



Influence of School Feeding Programme on Pupils' Academic Performance in Public Primary Schools in Mwatate Sub-county, Taita Taveta County, Kenya

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Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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ABSTRACT

This study sought to influence the school feeding programs on the academic performance of pupils in public primary schools located in Mwatate Sub-County, Taita Taveta County, Kenya. Its objective was to establish how availability of resources for school feeding program influences academic performance in public primary schools. The study used a descriptive survey research design approach. The target population were 62 public day primary schools in Mwatate Sub County with the study respondents being all head teachers and teachers and some selected parents through a random sampling procedure. The deputies also formed the basis for the participants. There are 502

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teachers across the 62 schools in Mwatate Sub-County. To ensure an equal representation a sample of 20% was selected resulting to a sample size of 12 head teachers, 12 deputy head teachers and 76 teachers. The research similarly used an interview guide to collect opinions from the head teachers. To ensure reliability of the research tools, a reliable 0.750 Cronbach's coefficient alpha index was obtained from the piloted questionnaires. Inferential statistics such as correlations and regressions were utilized to test the study hypothesis and provide the direction and strength of the association. Conclusions and recommendations were provided thereof. A mean of 30.7, the majority of respondents believed that availability of resources for school feeding program influence academic performance in public primary schools in Mwatate Sub- County. The research recommends that ensure consistent provision of SFP, resources will make SFP compulsory in schools and in return it improves children's enrolment, attendance and performance.

Keywords: Availability of resources; academic performance; school feeding program.

1. INTRODUCTION

Globally, hunger is a continuous predicament that influences more than 1.4 billion people, who lack adequate food to eat in the world today, mostly affected being the school-going children [1]. The recent global Covid 19 pandemic, global economic crisis, fluctuations in food prices, political conflicts and civil wars, and massive natural adversities have prevented masses of people from having access to enough foodstuff. The majority of those afflicted reside in the world's most underdeveloped areas and in addition, particularly the children of school going age, [2]. Notable authors such as Aliyar, Aulo & Hamdani, [2] Akanbi & Alayande, [3] and Ahmed [4] assert that the lack of food equally lead to body weakness and hence leading to underperformance of which every human being category be it adults and children, children in schools being affected the most if they lack it or under hunger.

It is due to this hunger that brought about such school program that was later recognized as school feeding programs attached to the dire needs. For example, School Feeding Programs in the USA, China, and India and now Africa represent crucial efforts to address childhood hunger, enhance educational outcomes, and promote public welfare. While each program has its unique features and challenges, they all share a common goal of providing nutritious meals to pupils in need. School feeding programs are instrumental in narrowing the achievement gap between socio-economically advantaged and disadvantaged pupils. By ensuring that every student have access to nutritious meals, regardless of their background, schools help level the playing field and provide equal opportunities for academic success, [2].

The continued existence of malnutrition, poverty, and starvation is one of the main grounds of the delay in the implementation of universal primary education. The effects of this challenge are unfavorable across the nations and worse when the very young are at stake. The effects of hunger and undernourishment on children and infants becomes irreversible, and leaves short- and long-term permanent effects on cognitive, physical, and delayed psychosocial development [5]. Additionally, there is growing evidence that under nutrition during childhood has weighty economic costs for both households and countries, and still if children's diets and nourishment is improved, it may possess a lasting progressive impact on both their long-term productivity as adults and their academic performance and behavior at school, [2].

1.1 Statement of the Problem

School feeding programs has a profound impact on pupils' academic performance by addressing their basic nutritional needs, [6]. By providing regular meals, these programs create an environment conducive to learning, leading to improved attendance, participation, and ultimately, higher academic achievement. In fact, the proponents of the feeding program in school assert that availing food in school could entice exposed children to go to school, improve their turnout and curtail dropouts. School feeding program is an inducement for susceptible families, which affects the grades, and overall educational performance of the student. Despite the wellness of the program according to Ahmed [4] and Jerono, Nzuki, [7] children from Arid and Semi-Arid Lands counties as well as in other among the 47 counties in Kenya have deteriorated sharply due to short rains, long distance in search of water.

Besides, school feeding programs in schools have been hampered by various other factors such as government policy and support, availability of resources like funding, undefined demographics or even undefinable community-school relations making it hard to define its net effect on student performance. The studies lack a clear path and elaboration on the linkage between schools feeding programme on pupils' academic performance in public primary schools more specifically in Mwatate Sub-County, Taita Taveta County, Kenya. The intent of this research was to assess the influence of school feeding programme on pupils' academic performance in public primary schools in Mwatate Sub-County, Taita Taveta County, Kenya.

1.2 Objectives of the Study

To establish the influence of availability of resources for school feeding program on academic performance in public primary schools in Mwatate Sub-County, Taita Taveta County, Kenya.

2. LITERATURE REVIEW

2.1 Theoretical Literature

2.1.1 Structural-functional theory

Structural-functional theory was proposed and advanced by Emile Durkheim [8] is the guiding theory in this study. In order to explain these structures in terms of functions-contributions to steadiness and perseverance of societies. Structural functional theory has its focus on structure for instance deriving roles, outline of institutions, and articulating of institutions in a society. This method grasps society as an intricate, nonetheless interconnected system, where every element makes some form of contribution towards whole functionality of the system. The theory interlinks the different structures, or systems, such as the government, schools, businesses, and families. It is crucial for all components of these systems to function together for a fully operative society. Application for the structural-functional approach or theory to institutions requires that all of the component pieces must cooperate. The relationship between each component of the greater social world is examined through structural-functional theory.

This theory therefore becomes plausible in explaining the interconnectedness of factors

surrounding the school feeding program such as infrastructure/resources, government policies, and stakeholders as participants that enable sustainability of SFP towards academic outcome of pupils. The application of the structural-functional theory provides a valuable framework for understanding the impact of the school feeding program on pupils' academic performance in public primary schools within Mwatate Sub-County, Taita Taveta County, Kenya. This theory, rooted in sociology, examines how social structures and institutions work together to maintain stability and equilibrium in a society. In this context, it enables us to dissect the intricate interactions between the feeding program, the educational system, teachers, students, parents, and the broader community [9]. As Wholey [10] asserts, within this theory underpinning, it is imperative to differentiate between manifest and latent functions of the school feeding program. The manifest function is the explicit and intended outcome, such as enhancing nutrition and health among students. On the other hand, latent functions are unintended consequences, which may include improved attendance, heightened concentration in class, and ultimately, elevated academic performance. This nuanced approach allows for a holistic evaluation of both the immediate and indirect impacts of the program by examining the stability and equilibrium within the educational system, this research gave insights into how the feeding program integrates with the existing structures.

2.2 Empirical Literature Review

2.2.1 Availability of resources for school feeding program and academic performance

The bulk of projects for school buildings in industrialized nations are regarded seriously since they are important predictors of educational success in addition to providing pupils with high-quality and luxurious learning environments. Schools should be apprehensive of how buildings appear, function, and are sized because here is where pupils and instructors spend the majority of their time studying and teaching in an environment where the primary aim is typically only to offer basic education. Child-friendly schools are setting the bar for creatively implementing educational initiatives that yield the highest learning results. Making progress towards creating learning-friendly, structurally sound school facilities as part of

growth initiatives, as well as evaluating current educational amenities and constructing enough classroom space for the kids and other school projects, is a daunting task, but one that could lead to a significant development milestone, [11].

According to Wamunyu [12] insufficient school amenities like filthy restrooms or a lack of gender-separated restrooms may make it problematic for pupil's to show up for class. Therefore, it is crucial to put into action projects that support the improvement of schools in our communities, with sustainable structures and educational resources that permit societies to reduce or even terminate need on outside assistance. Resources for school operations and continuity of programs continue to be a problem, especially given the dynamic economic climate. Some regions are in desperate need of starting capital improvement ventures but have stalled due to financial difficulties. In the current environment, educational leaders, planners, and designers are faced with the problem of guiding school communities in outlining fundamental educational goals and strategies put forth for pupil's and proving that careful facility organization helps achieve SFP goals.

The literature reviewed failed to explain how resources allow for effective monitoring and evaluation of school feeding programs. Regular assessments ensure that programs are achieving their goals and that resources are allocated efficiently. It also failed to elaborate how adjustments are made based on resources, exactly which resources, the need for feedback received and how this lead to more targeted interventions and better outcomes in terms of academic performance, hence depicting a research gap.

3. MATERIALS AND METHODS

The study adopted a descriptive survey research design approach. The purpose of the survey is to gather in-depth descriptions of existing occurrences with the goal of using the information to support present circumstances and practices or to develop additional plans for their improvement [13]. This methodology is apt for assembling information, summarizing, presenting, and interpreting for the goal of clarification as a descriptive survey does not call for the manipulation of the variables under examination, [14]. Without forcing them, the research asks teachers for information. Descriptive research entailed gathering data that

defines actions, arranging, tabulating, displaying, and describing the data acquired, [15].

The target population were 564 of the total respondents involving head teachers, deputy head teachers, teachers, and parents. From the target population, a sample of 20% was selected resulting to a sample size of 12 head teachers, 12 deputy head teachers and 76 teachers. The study also targeted 62 parents who participated in the questionnaire requiring to find out about the community-school relations as well as whether their demographic factors relative to the school program influenced school performance. The sample size was 113 possible respondents. A questionnaire was used to gather quantitative data from the teachers, while deputy head teachers and head teachers were interviewed to gather much deeper qualitative data that would optimize understanding of the problem under study. To establish what the research instruments intended to measure, the validity of the instruments was established by expert scrutiny by the supervisor. To ensure reliability of the research tools, a reliable 0.750 Cronbach's coefficient alpha index was obtained from the piloted questionnaires. The quantitative data was then cleaned, coded and descriptive statistics were analyzed. The analyzed data was then presented using frequencies and percentages on tables.

4. RESULTS AND DISCUSION

4.1 Influence of Availability of Resources for School Feeding Program on Academic Performance

The influence of availability of resources for school feeding program on academic performance formed the third independent variable in this investigation. The facts gathered was calculated and outcomes were presented as shown in the table. Sufficient allocation of resources (e.g., funding, facilities, and staff) to the school feeding program is essential for enhancing pupils' academic performance according to the first statement, to which 12% of respondents strongly agreed and 28% just agreed. This results in a total of 40% supporting the statement, as opposed to a total of just 31% (8+23%) opposing it. Only 29% of respondents had no opinion or rather were neutral. As a result, there were more respondents who indicated that sufficient allocation of resources (e.g., funding, facilities, and staff) to the school feeding program is essential for enhancing

pupils' academic performance were more than the respondents who did not

Regarding the second assertion, that inadequate resources allocated to the school feeding program hinder its potential to positively impact pupils' academic achievement, only 35% of respondents just agreed, while 10% strongly agreed. This results in a total of 45% in favor of the declaration as compared to a total of only 31% (12%+19%) who were against it. 14% of respondents exhibited neutrality. Accordingly, the percentages of respondents who said that inadequate resources allocated to the school feeding program hinder its potential to positively impact pupils' academic achievement were lower than those who said the opposite. The majority of employees indicated that the availability of resources directly influences the reach and effectiveness of the school feeding program, ultimately affecting pupils' academic achievements. 14% strongly agreed and 33% agreed with the statement. As a result, the statement is supported by 47% of respondents, compared to 37% who had contrary opinion (15+22%) whereas 16% who are neutral. In light of this, more respondents expressed a preference for the availability of resources

directly influences the reach and effectiveness of the school feeding program, ultimately affecting pupils' academic achievements than those who did not.

18% of respondents strongly agreed with the statement, and 38% of respondents agreed, that insufficient resources for the school feeding program result in disparities in academic performance among pupils in public primary schools. This indicates that 56% (18%+38%) of the respondents were in favor of the respondents, as opposed to 9% who strongly disagreed with the statement and 15% who agreed with it. This indicates that 20% of respondents were neutral, while 24% (9% + 15%) disagreed with the statement. It indicates that there were more responders who agreed with the declaration than those who did not. Regarding the claim that availability of nutritious and balanced meals through the school feeding program significantly contributes to improved learning outcomes for pupils, 10% of respondents severely disagreed with the statement, 30% of respondents disagreed, 15% of respondents strongly agreed, 15% of respondents agreed with the declaration, and 25% of the participants were neutral.

Table 1. Influence of availability of resources for school feeding program on academic performance

Statement on influence of availability of resources	SD	D	N	A	SA
Sufficient allocation of resources (e.g., funding, facilities, and staff) to the school feeding program is essential for enhancing pupils' academic performance.	8%	23%	29%	28%	12%
Inadequate resources allocated to the school feeding program hinder its potential to positively impact pupils' academic achievement	12%	19%	14%	35%	10%
The availability of resources directly influences the reach and effectiveness of the school feeding program, ultimately affecting pupils' academic achievements	15%	22%	16%	33%	14%
Insufficient resources for the school feeding program result in disparities in academic performance among pupils in public primary schools	9%	15%	20%	38%	18%
Availability of nutritious and balanced meals through the school feeding program significantly contributes to improved learning outcomes for pupils	10%	30%	25%	20%	15%
Continuous evaluation and adjustment of resource allocation are necessary to optimize the benefits of the school feeding program on pupils' academic performance	13%	15%	18%	30%	24%
Mean	11.2	20.7	20.3	30.7	15.5

Table 2. Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.811 ^a	.658	.631	.431

a). Predictors: government policies, demographic factors, availability of resources, and community-school relations (all constant).

The statement that it is continuous evaluation and adjustment of resource allocation are necessary to optimize the benefits of the school feeding program on pupils' academic performance received responses from 24% of respondents who strongly agreed, 30% of respondents who agreed, 13% of respondents who strongly disagreed, 15% of respondents who disagreed, and 18% of respondents who were neutral. The participants clearly posited out that availability of resources is imperative if SFP is to be successful. This declaration was supported by 18% of the total participants who strongly agreed with the declaration whereas 38% of the participants agreed with the declaration that insufficient resources for the school feeding program result in disparities in academic performance among pupils in public primary schools. With a mean of 30.7, the majority of respondents believed that availability of resources for school feeding program influence academic performance in public primary schools in Mwatate Sub- County. This demonstrates the necessity of availability of resources for school feeding program. The results support Osiemo [16] findings who posited out that funding and funds utilization influence implementation of SFPs. Further, Jerono & Nzuki, [7] stressed that schools' deficiency of capacity to heighten implementation bring about failure of finances provided to meet learning demand. Increased enrollment was cited to strain the programme amid lacking facilities such as the cooking equipment, kitchen, dining places all which stretch the funds allocated for the SFP [17].

4.2 Regression Analysis

The model summary findings are summarized, and the uncorrected R square values are 0.658. According to this coefficient of determination, the independent factors in this study only account for 66% of the variations in the students' academic performance. Instead of additional elements not included in the model, the remaining amount (34%) is considered. The conclusion indicates that familiarity with and knowledge of the independent factors contribute significantly to our understanding of primary public school pupils' academic performance.

5. CONCLUSION AND RECOMMENDATION

From the outcomes of this research, the investigator concluded that Parents from poor

socio-economic backgrounds similarly encourage their kids to go to schools in exchange in lieu of food offered during lunch time. Alternatively, children's enrolment and attendance is very low due to the unavailability of food in school. Despite high attendance in schools that provide SFP, children miss school. This could be related to other factors like poverty in their families. The low attendance and enrolment recorded in most public schools might mainly be attributed to lack of SFP. Interferences for curbing the challenges related to feeding programs in pre-school were only proposed but were not fully implemented. School feeding roll maximizes children's learning capacity and retains them in school. School feeding programme affects the retention of children in school. These children were attracted by the food offered in school to remain in class hence boosting their retention leading to good learning. Properly designed and effectively implemented SFPs can alleviate short-term hunger in malnourished or otherwise well-nourished school children. This helps to increase the attention and concentration of students producing gains in cognitive function and learning.

To reach higher achievements/performance of the children, head teachers must ensure everyone in the school that is teachers, parents and also the pupils knows what the school's overall goals and strategies are. In regard to the school feeding program, the investigator came up with the recommendations. To ensure consistent provision of SFP, policies that guide the need to make SFP compulsory in schools should be established since it improves children's enrolment, attendance and performance. Since SFP is a complex programme, all stakeholders led by County governments, national governments, local communities, parents and pupils should join hands to make SFP a success. School heads, Community and Parents should make arrangements in advance to store enough food during harvest season. Parents and community also should be mobilized further to fully support the programme by contributing adequate food, giving out money to purchase food, providing firewood, cooking and serving meals in turn. The investigator recommends that the head teachers to ensure that balanced meals with small portions of all nutrient components are offered in schools. There should be frequent change of the diets to avoid monotony. This will help boost school attendance and enrolment. This can be

made possible if the government will provide enough resources to the schools. The investigator also recommend that parents and both county and national government to work hand in hand to provide SFP in all pre-schools in the sub-county. To provide a clear understanding of the influence of school feeding programme on learners' academic performance, this study recommends that;

1. A similar study be carried out in other Sub Counties among public and private primary schools in Taita Taveta County
2. A similar study be carried out in different regions with an emphasis on the use of a larger population

DISCLAIMER (ARTIFICIAL INTELLIGENCE)

I hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc) and text-to-image generators have been used during writing or editing of manuscripts.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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