's economic growth and development.

The 2019 KCSE results in Kenya represent a significant improvement over all prior years. As indicated by the rise of 2478 pupils from the total number of candidates with A-minus to 5796, candidates for the KCSE in 2019 performed significantly better than those who took the exam in 2018. The proportion of candidates who selected to enroll in public universities also increased. However, based on 2020-2022 national examination results, the trend has slowed. Still, the larger numbers of schools that perform poorly in national examinations are found in marginalized areas and along the Kenyan coast region. The schools fail to attract or even motivate teachers and learners and constantly post poor grades, report high cases of drop-out, low enrollment and school repetition among others. In the past five years, public secondary schools in the Lunga Lunga Sub-county have posted poor results in national exams, with few students earning the minimum grade required for entry into a university of C+ or higher, a small percentage (about 11%) earning a mean grade of C minus to C plain, and the vast majority (over 80%) earning a mean grade of D+ or lower, rendering them ineligible for advancement to higher education. This has raised concern among stakeholders in the education system, hence the need to undertake this analysis.

The region is also faced with extreme cases of poverty thus being problematic for parents to support school activities and development agenda to improve school infrastructure and shelter the learners from harsh weather conditions or even to provide adequate learning materials for students. Lunga Lunga being in dry and poor region of the Kenyan coast, where parents are not able to support schools financially, the schools from the region also fails to attract competitive teachers who prefer to work in regions with lesser levels of economic hardships. However, no known study has tackled the effect of parental social factors as a contributor to poor performance in Kwale County public secondary schools. This leaves a gap that needs to be addressed. In light of this, current study examines the family social factors at public secondary schools in Lunga Lunga Sub County, Kwale County, Kenya, that affect students' performance.

1.1.1 Family Size and Academic Performance

Young learner's engagement in academics is influenced more by family size and birth order, with moderate families generally having greater academic accomplishments. With knowledge of family size, it becomes possible to compare families' status. The number of family members has an impact on access to education because it influences the way responsibilities and resources are distributed. The more the number of offsprings in a particular family, the higher the demand for childcare in terms of labor especially at early stages of child development (Ella, Odok, & Ella, 2015). On the other hand, an additional adult woman or an older sibling could lessen opportunity cost of students' time by providing alternatives for family chores. Thus, this increases the chances of enrollment and schooling level among children, especially girls in a family (Chege & Sifuna, 2006; Ramirez & Carpenter, 2018). A UNESCO report (2001) indicated that parents of large-sized families are more often expected to make multiple payments for school fees, provide learning inputs such as uniforms, textbooks, and still make contributions towards maintenance or building physical school structures, hence finding it difficult to enroll children to school. However, these social-economic factors have not been empirically tested in Lunga Lunga, Kwale context.

Jumaa (2003) investigation demonstrated that about 82% of school kids who ultimately depart from school system at all levels are from large-sized families. This suggested that parents or guardians with large-sized family responsibilities are habitually confronted with numerous social difficulties and thus, are not capable of meeting all school needs. Consequently, such parents find it burdensome to retain learners in secondary level education system (Boyle, 2004). Alongside the family size, this study incorporates other aspects of family social-economic and their linkage to academic performance in secondary schools at the Kenyan context.

Lee (2019) discovered that smaller family sizes result in a lessened economic dependency ratio, relieving some of resource constraints that could compel families to make unfavourable choices regarding young learners' education investment. Therefore, small size families will rarely be compelled to make education choices between girls and boys or between the eldest versus other siblings. In addition, Frances et al. (2017) put forward that small-sized families could redefine family responsibilities past those traditional family prospects; hence social viewpoints are related to schooling of girls as measured up to boys, and of younger children as compared to first born children. This study however focuses on performance of learners in totality without relating the factors to either gender.

In Ghana, existence of children younger than six years in a family have a propensity to augment the likelihood of exposing the older siblings to paid labour at the expense of attending school and the effect is felt more by the

girls who assume the roles of the mother (Hunt, 2008). However, presence of female adults within such families increases the possibility of girls being sent to school. Still in Ghana, it was demonstrated that for every extra child, the presence considerably amplified likelihood of elder girls' withdrawal from school to assume childcare roles. While the study focused on retention of learners of all ages in primary schools, current study has its focus on performance at national examinations and how the social-economic factors of a family influence it. Shen (2017) analyzed age size and academic progress in middle school by collecting data through interviews conducted on learners. The author found that young learners from small-sized families have higher probabilities to participate in formal learning and quickly adjust to the school setting. They are also found to be more expressive in the classroom as contrasted to introverted children from large-sized families. The birth of younger kids to large-sized families has been largely related to likelihood that an older child, preferably the female sibling will withdraw from school (Ahawo, 2018). In addition, in a large family, attention directed to individual child in terms of interactions in the study life could be limited. During the early stages of life, the oldest child usually benefits from good attention and warmth. Parental interest on children tends to take a declining trend with the increasing number of siblings which places the children born later to a family at the verge of withdrawing from learning at early stages of school life. While the study focus was family size, present study involves a broader perspective of family social-economic factors and their influence on academic performance in secondary school setting. Data will also be collected from several sources using three research instruments.

1.1.2 Social Learning Theory

The study was founded on Albert Bandura, a psychologist, created the social learning theory in 1986 as an alternative to the earlier work of Skinner, another psychologist who is well-known for having influenced behaviorism. According to the social learning theory, people learn social conduct through seeing and copying the actions of others. Study habits and other family traits like discipline can affect a student's ability to learn. College academic success can be strongly predicted by the number of study hours per week spent on college work and the desired degree. These homework habits are instilled in students at a young age because to Bandura's (1986) social learning theory. The social learning hypothesis states that when parents set an example of disciplined behavior for their children, they create an expectation that their offspring will do the same. The habits and effects of those behaviors are practiced and taught to their kids (Bandura, 1994). As a result, it is likely that parents who have attained their objective of earning a graduate degree prefer to encourage their kids to develop disciplined study habits. Parents who did not pursue higher education are less likely to provide their children with numerous opportunities for observational learning so they can establish devoted study habits.

When it comes to education, social learning happens when children see their peers, parents, or teachers and learn by imitating their actions. It offers the chance for learning to take place at many levels and in a variety of situations, all of which emphasize the importance of motivation. According to the social learning theory, parents who did not experience the same levels of achievement and positive reinforcement in their own educational experiences would naturally shy away from taking on new academic challenges. On the other hand, parents who have received a college degree are more likely to have encouraged perseverance and skills in their kids by praising and recognizing their developing talents. This theory has been proven to be helpful in illuminating the proposed relationship between parental educational attainment and academic achievement.

1.1.3 Conceptual Framework

The conceptual model shows the direct linkage between independent and dependent variables relationship.

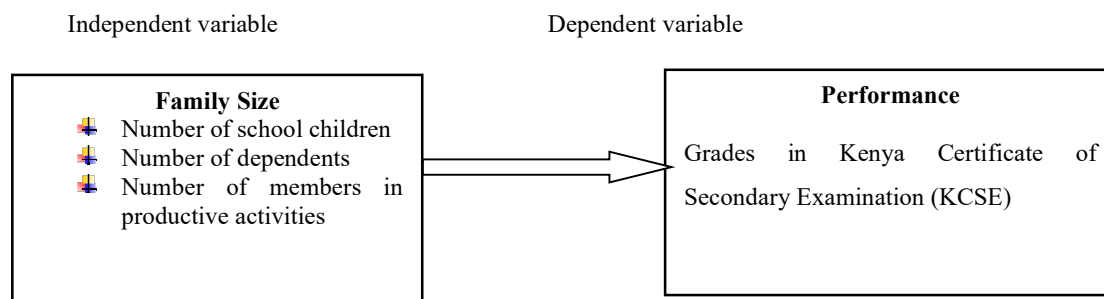


Figure 1. Conceptual framework

Above table depicts the relationship between family size and performance of KCSE

1.2.1 Methodology

This study adopted a descriptive survey design because it is simple and easy to understand a target population from analyzing a selected sample. Bryman (2008) depict target population as all elements that meet the inclusion criterion in an analysis where the elements have common observable traits. The target population consisted of Twenty-one (21) public secondary schools hosting 12,117 students and 11,070 parents/guardians in Lunga Lunga Sub- County. Students and parents as well as the 21 school heads formed the basis of target population. The 21 school heads were chosen as main respondents because they are well positioned to provide required information on KCSE performance for five years, yet still, the population was not large. 10% and parents was used to select students of each public secondary schools resulting to sample 1,211 students and 1,107 parents respectively. The students were then picked randomly. Both primary and secondary data were gathered using a questionnaire, interview guide and a data collection matrix.

1.2.2 Study Location

The study was conducted in Kenya's Kwale County's Lunga Lunga Sub County. Kwale County, which has a population of 649,000 and is situated on Kenya's Southern Coast, has an area of 8,270 km². The region, which largely consists in dry and semi-arid terrain and is along the coast, stretches from Shika Adabu in the south to Kinango and then southward to Lunga Lunga on the border with Tanzania. Lunga Lunga South sub-county has 21 public schools for girls, boys and mixed boarding and day (Lunga Lunga sub-county HR-education, 2023). These secondary schools have continued to perform poorly with most students ending studies at secondary school level despite posting of government teachers and infrastructural support from the county government.

1.2.3 Study Results

Descriptive correlation and regression results were as detailed in Table 1, Table 2 and Table 3 below

Table 1. Family size

Indicator	N	Min	Max	Mean	S.D	SK	KU
Number of school children	994	1	5	3.890	1.906	-0.707	-0.374
Number of dependents	994	2	5	3.900	0.961	-0.631	-0.131
Members in productive activities	994	1	3	2.270	2.590	-0.980	-0.235
Aggregate Mean	994	1	5	3.3533	1.819	-0.772	-247

The findings established that number of school children in a family was relatively high suggesting that implying that respondents agreed that their families had other school going sibling thus respondents concurred that number of other siblings in school plays an integral role in academic performance (Mean = 3.890). In regard to number of dependents scores, the respondents agreed that families were quite large (M = 3.900). The mean score of number of family members in economically productive activities attributes was moderate (M = 2.270). The family size may pose difficulties for learners to manage perform academically due to parents habouring burden of bringing up large families which would consecutively be detrimental to learners' progress at school.

Table 2: Correlation Analysis Results

Variable	FS	P
Family Size (FS)	1	
Performance (P)	0.549	1

Results of correlation indicated that family size had moderate and significant positive correlation with performance ($r = 0.549$, $p < 0.05$).

Table 3: Regression Analysis Results

Performance	Coefficient	Standard Error	t-statistics	Prob.
Constant	1.631	0.828	1.97	0.055
FS	0.072	0.181	0.40	0.691
R ²	0.391			
Adj. R ²	0.337			
MSE	0.404			
F-Stat	7.22			
Prob	0.000			
N	994			

While correlation analysis indicated a positive association between family size and academic performance, hypothesis tests revealed p values greater than 0.05. The individual coefficients were not significant but the overall model was significant. This infers that the linkage between the two variables is positive but not significant. Thus family size is not an influencer of academic performance among public secondary schools in Lunga Lunga.

Sentiments of school heads on the family size yielded similar responses. The school heads explained that the size of family cannot be entirely a reason as to why a learner performs poorly but associate performance to individual learner efforts despite challenges in schools. Some singled out stellar students who are associated with very large families. They too gave views that there are other parts of the family with large families who performed much better than their Coastal region counterparts even citing families in slums. Some respondents pointed that small families with one or two school going children does not necessarily cater for all learning needs.

1.3 Conclusion

There exists a burden to cater for large families upon the parents which trickles down to the learners who are constrained to access basic learning resources. The large size of families has adverse effect on high school learners because the parents tend to give more attention to the younger kids in the family and fail to follow-up on academic wellbeing of high-scholars. Another challenging factor is that most families have one parent as a sole bread winner with most household members not engaged in economically productive activities.

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Bio data

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