EFFECTS OF SCHOOL FEEDING PROGRAM ON PRE-PRIMARY LEARNERS' ATTENDANCE IN PUBLIC PRE-SCHOOLS IN NYALI SUB-COUNTY, KENYA

AGNES AWUOR OWANO

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF EDUCATION DEGREE IN EDUCATIONAL LEADERSHIP AND MANAGEMENT OF MOUNT KENYA UNIVERSITY

OCTOBER 2024

DECLARATION AND APPROVAL

Declaration by the Student

This project is my original work and has never been presented for any academic award in any institution.

Name:……. **Agnes Awuor Owano**…….

Reg. No.……. **MED/2021/8483**…….

Signature…… Date……..31-10-2024……

Approval by the supervisor

This project is being submitted for examination with my approval as University supervisor

Name:…… **Dr. Ronald Kikech**…….

School of Education,

Mount Kenya University

Signature…… Date……31-10-2024……

DEDICATION

To my loving mother Perez Owano and my nephew Derick Okeya for their continued support and understanding during my study. God bless you all

ACKNOWLEDGEMENTS

First, I extend my sincere appreciation to my supervisor, Dr Ronald Kikechi, whose invaluable guidance, support, and constructive feedback greatly enhanced the quality of this research. Your expertise and encouragement were instrumental in navigating the challenges of this study.

I am also grateful to the faculty and staff of the Department of Educational Management and Curriculum Studies at Mount Kenya University for their support and resources, which fostering a conducive learning environment.

My gratitude goes to the participants of this study, including the headteachers, teachers, and PTA members whose insights and experiences on school feeding program provided essential data for this research.

I am deeply grateful to my family for their unwavering support and encouragement. Your understanding and patience during the demanding times of this research have been a source of strength for me.

ABSTRACT

This study examined the influence of school feeding programs on pre-primary learners' attendance in Nyali Sub-County, Kenya. Thus, specifically the study was guided by the following objectives: to determine the effect of school feeding program policies on pre-primary learners' attendance in public schools, to determine the effect of school feeding program demographics on pre-primary learners' attendance in public schools, to assess the effect of school feeding program rations on pre-primary learners' attendance in public schools, and to establish the effect of school feeding program resources availability on pre-primary learners' attendance in public schools in Nyali sub-county. The study was anchored on the human capital theory, social exchange theory, and Maslow's hierarchy. The study was guided by descriptive research design. It focused on 12 public early childhood development centers in Nyali Sub-County. It targeted 12 head teachers, 30 teachers and 60 Parents Teachers Association (PTA) in 12 public pre-primary schools in Nyali Sub-County. The study used censures sampling method to collect data from 12 head teachers, 30 teachers and 60 Parents Teachers Association (PTA) in the 12 public pre-primary schools. Data collection involved the use of questionnaires, interviews, and document analysis. Data was analysed using measures of central tendency and chi-square. Ethical was considered by obtaining permission for data collection and ensuring participant confidentiality. The study established that the p value (p=0.000) for school feeding program policies, p value (p=0.003) for school feeding program demographics, p value (p=0.001) for school feeding program rations and the p value (p=0.000) for school feeding program resource availability and pre-primary learners' attendance was less than 0.05.

TABLE OF CONTENT

LIST OF TABLES

LIST OF FIGURES

LIST OF ABBREVIATION AND ACRONYMS

ECD	Early Childhood Development
HGSMP	Home-Grown School Meals Programme
MDG	Millennium Development Goals
NACOSTI	National Council of Science Technology and Innovation
NMK	Njaa Marufuku Kenya
PTA	Parents Teachers Association
RSMP	Regular School Meals Programme
SDG	Sustainable Development Goals
WFP	World Food Programme

CHAPTER ONE

INTRODUCTION

1.0 Introduction

This chapter contains the background of the study, statement of the problem, purpose of the study, objectives of the study, research questions, significance of the study, scope and limitation of the study, and assumption.

1.1 Background of the study

Sustainable Development Goals for Education call for all children to have access to free, equitable, and high-quality primary and secondary education by the year 2030, regardless of their family's financial situation. The school feeding program strategy is aimed at increasing enrollment in schools, attendance among those already enrolled, retention rates for students, dropout rates, and, most importantly, the overall performance of students in both academic and extracurricular activities (GoK, 2012). One potential factor is the effectiveness of program policies in addressing the specific needs and challenges of pre-primary education. Demographic factors, such as socioeconomic status, parental education levels, and cultural norms, may also influence the program's effectiveness in promoting attendance. Families facing economic hardships or those with limited awareness of the program's benefits may be less likely to prioritize consistent school attendance for their children (Ahmed et al., 2010). The school feeding programme would enable learners to increase their regular attendance in order to improve their academic performance.

As early as the 1930s, the United States of America (USA) and the United Kingdom (UK) utilized FFE to improve children's health (Gokah 2008); these early programs took the form of school feeding programs (SFP), where participants were fed a meal or a snack at school.

As a social safety net, FFE programs have also gained popularity among political leaders and policy makers in developing countries in Asia, Africa, and Latin America. The 2011 World Food Prize was shared by John Agyekum Kufuor, former president of Ghana, and Luiz Inácio Lula da Silva, former president of Brazil, for the successful social programs, including school feeding, that each nation has established. Brazil and India have established school feeding programs by passing legislations. Brazil added school feeding to its constitution (Bundy et al. 2009) while in 2001 in India, the Supreme Court mandated that all state governments must provide cooked meals in targeted schools (Afridi 2010).

The study carried in Malawi had been indicated that school feeding programme had an effect on learner's enrollment and attendance. The enrollment increased up to 5% and improvement of attendance up to 36% (WFP, 1996). Around 40 percent of the 60 million children who attend school hungry more frequently in developing nations live in Africa, demonstrating the need to provide school meals to feed children (Akanbi, 2013). According to Akanbi (2013), the school feeding initiative encourages parents to enroll their children in school rather than letting them remain home to work or look after younger siblings. The Millennium Development Goals (MDGs) initiative and numerous subsequent conferences attended by African leaders that addressed issues like economic, security, peace, political, and corporate governance are credited with the introduction of the school feeding program (Bundy et al., 2009). The School Feeding Programme has been run in two ways: either the entire family receives food upon attainment of a particular level of student attendance (take home rations) or the children are fed inside the school compound (school meals) (Dheressa, 2008). Children who participate in the school food programs receive breakfast, lunch, or both in the classroom. As opposed to home rations, which also tries to assist other needy members of the home, this incentive specifically targets primary school students (Adelman et al., 2008).

In the early 2000s, the Tanzanian government introduced the Primary Education Development Programme (PEDP) with the purpose of increasing access to education and improving the teaching and learning infrastructures. The programme stressed on free primary education. Enrollment and attendance of learners in schools was not proportionally appended to the programme. To support the objectives of the programme, the government introduced the school feeding programme at primary school level in the regions of food insecurity. Feeding children through school would impact academic performance in Tanzania. It is believed that the short-term hunger in the classroom may affect the academic performance of learners. Further, it has been suggested that school feeding programme if provided properly did raise school enrollment and increased school attendance (Ahmed, 2004). School feeding programme greatly promotes the learning style of learners in schools. It is one of the key interventions for promoting learning to learners in the areas of food insecurity. This can motivate learners to concentrate and learn better so as to improve learning capacity and performance. Therefore, it is apparent that the supply of food to learners in primary schools' level had increased school attendance and reduced dropout among the learners in the community schools in Tanzania (Malila, 2015).

In Kenya, school meals have a more than 40-year tradition. The government started the school milk program in 1979, however, due to high implementation expenses and the advent of the Structural Adjustment Programme, the program was ultimately canceled in the early 1980s. The Kenyan government and the World Food Programme (WFP) established a collaboration for school feeding in 1980 (RoK, 2014). The program's main goals were to raise student enrolment, retention, and graduation rates as well as students' capacities for learning and focus. About 220,000 primary school students, including those participating in early

childhood development in certain elementary schools, were the initial target audience for the campaign. In addition, enrolment grew as a result of the introduction of Free Primary Education in January 2003, and by 2007, the school feeding program in Kenya had benefited over 1.2 million students in 3,847 primary schools. The number of recipients climbed to 1.5 million between 2008 and 2009. The Regular School Meals Programme (RSMP), run by the World Food Programme, and the Home-Grown School Meals Programme (HGSMP), run by the Government of Kenya, both of which operate under two different models: Home-Grown School Meals (HGSM) and Njaa Marufuku Kenya (NMK). These initiatives are meant to aid Kenya in achieving the Sustainable Development Goals (SDGs) (Drake et al., 2016).

Recognizing the unique challenges and opportunities within Nyali Sub-County is essential for optimizing the school feeding program's impact on pre-primary learners' attendance. By investigating the interplay of program policies, resource availability, ration quality and quantity, and demographic factors, this study aims to provide valuable insights for educational stakeholders and policymakers. Addressing the identified barriers and leveraging the program's strengths can contribute to enhancing pre-primary education, promoting consistent attendance, and ultimately fostering a foundation for lifelong learning and development in the region (Mogaka et al., 2021). School Feeding Programme (SFP) has been a crucial ingredient in Nyali Sub-County enrollment, transition, and retention of pre-primary learners, and there is a need for reliable food supply to meet the metabolic supplies of body growth and brain development (Kamau et al., 2022). Thus, prioritizing the school feeding program is fundamental in reducing short-term hunger, providing cognitive function to learners, and enhancing the learning environment .

1.2 Statement of the problem

One of the most important factors in assuring a nation's economic success is education. To raise the educational levels of their inhabitants, the majority of nations have developed a variety of strategies, including the implementation of school feeding programs. To encourage parents and guardians to enroll their children in school, many developed and developing countries worldwide, including Kenya, have embraced school feeding programs in their primary schools (WFP, 2016). In Kenya, school feeding programs have proven to be one of the most effective means to ensure that every child receives quality basic education. In Nyali Sub-County, free primary education, in conjunction with the school feeding program, has been a major strategy to guarantee that each child receives a quality education (GoK, 2012).

Despite these efforts, many pre-primary schools in Nyali Sub-County continue to experience low enrollment and attendance rates. Recent data from the Nyali Sub-County Education Office indicates that the average attendance rate in public pre-primary schools is only 65%, well below the national target of 85% (Nyali Sub-County Education Office, 2023). Furthermore, a survey conducted by the Ministry of Education in 2022 revealed that approximately 30% of children in Nyali Sub-County do not attend school regularly, with many families citing the lack of meals as a significant deterrent (Ministry of Education, 2022). According to Abdalla (2023), most public elementary schools, particularly in low-income communities, continue to experience low enrollment and high dropout rates, with dropout rates in some areas exceeding 20%.

It is against this background that the study intended to establish the effects of school feeding program on pre-primary learners' attendance in public pre-primary schools within Nyali sub-county in Mombasa, Kenya.

1.3 Purpose of the study

The study aimed to investigate the effects of the school feeding program on pre-primary learners' attendance in public pre-primary schools within Nyali sub-county in Mombasa, Kenya.

1.4 Objectives of the study

The study was be guided by the following objectives:

1. To determine the effect of school feeding program policies on pre-primary learners' attendance in public schools in Nyali sub-county.
2. To determine the effect of school feeding program demographics on pre-primary learners' attendance in public schools in Nyali sub-county.
3. To assess the effect of school feeding program rations on pre-primary learners' attendance in public schools in Nyali sub-county.
4. To establish the effect of school feeding program resources availability on pre-primary learners' attendance in public schools in Nyali sub-county.

1.5 Research Hypothesis

The study seeks to answer the following questions:

HO_1: There is no statistically significant association between school feeding program policies and pre-primary learners' attendance in public schools in Nyali sub-county.

HO_2: There is no statistically significant association between school feeding program demographics and pre-primary learners' attendance in public schools in Nyali sub-county

HO_3: There is no statistically significant association between school feeding program rations and pre-primary learners' attendance in public schools in Nyali sub-county

HO_4: There is no statistically significant association between school feeding program resource availability and pre-primary learners' attendance in public schools in Nyali sub-county

1.6 Scope of the Study

This study was carried out in Nyali Sub-County, Kenya, focusing exclusively on public schools within this specific region. The scope was intentionally confined to Nyali Sub-County, providing a localized examination of the effects of the school feeding program on pre-primary learners' attendance within the geographical boundaries of this area. Data was collected from selected public pre-primary schools, utilizing questionnaires and interviews to gather insights from headteachers, teachers and PTA members. The study sought to assess various dimensions of the school feeding program, including its implementation, resource availability, and demographic influences on attendance.

1.7 Limitations of the study

i. While conducting this study, several limitations were encountered. One potential limitation was the possibility of external factors influencing attendance, such as family circumstances or health issues, which could not be solely attributed to the school feeding program.

ii. Logistical constraints, such as the availability of resources and time, limited the depth and breadth of the study.

iii. The study was confined to Nyali Sub-County, and therefore, the findings may not have been universally applicable to other regions with distinct socio-economic or cultural contexts.

1.8 Delimitation of the study

This study is delimited by the following parameters:

Geographical focus- The research was conducted exclusively in Nyali Sub-County, Kenya, ensuring that findings are relevant to this specific location.

Institution type- The study targeted only public pre-primary schools, providing a focused analysis within the public education sector, and excluding private institutions.

Age group- The research specifically examined pre-primary learners, which allowed for an in-depth exploration of attendance patterns among children typically aged 3 to 6 years.

Program focus- The study concentrated solely on the school feeding program, limiting the investigation to its direct effects on learner attendance without addressing other educational interventions.

Data sources- Data was collected from selected stakeholders, including teachers, parents, and school administrators, which further narrowed the focus to experiences and perceptions related to the school feeding program.

1.9 Assumptions of the study

Several assumptions underlay this study:

Impact of implementation- It was assumed that the implementation of the school feeding program had a direct positive impact on pre-primary learners' attendance.

Compliance with nutritional standards- The study assumed that there was a certain level of compliance with the nutritional standards outlined in the school feeding program, ensuring that the meals provided were adequate and beneficial.

Community involvement- It was assumed that the community was actively involved in supporting and sustaining the school feeding initiative, contributing to its success.

Causality of attendance changes: Furthermore, it was assumed that any observed changes in attendance could be reasonably attributed to the school feeding program, taking into account other contextual factors.

1.10 Operational definition of terms

Early childhood center-educational facility specifically designed to cater to the developmental needs of young children before they enter formal primary education.

Dependent variable- measurable outcome or factor that is influenced or affected by the implementation of the school feeding program.

Independent variable- The independent variable in this study is the school feeding program. It represents the intervention or condition that is intentionally manipulated or varied to observe its effect on the dependent variable, which, in this case, is the attendance patterns of pre-primary learners.

Pe-primary learners- young students who are in the early stages of their formal education, typically before entering primary school.

School feeding program-structured initiative that involves providing regular and nutritious meals to students within educational institutions.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter contains the concept of school feeding program policies, demographics, theoretical and conceptual frameworks, and knowledge gaps.

2.1 Concept of School Feeding Program Policies

In Kenya, where food security and nutritional well-being are still pressing concerns, the quantity of food served in school feeding programs is a critical factor with multifaceted implications. The portion sizes of rations are a subject of careful consideration, as they directly impact the success of these programs. Inadequate portion sizes have the potential to leave students undernourished and hunger-stricken, leading to diminished concentration and participation in class activities. Adequate portion sizes, on the other hand, are paramount to ensure students receive the sustenance needed to actively engage in the learning process. The right balance between portion sizes and students' nutritional requirements is a central consideration in the planning and administration of school feeding programs (Smith et al., 2017).

School feeding program involves the provision of nutritious meals or snacks to students in educational institutions to improve their health, nutrition, and overall well-being. These programs have garnered significant attention due to their potential to enhance educational outcomes and attendance rates among students. The primary objectives of school feeding programs include improving nutritional status, enhancing physical and cognitive development, increasing school attendance, fostering a conducive learning environment, and promoting social inclusion (UNESCO, 2019). The rationale for implementing school feeding

programs is rooted in the prevalence of malnutrition and food insecurity among students. Malnutrition and inadequate access to nutritious meals can have detrimental effects on the health and academic performance of students. By ensuring regular access to nutritious meals, school feeding programs address these issues and contribute to improved nutritional status and overall well-being (Ahmed et al., 2019). Additionally, these programs help alleviate the burden of poverty by providing meals to students from low-income backgrounds, thus promoting social and economic development (Barrett, 2010).

School feeding programs offer a range of benefits. Firstly, improved nutrition resulting from these programs leads to enhanced physical and cognitive development among students. Proper nutrition supports optimal growth, development, and immune function, all of which positively impact students' overall well-being (Alderman, Bundy, & School Food, 2012). Furthermore, access to regular meals through school feeding programs has been found to reduce absenteeism and dropout rates. By acting as an incentive for regular school attendance, these programs contribute to creating a positive learning environment and enhancing educational outcomes (Kristjansson et al., 2007). Several theories support the concept of school feeding programs. The Capability Approach, proposed by Amartya Sen, emphasizes the importance of providing individuals with the capabilities to lead a fulfilling life. By addressing the nutritional needs of students, school feeding programs contribute to enhancing their capabilities and opportunities (Sen, 1993). Additionally, the Social Learning Theory, introduced by Albert Bandura, suggests that students observe and imitate behaviors modeled by their peers. School feeding programs can create a positive norm of regular attendance and participation, leading to improved attendance rates (Bandura, 1977).

The importance of monitoring and evaluation (M&E) in school feeding programs is paramount. Regular assessments can identify strengths and weaknesses in program implementation, providing valuable data that can inform policy adjustments and best practices. M&E frameworks that incorporate both quantitative and qualitative measures will give a comprehensive view of how these programs impact student attendance, health, and academic performance, allowing for evidence-based improvements (Gelli, 2015). Monitoring indicators may include nutritional outcomes, such as the prevalence of undernutrition or anemia among students, as well as educational outcomes like attendance rates, dropout rates, and academic performance metrics. Surveys and focus group discussions can complement quantitative data by capturing the lived experiences and perceptions of students, parents, and teachers regarding the school feeding program. This participatory approach not only enriches the data collected but also fosters community engagement and ownership of the program (Gelli et al., 2010).

Furthermore, addressing the logistical and operational challenges of school feeding programs requires a collaborative approach involving government bodies, NGOs, and local communities. Effective coordination is essential to ensure that resources are efficiently allocated and that the nutritional needs of students are met consistently. Collaboration among diverse stakeholders can facilitate the sharing of best practices, improve resource mobilization, and foster innovation. For example, partnerships between schools and local farmers can lead to the incorporation of locally sourced, fresh foods into school meals, enhancing the nutritional quality and supporting local economies (FAO, 2020). In addition, training and capacity building for school staff and volunteers are crucial components for the successful implementation of school feeding programs. Workshops focused on food preparation, hygiene, and nutrition can empower kitchen staff and educators to deliver high-

quality meals while promoting healthy eating habits among students. By fostering a culture of health and well-being within schools, these programs can extend their positive impact beyond the classroom, encouraging families to prioritize nutrition and health at home (World Food Programme [WFP], 2016).

Another important consideration is the evolving landscape of school feeding programs in the context of global challenges, such as climate change and economic fluctuations. These factors can significantly impact food availability and prices, which in turn affect the sustainability of school feeding programs. Therefore, incorporating climate-resilient practices into the planning and implementation of these programs is essential. For instance, using drought-resistant crop varieties and promoting sustainable agricultural practices can help ensure stable food supplies, even in the face of environmental challenges (United Nations, 2018). Moreover, there is a growing recognition of the need for policy coherence across various sectors to maximize the benefits of school feeding programs. Integrating education, health, and agricultural policies can create a more holistic approach that addresses the underlying determinants of malnutrition and inadequate educational outcomes. For example, synergies between health and education sectors can lead to joint initiatives that promote not only school meals but also health services, such as deworming and vaccinations, thereby enhancing the overall effectiveness of school feeding programs (WFP, 2019).

Finally, it is essential to advocate for the sustainability of school feeding programs through robust policy frameworks and funding mechanisms. Governments, international organizations, and NGOs must work together to secure long-term funding, ensuring that these programs can continue to provide essential services to vulnerable populations. Advocacy efforts should also focus on raising awareness about the importance of school feeding

programs among policymakers, educators, and the broader community, highlighting the long-term benefits of investing in the nutrition and education of children.

2.2 Concept of school attendance

School attendance refers to a learner's daily or everyday participation in school activities (Gottfried, 2010). Learners who attend college on a regular basis have access to frequent educational support to help them achieve their educational goals (Oghuvbu, 2010). According to Honneth (1995), when college students succeed academically, they are aware of their own identities and have intersubjective awareness of their social and man or woman talents. Regular teacher attendance, according to Epstein and Sheldon (2002), is a commitment to classroom time and activities from enrolling to completion of a comprehensive educational program. Students' tutorial performance is heavily influenced by their attendance at school. Ordinary college attendance, according to Roby's (2004) School Attendance Hypothesis, can help college students achieve academic achievement. Similarly, according to Fleming (2008), students must attend college on a daily basis in order to be fully involved in lecture room activities. Nonstop instructor training and parental/guardian encouragement, according to Black et al. (2014), reinforce school attendance.

It is, however, prison for faculty instructors to preserve a day by day pupil attendance report (Bagaya, 2019). As a quality assurance measure, the attendance record is reviewed on a ordinary foundation by means of the primaryand the district inspector of faculties (Nsubuga, 2008). 2.2.1 Dimensions of school attendance A growing corpus of research splits students into two groups: college students and absentees (Schoeneberger, 2011; Nichols, 2003; Rana et al., 2015). Similarly, the US Department of Education (2019) distinguishes between occasional and regular college participants. Zubrick (2019) advocates dividing college

absentees into five categories: truancy, dropout, mobility, absenteeism, and expulsion. Each of thesedimensions of college absenteeism includes a extraordinary vicinity of focus. According to the National Audit Office (2005), truancy has prison consequences and is frequent among a sure age group. A school dropout is a situation characterized by a progressive loss of academic continuity, low retention, and minimal participation (Council of Australian Governments, 2010). It frequently reveals learner division patterns into educational and vocational streams (Reid, 2012). Furthermore, the patriarchal social order and college system stigmatize and discriminate against girls, resulting in a high dropout rate (Gray & Partington, 2012).

High poverty ranges in households are a fundamental motive of faculty dropout in the developing world, even in UPE faculties where education is free (Morrissey et al., 2014). Chronic school absence is probably to have a terrible influence on pupil achievement. According to the Baltimore Education Research Consortium (2011), college students who pass over two or greater college days are continual absentees who frequently obtain low grades. Chronic absenteeism is described by means of Epstein and Sheldon (2002) as a scholar missing 20 or greater college days in one tutorial school year. However, Balfanz and Byrnes (2012) define chronic absentee students as those who omit 10% or more of college attendance for any reason, excused or unexplained, over the course ofone educational faculty year. Sheldon and Epstein (2002) argue that when college students leave out school on a regular basis, they are labeled as chronically absent. Students who are frequently absent from class are more likely to smoke, drink alcohol, or abuse drugs. Persistent absenteeism is particularly common among low-income students, according to Balfanz et al. (2007), who typically encounter financial difficulties due to their inability to pay faculty charges on time. The

present day finds out about hypothesizes that one-of-a-kind stages of absenteeism will have distinct results on educational performance.

2.2 School feeding program policies and pre-primary learners' attendance

School feeding programs have played a significant role in addressing child malnutrition, enhancing school attendance, and improving overall educational outcomes. In Kenya, the history of these programs dates back to the early 1980s, with the country actively participating in international efforts to improve access to education, particularly in underserved communities (RoK, 2014). These programs have been instrumental in boosting student enrolment, increasing retention rates, and enhancing the overall learning capacity of children. The collaboration between the Kenyan government and international organizations like the World Food Programme (WFP) has been pivotal in shaping the trajectory of school feeding programs in the country (Drake et al., 2016).

In Kenya, school feeding programs operate under two primary models: the Regular School Meals Programme (RSMP) and the Home-Grown School Meals Programme (HGSMP). These programs are designed to align with the Sustainable Development Goals (SDGs) and support Kenya's broader development agenda (Drake et al., 2016). The RSMP, run by the World Food Programme, and the HGSMP, run by the Kenyan government, include sub-models such as Home-Grown School Meals (HGSM) and Njaa Marufuku Kenya (NMK). These initiatives aim to address the multifaceted challenges of food security and education, targeting both immediate nutritional needs and long-term educational goals. Despite the overall benefits of school feeding programs, there have been challenges and policy adjustments over time. For instance, in 2009, the World Food Programme (WFP) reduced the number of beneficiaries under the RSMP from 1.2 million to 770,500 due to rising transportation and commodity

prices (RoK, 2014). These challenges underline the need for continuous evaluation and adaptation of policies to ensure the effectiveness of school feeding programs in Kenya.

More recently, the impact of school feeding programs has extended to regions like Nyali Sub-County within Mombasa County. In 2021, Food 4 Education, an NGO, partnered with the Mombasa County government to provide meals for public primary schools. Over the following two years, the program expanded to include additional schools in Nyali Sub-County, contributing to the strengthening of the school feeding program in the region. This expansion highlights the ongoing commitment to enhancing educational access, attendance, and nutritional outcomes in Kenya (RoK, 2014). The integration of local food sources is a significant aspect of the Home-Grown School Meals Programme (HGSMP), which aims not only to provide nutritious meals but also to stimulate local economies by sourcing food from nearby farmers. This model encourages sustainable agricultural practices and supports local farmers, thereby enhancing food security and promoting economic development in rural areas. By fostering a closer relationship between schools and local producers, the HGSMP serves both educational and community development goals, ensuring that children receive fresh, locally sourced meals that improve their health and learning outcomes (Schmidt, 2020).

Additionally, the school feeding programs in Kenya have shown a marked improvement in children's cognitive performance. Research indicates that well-nourished children are better able to concentrate, participate in classroom activities, and retain information compared to their malnourished peers (Tarasuk, 2019). This correlation underscores the importance of nutrition in education, as the academic success of pre-primary learners is closely linked to their physical health. The consistent provision of meals helps to reduce absenteeism and tardiness, contributing to a more stable learning environment. The socio-economic impacts of

school feeding programs are also notable. By alleviating food insecurity, these programs enable families to allocate resources toward other essential needs, such as education and healthcare. Many families in low-income areas face the dilemma of whether to send their children to school or keep them at home to help with household chores or work. By ensuring that children receive at least one nutritious meal a day at school, feeding programs help to mitigate this dilemma, promoting higher enrollment and attendance rates (Gelli et al., 2016).

Moreover, the psychological benefits of school feeding initiatives cannot be overlooked. Many children in underserved communities face the stress of hunger, which can lead to anxiety and difficulty in concentrating at school. Providing meals in a school setting helps to create a sense of security and stability for children, which is paramount for their emotional well-being and academic performance. The presence of school feeding programs offers a supportive environment where children can focus on learning rather than worrying about their next meal (World Food Programme, 2021). The adaptability of school feeding programs has also played a critical role in their success. The ability to respond to the evolving needs of communities, such as changing dietary requirements and economic conditions, ensures that these programs remain relevant and effective over time (WFP & FAO, 2020). For instance, recent adaptations have included incorporating micronutrient-rich foods into meal plans and tailoring menus to reflect local dietary preferences and cultural practices. This responsiveness not only improves acceptance among students but also enhances nutritional outcomes.

The role of stakeholder involvement extends beyond government and NGOs to include parents and communities. Engaging parents in the school feeding program fosters a sense of ownership and accountability. When parents are actively involved, they can contribute to decision-making processes regarding menu selection, food sourcing, and program

implementation. This collaboration leads to enhanced program effectiveness and sustainability, as community buy-in is crucial for long-term success (Nkuembe et al., 2022). In order for school feeding programs to achieve their full potential, it is essential to monitor and evaluate their impact continually. Data collection on student attendance, health outcomes, and academic performance must be prioritized to understand better the effectiveness of these initiatives. Regular assessments can provide insights into the areas that require improvement, allowing for timely adjustments to be made. For example, if certain schools experience lower attendance despite having a school feeding program, it may indicate the need for additional support services, such as counseling or parental engagement initiatives (Mandon et al., 2020).

International collaborations also play a pivotal role in enhancing the effectiveness of school feeding programs. Kenya has benefited from partnerships with organizations such as the World Food Programme (WFP) and UNICEF, which provide technical assistance, funding, and strategic direction. These collaborations facilitate the sharing of best practices and innovations in nutrition and education, ultimately contributing to the achievement of national and global development goals (WFP, 2022).

Challenges still exist, including logistical issues related to food distribution, funding constraints, and the need for consistent policy support. The complexity of implementing school feeding programs across diverse geographical and socio-economic contexts requires significant investment and commitment from stakeholders at all levels. Addressing these challenges is essential to ensure that school feeding programs can reach their full potential in improving educational access and outcomes, particularly for pre-primary learners.

2.3 School feeding program demographics and pre-primary learners' attendance

School feeding programs have emerged as instrumental tools in addressing child malnutrition, enhancing school attendance, and improving overall educational outcomes globally. Focusing on Kenya, the historical evolution of these programs dates back to the early 1980s, showcasing the country's commitment to international efforts aimed at improving access to education, particularly in underserved communities (RoK, 2014). Over the years, these programs have significantly contributed to boosting student enrollment, increasing retention rates, and enhancing the overall learning capacity of children. This comprehensive examination delves into the demographics of school feeding programs in Kenya and assesses their impact on pre-primary learners' attendance, drawing on historical context, collaborative efforts, and recent expansions.

Kenya's engagement in school feeding programs has been marked by collaborative endeavors between the Kenyan government and international organizations, notably the World Food Programme (WFP) (Drake et al., 2016). This collaboration has been pivotal in shaping the trajectory of school feeding programs, aligning them with broader educational goals. The establishment of two primary models, the Regular School Meals Programme (RSMP) and the Home-Grown School Meals Programme (HGSMP) has been a testament to Kenya's commitment to addressing multifaceted challenges such as food security and education (Drake et al., 2016). These programs, in their various sub-models, including Home-Grown School Meals (HGSM) and Njaa Marufuku Kenya (NMK), target both immediate nutritional needs and long-term educational goals, creating a dynamic policy landscape (RoK, 2014). Despite the overall success of school feeding programs in Kenya, challenges have prompted necessary policy adjustments. In 2009, the reduction in the number of beneficiaries under the RSMP from 1.2 million to 770,500 due to rising transportation and commodity prices highlighted the

adaptive nature of these initiatives (RoK, 2014). The challenges underscore the importance of continuous evaluation and adaptation of policies to ensure the effectiveness of school feeding programs in Kenya. These adaptations have become crucial in the face of evolving demographic patterns, economic shifts, and external factors impacting the implementation of these programs.

Understanding the demographics of school feeding programs is essential for tailoring interventions to the specific needs of diverse populations. Demographic considerations include geographical distribution, socioeconomic status, and cultural diversity among beneficiaries. For instance, the recent expansion of the Food 4 Education NGO's program in Nyali Sub-County within Mombasa County exemplifies how demographics play a role in program implementation. The partnership with the Mombasa County government and the subsequent expansion to additional schools in Nyali Sub-County reflects a nuanced approach to addressing specific regional needs (RoK, 2014). The impact of school feeding programs on pre-primary learners' attendance extends beyond immediate nutritional benefits. These programs contribute to creating a conducive learning environment, fostering regular attendance, and laying the foundation for improved cognitive development. The inclusive approach of recent policy developments ensures that pre-primary learners receive age-appropriate nutritional support, recognizing the critical importance of early childhood nutrition. Integrating school feeding programs with early childhood education strategies optimizes the impact on attendance, setting the stage for enhanced educational outcomes.

In Kenya, the demographic landscape significantly influences the effectiveness of school feeding programs. Urban versus rural disparities play a critical role in program implementation. Urban areas, like Nyali Sub-County, face unique challenges, including higher

living costs and differing food availability compared to rural areas. The partnership between Food 4 Education and the Mombasa County government demonstrates how tailored interventions can address these urban complexities. For example, by providing meals in urban settings, the program alleviates some of the economic burdens families face, allowing children to attend school without the distraction of hunger (Kariuki et al., 2021).

Socioeconomic status also influences school feeding program dynamics. In Kenya, many families with low income often struggle to provide adequate nutrition at home. School feeding initiatives serve as an equalizer, providing a daily meal that can substantially improve a child's nutritional intake. Studies have shown that in low-income households, children who participate in school feeding programs benefit not only nutritionally but also academically, as their improved health allows for better focus and engagement in classroom activities (Mokoro et al., 2020). Additionally, cultural diversity among beneficiaries necessitates a sensitive approach to program implementation. The HGSMP has made strides in this regard by incorporating local foods that reflect the dietary customs of various ethnic groups. This inclusion not only enhances the nutritional value of the meals provided but also fosters a sense of belonging and acceptance among children, which is essential for their social and emotional development (Shirley & Karp, 2019). Programs that respect and integrate local culinary traditions are more likely to be accepted by communities, ultimately enhancing attendance and participation rates.

Furthermore, the demographic profile of pre-primary learners, especially in terms of age and developmental stage, is crucial. Early childhood education emphasizes the need for nutrition that supports rapid growth and cognitive development. School feeding programs targeting pre-primary learners must consider the specific dietary needs of children aged 3-6 years, ensuring

that meals are balanced and provide adequate vitamins and minerals to support brain development (World Health Organization, 2021). Moreover, the quality of the meals provided can greatly impact attendance. Research indicates that when children perceive the food as tasty and appealing, they are more likely to attend school regularly (Alderman & Headey, 2018). Thus, the involvement of nutritionists in planning meals, as well as feedback mechanisms for students and parents, can enhance meal acceptance and, by extension, program success (Gelli et al., 2020).

The role of parents and the community cannot be overstated when discussing the demographics of school feeding programs. Engaging parents in the process—through awareness campaigns and participation in meal preparation—can foster collaboration, thus enhancing program effectiveness. In areas where community members are involved, there tends to be a higher level of accountability and sustainability. For instance, initiatives that encourage local farmers to supply food staples for school meals not only support school feeding programs but also bolster local economies and create a network of support among families, schools, and communities (Kafle et al., 2023).

Furthermore, demographic shifts, such as population growth and migration, require ongoing adjustments to school feeding programs. As urbanization increases and families move from rural to urban areas, the demand for nutritious school meals rises. Programs must be adaptive and able to scale quickly, ensuring that children in newly populated areas do not miss out on essential support. Evidence from the HGSMP indicates that flexibility in food sourcing and program delivery can significantly impact the number of children served, particularly in fast-growing urban settings (WFP, 2022).

The interplay between school feeding programs and government policies is also critical. The Kenyan government has recognized the importance of school feeding as part of its broader education strategy, dedicating resources and legislative support to ensure these programs are sustainable. Initiatives such as the National School Feeding Policy, established to guide the implementation and scaling of these programs, aim to create a structured framework that considers demographic dynamics, economic realities, and cultural contexts (RoK, 2022).

Monitoring and evaluation frameworks are also essential to assess how demographic changes influence the effectiveness and reach of school feeding programs. By collecting data on attendance rates, nutritional outcomes, and academic performance, stakeholders can identify patterns and trends that guide future interventions. This data-driven approach helps policymakers understand which demographics are benefiting most from feeding programs and where gaps may exist that require targeted actions (Kariuki et al., 2021). Moreover, partnerships with local NGOs and community-based organizations can enhance the reach and efficacy of these programs. These organizations often have better insights into community needs and can facilitate the mobilization of resources and support for school feeding initiatives. Collaborative efforts improve the sustainability of programs, ensuring that they adapt to the changing demographics of the populations they serve (Kafle et al., 2023).

2.4 School feeding program rations and pre-primary learners' attendance in schools

According to Yunusa (2012), in many developed and developing countries, the school feeding program has intervened critically to address poverty issues that impede school enrollment and participation, and as a result, student performance has improved. Furthermore, he stated that this program enabled students to attend school on a regular basis and focus effectively. Their regular attendance and concentration improved their performance. Providing food for

consumption at school is important for learning because it alleviates hunger in a short period of time. Students who are not hungry are more motivated to learn and have higher cognitive skills, resulting in improved academic performance (Simeon, 1998). When students' hunger is alleviated at school, their performance in school tests improves, and they progress normally from level to level or grade to grade in order to complete their basic education. An investigation was conducted on Grade 2 students in Jamaica. Yunusa observed higher Arithmetic scores of students during the implementation of feeding at their schools. It was discovered that the program not only motivated parents to enroll their children, but it also improved the learners' performance through various influencing factors. Many researchers have investigated the impact of the school feeding program on student performance, and Adenkule et al. (2016) discovered that the School Feeding Program has a positive impact on student performance.

The influence of school feeding programs on pre-primary learners' attendance is well-documented, with numerous studies showing a positive correlation between the provision of meals and improved attendance rates. School feeding programs serve as a significant motivation for children to attend school, particularly in areas where food insecurity and poverty are prevalent. One major study by Gelli, Meir, and Espejo (2007) found that in sub-Saharan Africa, the introduction of school feeding programs resulted in a substantial increase in school attendance, with children in schools offering meals having significantly higher attendance rates compared to those without such programs. For instance, in Malawi, it was noted that schools with feeding programs saw a 5-10% increase in attendance rates compared to schools without such programs .

Similarly, research by the World Food Programme (WFP) highlights that school meals reduce absenteeism by addressing hunger, which is a barrier to consistent attendance for pre-primary learners. Children who receive adequate nutrition at school are more likely to attend regularly, as the program helps alleviate the financial burden on families struggling with food insecurity (WFP, 2013). This is especially true in rural and impoverished areas where food may not be readily available at home . Moreover, a study conducted in Kenya showed that school feeding programs not only improved overall attendance but also reduced dropout rates and enhanced participation among younger learners. The study revealed that when rations were improved or diversified (e.g., including more nutrient-rich foods), children's attendance rates increased, demonstrating the impact of meal quality on school attendance (Nyashanu, 2015) .

In addition to improved attendance, school feeding programs have been found to positively influence gender parity in education. In some communities, girls are kept at home to assist with household chores. However, school feeding programs have encouraged families to send both boys and girls to school, thus narrowing the gender gap (Ahmed, 2004). The study observed that girls' attendance rates increased when schools provided meals, as it served as an incentive for parents to educate their daughters.

In summary, the influence of school feeding program rations on pre-primary learners' attendance is clear: they lead to higher attendance rates, particularly when meals are nutritious and provided consistently. These programs not only mitigate hunger but also act as a tool for promoting gender equity in education and reducing absenteeism in food-insecure areas.

2.5 School feeding program resource availability and pre-primary learners' attendance in schools

The availability of resources for school feeding programs plays a critical role in determining their effectiveness and, consequently, their influence on pre-primary learners' attendance. Adequate resources ensure the sustainability, quality, and reach of these programs, which are vital to improving attendance, especially in marginalized communities. Research indicates that when school feeding programs are well-resourced, they are more likely to operate consistently and provide nutritious meals, which, in turn, positively impacts school attendance. According to a study by Bundy et al. (2009), schools that have stable funding and reliable food supplies see marked improvements in attendance among pre-primary learners. This is because resource availability ensures that children can rely on receiving meals at school, encouraging regular attendance.

In contrast, programs that are under-resourced often suffer from inconsistencies, such as food shortages or a lack of diversity in meals, which can lead to irregular attendance. A report by the United Nations Educational, Scientific and Cultural Organization (UNESCO, 2015) found that in schools where feeding programs were underfunded or irregular, learners' attendance fluctuated, as parents could not depend on the program to provide meals daily. The quality of meals is directly tied to the resources available to school feeding programs. When sufficient resources are allocated, schools can offer nutrient-rich and balanced meals, which support not only regular attendance but also the health and cognitive development of pre-primary learners. According to Gelli, Meir, and Espejo (2007), schools that provided more diversified meals (with adequate proteins, carbohydrates, and vitamins) saw greater improvements in both attendance and academic performance. This is because better-nourished children are more likely to attend school regularly and engage actively in learning. In situations where resources

are limited, programs may provide meals with insufficient nutritional value, which diminishes their impact on learners' health and attendance. The Food and Agriculture Organization (FAO, 2019) notes that in under-resourced programs, meals often lack essential nutrients, leading to lower energy levels among children, reduced school participation, and, over time, declining attendance.

The availability of resources also affects the long-term sustainability of school feeding programs, which is crucial for maintaining consistent attendance. Studies show that when local communities and governments are involved in resource mobilization, such as through food contributions or financial support, school feeding programs are more sustainable and effective. In Ghana, for example, government-backed feeding programs that engaged local farmers saw a sustained increase in school attendance because the program was well-supported and provided consistent meals (WFP, 2017). Conversely, in countries where funding is reliant solely on external donors or international aid, the programs are often at risk of interruptions when resources become scarce. This instability in resource availability directly affects attendance rates, as families may withdraw children from school during periods when meals are not provided (Nyashanu, 2015).

In summary, the availability of resources is a decisive factor in the success of school feeding programs and their influence on pre-primary learners' attendance. Well-resourced programs with stable funding, diverse and nutritious meals, and community engagement are more likely to enhance attendance by providing reliable incentives for families to send their children to school. On the other hand, resource-poor programs often struggle with inconsistency, reducing their impact on learners' attendance.

2.4 Theoretical framework

The study was underpinned by a theoretical framework that draws from various theoretical perspectives to understand the relationship between school feeding programs and attendance among pre-primary learners in Nyali Sub-County, Kenya. These theoretical perspectives provide a foundation for comprehending the intricate dynamics at play:

Educational product theory

This theory emphasizes the connection between inputs, processes, outputs, and outcomes in educational interventions. In the context of the SFP, key inputs include program policies that guide implementation, the demographic characteristics of participants, the quality and quantity of food rations, and the availability of resources necessary for effective program delivery (Bundy et al., 2009). These inputs collectively shape the processes of the SFP, including how meals are served, the level of community engagement, and the mechanisms for monitoring and evaluation.

The expected outputs of the SFP, such as increased attendance and enrollment rates, directly correlate with the well-being of the learners, fostering an environment conducive to academic engagement (Ahmed et al., 2010). Ultimately, the outcomes of this program—improved retention rates, enhanced academic performance, and the cultivation of a lifelong learning mindset—demonstrate the critical role that school feeding initiatives play in promoting educational access and success. By framing the study within this theoretical perspective, valuable insights can be gained on how to optimize the SFP's effectiveness in addressing attendance challenges among pre-primary learners in the region.

Maslow's hierarchy of needs

Maslow's Hierarchy of Needs Theory posits that human motivation is structured in a hierarchy, beginning with basic physiological needs (Maslow, 1943). According to Maslow, individuals must satisfy lower-level needs before they can attend to higher-level psychological needs. For pre-primary learners, food represents a fundamental physiological requirement necessary for effective participation in educational activities.

The implementation of the school feeding program is crucial in meeting the physiological needs of these learners, thereby fostering an environment conducive to learning. By ensuring that children receive nutritious meals during school hours, the program addresses hunger, which can enhance concentration and learning capabilities. As such, the objectives of the study aim to examine the effectiveness of school feeding program policies in satisfying these basic needs, ultimately contributing to improved school attendance (Gordon et al., 2007).

2.5 Conceptual framework

A conceptual framework is a schematic illustration of the interaction of a research study between variables. Figure 1 depicts the link between the study's factors.

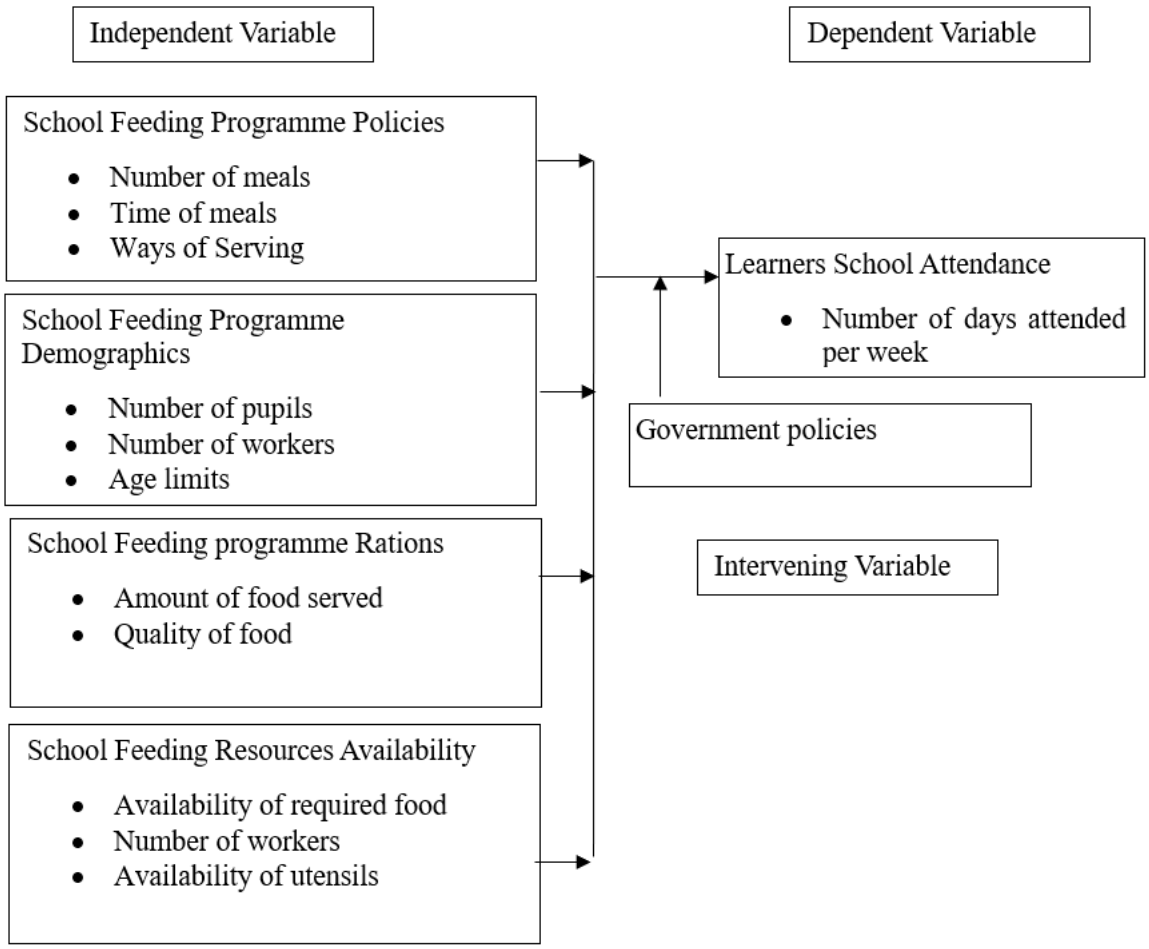


Figure 1: Conceptual Framework

2.6 Research gaps

The existing body of research on school feeding programs predominantly focuses on primary and secondary education levels. Numerous studies have explored the effects of these programs on various outcomes such as enrollment rates, attendance, academic performance, and nutrition. For instance, Ahmed, Hoddinott, and Roy (2010) conducted a study in Bangladesh that examined the impact of school feeding programs on enrollment, attendance, and academic performance in primary schools. While the study demonstrated positive effects on attendance,

it primarily centered on primary schools, leaving a gap in understanding how these programs may affect pre-primary learners. The limitations of this research include its narrow focus on one region and one educational level, which does not account for the unique context of pre-primary education.

Pre-primary education represents a distinct level of the educational system with specific goals centered on early childhood development, school readiness, and establishing a foundation for lifelong learning. Pre-primary learners possess unique needs and vulnerabilities that require specialized attention. Therefore, it is crucial to investigate how school feeding programs impact attendance and other relevant outcomes within this particular educational context. Bundy et al. (2009) examined the social safety nets and child development aspects of school feeding programs in their study, "Rethinking School Feeding." While this research provided valuable insights into the broader impacts of such programs, it did not extensively address pre-primary education, failing to account for the specific needs and challenges associated with this educational level.

Though previous studies have demonstrated positive outcomes of school feeding programs on attendance and academic performance, these findings may not translate directly to the pre-primary level due to differences in goals, challenges, and educational contexts. Consequently, there is a clear need for research tailored specifically to the pre-primary level to provide more precise insights. Gelli et al. (2013) explored the link between school feeding programs and domestic food security in Sri Lanka, demonstrating positive outcomes in attendance but not specifically addressing pre-primary education. Furthermore, the effectiveness of school feeding programs is profoundly influenced by socio-economic, cultural, and logistical factors

that can vary significantly from one region to another. These regional disparities can uniquely affect the outcomes of school feeding programs.

Therefore, the lack of research specific to the pre-primary level leaves significant questions unanswered: What are the distinctive challenges and opportunities associated with implementing school feeding programs for pre-primary learners in various contexts? How do these programs influence the attendance and readiness of pre-primary learners for primary education, considering the specific goals of early childhood education? What are the policy and resource considerations essential for optimizing the impact of school feeding programs at the pre-primary level, irrespective of location? Addressing these knowledge gaps is vital for providing insights that can enhance the design and implementation of school feeding programs, ultimately benefiting early education and child development in diverse regions and contexts, including Nyali Sub-County.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

This section gives the outline methodology that was used in the study. The components of the methodology include the proposed research design, target population, target sample and sampling procedure, data collection procedure, data analysis techniques and ethical considerations.

3.1 Research methodology

The study utilized a mixed method research methodology, where it incorporated both quantitative and qualitative methods of data collection. According to Rajasekar et. al. (2006), research is a logical and systematic search for new and useful information on a particular topic. It is an investigation of finding solutions to scientific and social problems through objective and systematic analysis. It is a search for knowledge, that is, a discovery of hidden truths. Here knowledge means information about matters. The information might be collected from different sources like experience, human beings, books, journals, nature, etc. Research can lead to new contributions to existing knowledge. Only through research is it possible to make progress in a field. Research is done with the help of study, experiment, observation, analysis, comparison and reasoning. Research is in fact ubiquitous. More precisely, research seeks predictions of events and explanations, relationships and theories for them.

3.2 Research Design

Descriptive research design was used for this research. Descriptive research involves collecting data in order to test hypotheses or answer questions concerning the current status of the subjects of the study. It determines and reports the way things are. According to Kothari

(2005) research design as a roadmap of how a researcher seeks to obtain answers to the research questions and distribution that will be applied. Cooper and Schindler (2003) on the other hand observe that descriptive study is only focused on establishing what, where and how of a phenomenon. The choice for descriptive research design was based on the fact that the researcher had an interest in the state of affairs already existing in the field and did not intend to manipulate any study variables. The design also enabled the researcher to easily generalize her findings on the entire population.

3.3 Location of the Study

The study was carried out in Nyali Sub-County, located within Mombasa County, Kenya. Nyali is recognized as a residential area in Mombasa City, situated on the mainland north of Mombasa Island and linked by the New Nyali Bridge. While Nyali boasts affluent neighborhoods and upscale hotels, it also has densely populated settlement areas, including informal settlements such as Kongowea, Maweni, and Kisumu Ndogo. These areas often face socio-economic challenges that can affect educational outcomes, including school attendance. Nyali presents a unique case within Mombasa County, characterized by a mix of wealth and poverty. Despite its reputation as a thriving tourist destination, certain segments of the population, particularly in the more impoverished areas, struggle with access to basic resources, including education. This duality makes Nyali an ideal location for examining the effects of school feeding programs on pre-primary learners' attendance.

In recent years, educational attendance statistics indicate that Nyali Sub-County has not consistently performed well compared to other sub-counties within Mombasa County. According to the Mombasa County Education Office (2022), the overall attendance rates in Nyali's pre-primary schools have been reported at approximately 75%, which is lower than

the county average of 82%. Furthermore, sub-counties such as Kisauni and Changamwe boast attendance rates exceeding 85%, indicating that Nyali faces specific challenges that may be exacerbating attendance issues among pre-primary learners (Mombasa County Education Office, 2022).

Data from the Kenya National Bureau of Statistics (KNBS, 2021) also provides additional context, noting that certain areas within Nyali, particularly the informal settlements, exhibit attendance rates as low as 60%, significantly below the national and county averages. This discrepancy highlights the urgent need for targeted interventions, such as school feeding programs, to address the attendance challenges faced by vulnerable populations in Nyali.

In contrast, Kisauni Sub-County, which is adjacent to Nyali, has reported higher attendance rates, averaging around 87% (Mombasa County Education Office, 2022). Similarly, Changamwe Sub-County has shown an average of 85% attendance among pre-primary learners (Mombasa County Education Office, 2022). These figures suggest a stark difference in educational engagement, emphasizing the need for further investigation into the underlying factors affecting attendance in Nyali. By focusing on Nyali, the study aims to uncover the specific barriers to attendance faced by pre-primary learners in both affluent and disadvantaged areas, ultimately providing valuable insights that could inform policy and resource allocations for school feeding programs and other educational interventions in Mombasa County.he study

3.4 Target Population

Target population is a group of individuals or objects that the researcher wants to draw a conclusion from (Mugenda & Mugenda, 2003). The target respondents of this study included

the following key stakeholders involved in the implementation and management of the school feeding program in these pre-schools:

a) Headteachers: The headteachers of the public pre-schools in Nyali sub-county were included in the target population. As the administrative leaders, their insights and perspectives on the school feeding program's policies, resource allocation, and overall implementation are crucial.

b) Pre-primary teachers: All teachers directly involved in the education and care of pre-primary learners in the public pre-schools were part of the target population. These teachers have first-hand experience in observing the impact of the school feeding program on learners' attendance and engagement.

c) Parents-Teachers Association (PTA) members: One representative from the PTA of each of the public pre-schools was included in the target population. PTAs play a vital role in overseeing the school feeding program, addressing challenges, and ensuring the effective utilization of resources.

Table 1 shows a brief summary of the the polpulation that was targeted in this study in public pre-schools in Nyali sub-county.

Table 1: Target Population

Category	**Total target population**
Headteachers	12
Pre-primary teachers	30
PTA members	60
Total	**102**

Source: Nyali Sub-County Education office, 2024

3.5 Sample size and Sampling Procedures

The following sub-sections provides a summary of the sample size and sampling procedures that were employed in the study.

3.5.1 Sampling Size

Sampling is the process by which a suitable sample or a representation of a whole population is selected in order to determine characteristics of the whole population under study (Orodho, 2003). Mugenda and Mugenda (2008) define a sample as a small group obtained from an accessible population. For this research, the sampling frame consisted of a list of all the Head Teachers, Teachers of the 12 public pre-primary schools in Nyali sb-county under School Feeding Program, and the members of the PTA from relevant educational offices within the county government of Mombasa. This list was obtained in the sub-county education office. Study employed purposive sampling head teachers, teachers and PTA members of the 12 to ensure that the most relevant and knowledgeable respondents were included in the sample. This technique allowed for the selection of participants who could provide valuable insights into the School Feeding Program (see Table 2).

Table 2: Sample Size Distribution

Category	Target population	Sample
Headteachers	12	12
Pre-primary teachers	30	30
PTA members	60	60
Total	102	102

3.6 Data Collection Instruments

Two sets of data collection tools were employed for this study as shown in the following sub-sections.

3.6.1: Questionnaires for pre-school teachers and PTA members

The questionnaire comprised of two sections (see Appendices III) i.e., section A and section B. Section A consisted of questions seeking the demographic information of the respondents like their gender, age, academic qualification, number of years they served as PTA members among others. Data on school attendance was also obtained in this section. Section B looked at the indicators of the following variables namely: school feeding program policies, school feeding program demographics, school feeding program rations and school feeding program resources availability on pre-primary learners' attendance in public pre-primary schools within Nyali sub-county in Mombasa, Kenya.

3.6.2: Interview schedule for head teachers

This interview schedule was designed to collect information from head teachers at pre-primary schools in Nyali sub-county. Initial data collection focused on instructors' demographics including age, gender, and education level. The second part collected data on the independent sub-variables of each objective.

3.7 Piloting of Research Instruments

Pilot study was conducted on a few respondents in order to ascertain the suitability of the questionnaire. Piloting was carried out on three Early Childhood Development (ECDE) facilities in the neighboring Mvita Sub- County. About 10% of the ECDE centers in the neighboring Mvita Sub-County with similar characteristics were included in the sample. This

is per Mugenda and Mugenda (2003) assertions that pretest case numbers should be relatively small and range from 1 percent to 10 percent of the final sample size. This meant that a pilot study with only five Pre-Primary School teachers and fifteen Pre-Primary School PTA members were sufficient. Permission for the pilot project was sought and received by the Education office of Mvita Sub-County.

3.7.1: Validity of Instruments

According to Gay (2009) validity is the extent by which an instrument measures what it was intended to. Kathuri and Pals (1993) and Orodho (2004) both agree that validity relates to whether or not the score given by the measure is suitable for the conclusions that may be drawn from the data. Validity of the questionnaires was determined by having them evaluated by the researcher's supervisor. There was a final version of the study instruments that included their ideas, comments, and critiques from the supervisors. The use of pilot study was also planned as a way to increase the reliability of the measuring devices. Any difficulties that responders may have in completing the tasks was revealed in this step. In addition to bolstering the instruments' validity, this is aimed to increase the items' applicability to the research. Also, the triangulation approach was also used to help the researcher verify the validity of the study instruments in terms of their content and criteria.

3.7.2 Reliability of Instruments

Reliability of research instruments is defined as its capacity to provide the same findings time and time again (Mugenda & Mugenda, 2003). To evaluate the instruments' precision, an internal consistency strategy was used. A test's internal consistency reliability measures how well individual items on that exam correspond to one another and to the test as a whole (Gay,

Mills & Airasian, 2006). Since this method only calls for a single round of testing, it avoids the possibility of measuring inaccuracies due to repetition.

For this study, the reliability of the instruments was assessed using Cronbach's Alpha, which is a suitable reliability coefficient estimate for instruments with more than two score items. This estimate was implemented since the instruments' items were graded on a five-point Likert scale. Three neighboring schools in Kwale County served as the test sites for the final versions of the instruments, and their results were used to calculate the Cronbach's Alpha reliability coefficient. Ten percent (10%) of the total sample size was used, and only those with similar characteristics were considered. The analysis yielded a reliability value of $r = 0.723$, indicating an acceptable level of internal consistency among the items in the instruments.

3.8: Data Collection Procedures

The researcher began by first obtaining an ethical review certificate from the Ethical Review Committee of Mount Kenya University. Thereafter an introductory letter was issued from the graduate school to enable the research which was then used to obtain a research permit from National Commission of Science, Technology, and Innovation (NACOSTI). The letter from NACOSTI authorized the researcher to obtain data from participants, whereas the letter of introduction enabled the researcher to easily introduce herself to the respondents. The researcher ensured that ethical standards such as informed consent, anonymity and confidentiality were adhered to. The researcher provided the respondents with a consent form to be signed before the questionnaire administration. The consent forms contained information on the nature of the research and also explained the extent of their involvement. 29 For anonymity, the questionnaires did not bear the respondents names. For confidentiality, the

respondents were assured that data will be kept confidential and not accessible to anyone other than the researcher.

3.7 Data analysis methods

Quantitative data in the questionnaire were coded in SPSS software for quantitative analysis, which included both descriptive and inferential statistics. Descriptive statistics such as mean, standard deviation, frequency, and percentage distribution were used to illustrate the general characteristics of the data. Inferential statistics, including correlation and regression analysis, were conducted to establish associations between the school feeding program and school attendance among pre-primary learners.

For the qualitative data, it was analyzed using thematic analysis, which involved identifying and coding key themes and patterns within the responses. The findings from the qualitative data were presented in a narrative format, supplemented with direct quotes from respondents to provide context and depth to the analysis. This approach allowed for a richer understanding of the participants' experiences and perceptions related to the school feeding program and its impact on attendance.

3.8 Ethical considerations

1. The researcher sought approval from Mount Kenya University and NACOSTI before obtaining permission from school administrations to collect data.
2. The researcher ensured that respondents' privacy and confidentiality were maintained, with no information released to third parties without written permission.
3. The purpose of the study was explained to respondents, who were encouraged to provide honest information.

4. Consent was sought from respondents to confirm their willingness to participate, and they were informed about their right to access study findings afterward.
5. Respondents' names and admission numbers were not included in research tools, and they were serialized to ensure privacy and anonymity.

CHAPTER FOUR

RESULTS AND DISCUSSION

4.0 Introduction

This chapter presents a detailed analysis and discussion of the findings from the study on the effects of the school feeding program on pre-primary learners' attendance in public schools in Nyali sub-county, Kenya. The data was collected through questionnaires administered to teachers and PTA chairpersons, as well as interviews with headteachers. The findings are organized according to the research objectives, which aimed to:

- Determine the influence of school feeding program policies on pre-primary learners' attendance
- Examine the influence of school feeding program demographics on pre-primary learners' attendance
- Assess the influence of school feeding program rations on pre-primary learners' attendance
- Establish the influence of school feeding program resources availability on pre-primary learners' attendance

The chapter begins with an overview of the response rate and demographic information of the participants, followed by a comprehensive analysis of each research objective. It concludes with a discussion that contextualizes the findings within the broader literature on school feeding programs and their impact and pre-primary learners' attendance.

4.1 Respond Rate

The study involved administration of 90 questionnaires to 30 Pre-Primary teachers and 60 members of the PTA. Out of the 90 distributed questionnaires only 82 of them were returned giving a return rate of 91.11%. This was sufficient enough as Mugenda and Mugenda (1999)

observe that a return rate of over 70% is high enough to provide the required information. The questionnaire response rate was as summarized in Table 3.

Table 3 Questionnaire return rate

Respondents	Number issued	Number collected	Return rate
Pre-primary teachers	30	28	93.33%
PTA members	60	54	90.00%
Total	90	82	91.11%

4.2 Demographic Information

This section outlines the demographic information collected from the respondents participating in the study, which aimed to investigate the influence of the school feeding program on pre-primary learners' attendance. Understanding these demographics is essential for contextualizing the findings regarding the school feeding program's implementation and its impact on attendance rates.

4.2.1: Respondents' gender

The researcher requested the respondents to provide their gender and the results were as summarized in Table 4.

Table 4: Gender Distribution of Respondents

Gender	Frequency (F)	Percentage (%)
Male	52	43.33
Female	68	56.67
Total	120	100

Table 4 illustrates a slightly higher representation of female respondents (56.67%) compared to male respondents (43.33%). This implies that majority of the schools preferred female over males to take care of learners in pre-primary schools. This might be due to the fact that children at younger ages prefer being closer to their mothers than fathers.

4.2.1: Respondents' Age

The researcher also requested the respondents to provide their age and the results were as summarized in Table 5.

Table 5: Age Distribution of respondents

Age Range	Frequency (F)	Percentage (%)
Under 25	16	13.33
26-35	30	25.00
36-45	28	23.33
46-55	24	20.00
Over 55	22	18.34
Total	120	100.00

The analysis of age distribution in Table 5 reveals that respondents predominantly fall within the 26-35 age range (25.00%), followed closely by those aged 36-45 (23.33%). This demographic profile suggests a relatively youthful workforce in the educational sector of Nyali sub-county, likely contributing dynamic perspectives on the effectiveness of the school feeding program.

4.2.1: Respondents' Experience

The researcher also requested the respondents to provide their experience in teaching and the results were as summarized in Table 6.

Table 6: Years of experience in education

Years of Experience	Frequency (F)	Percentage (%)
Less than 1 year	2	5.0
1-3 years	7	17.5
4-6 years	10	25.0
7-10 years	4	10.0
More than 10 years	17	42.5
Total	40	100.00

As illustrated in Table 6, a significant proportion of respondents (52.5%) have over seven years of experience in the education sector, indicating a wealth of knowledge and familiarity with educational practices, including school feeding programs. This substantial experience base may offer valuable insights into the assessment of the program and its effects on attendance.

4.3 School Feeding Program Policies on Pre-Primary Learners' Attendance

This section presents the findings related to the program policies associated with the school feeding program in public pre-primary schools in Nyali sub-county, Mombasa County, Kenya. The responses gathered from headteachers, pre-primary teachers, and PTA members provide critical insights into the operational aspects of the program and its implications for pre-primary learners' attendance.

The respondents were requested to indicate the number of meals provided to the pre-primary school pupils per day, and their responses were as summarized in Table 7.

Table 7: Number of meals provided per day

Meals Provided	Frequency (F)	Percentage (%)
1 Meal	13	15.85
2 Meals	29	35.37
3 Meals	34	41.46
Others	6	7.32
Total	82	100.00

The findings in Table 7 indicate that a majority of respondents reported that their schools provide three meals per day (41.46%), followed by those providing two meals (35.37%). Only a minority reported offering one meal (15.85%), while 7.32% indicated alternative arrangements. This distribution highlights that most pre-primary learners benefit from multiple meals, which may contribute positively to their overall attendance and engagement in school activities. This was evidenced by one of the head teachers who had the following to say:

> *".....learners who take meals at school have a tendency to report to school all the days of the week. The school feeding program has been of great help in ensuring that learners attend school....."*

The respondents were then requested to indicate the timeliness of meal provision to the pre-primary school pupils, and their responses were as summarized in Table 8.

Table 8: Timeliness of Meal Provision

Timeliness of Meals	Frequency (F)	Percentage (%)
Very Timely	23	28.05
Timely	29	35.37
Somewhat Timely	18	21.95
Not Timely	12	14.63
Total	82	100.00

The timeliness of meal provision is another crucial aspect of the school feeding program. As shown in Table 8, a total of 70.42% of respondents reported that meals are either very timely (35.05%) or timely (35.37%). However, a significant portion of respondents (29.58%) indicated that meal provision is either somewhat timely (21.95%) or not timely (14.63%). This variability in the timeliness of meals may impact learners' attendance and participation, as delays could discourage learners from attending school. This was evidenced by one of the head teachers who had the following to say:

> *"…. timeliness of meals may impact learners' attendance and participation. Many learners are accustomed at having their meals at certain specific times…."*

The respondents were requested to indicate the effectiveness of meal serving methods on the meals provided to the pre-primary school pupils, and their responses were as summarized in Table 9.

Table 9: Effectiveness of meal serving methods in pre-primary school

Effectiveness of Meal Serving Methods	Frequency (F)	Percentage (%)
Very Effective	32	39.02
Effective	36	43.90
Neutral	8	9.76
Ineffective	6	7.32
Total	82	100.00

Table 9 presents responses regarding the effectiveness of meal serving methods. A significant majority (82.92%) of respondents rated the meal-serving methods as either very effective (39.02%) or effective (43.90%). Only 7.32% of respondents found the methods ineffective, with 9.76% remaining neutral. This high level of perceived effectiveness suggests that the manner in which meals are served could positively influence learners' overall experience and attendance at school.

The respondents were requested to indicate the perceived impact of school feeding program to the pre-primary school pupils, and their responses were as summarized in Table 10.

Table 10: Perceived impact of school feeding program on attendance

Impact on Attendance	Frequency (F)	Percentage (%)
Strongly Agree	42	51.22
Agree	29	35.36
Neutral	6	7.32
Disagree	3	3.66
Strongly Disagree	2	2.44
Total	82	100.00

Table 4.8 summarizes respondents' perceptions of the impact of the school feeding program on attendance. An overwhelming majority (86.58%) expressed agreement that the program positively affects attendance, with 51.22% strongly agreeing and 35.36% agreeing. The absence of respondents (2.44%) who strongly disagreed highlights a general consensus on the program's positive influence on retaining learners in school.

Table 11: Average attendance rate before and after implementation

Attendance Rate	Before Implementation	After Implementation
Less than 60%	19 (23.17%)	2 (2.44%)
60-70%	24 (29.26%)	5 (6.10%)
71-80%	18 (21.95%)	12 (14.63%)
81-90%	13 (15.85%)	24 (29.27%)
More than 90%	8 (9.76%)	39 (47.56%)
Total	82 (100.00%)	82 (100.00%)

Table 4.9 presents a comparative analysis of average attendance rates before and after the implementation of the school feeding program. Prior to the program's implementation, a combined total of 52.43% of respondents indicated that attendance was below 80%. After the program was initiated, the percentage of learners attending at least 80% of the time rose dramatically, with 47.56% reporting attendance rates of more than 90%. This stark increase suggests that the school feeding program plays a critical role in enhancing attendance rates among pre-primary learners. This was evidenced by one of the head teachers who had the following to say:

> *"....school feeding program plays a crucial role in enhancing attendance rates among pre-primary learners. These learners are young and very playful, hence tends to feel hungry and it is through the school feeding program their health needs are met...."*

These descriptive statistics of objective one was followed by a Chi-square test of association. The Chi-square test at $p \leq 0.05$ significance level illustrating statistically significant association between school feeding program policies on pre-primary learners' attendance in public pre-primary schools within Nyali sub-county is as summarized in Table 12. To achieve this, the hypothesis below was tested.

HO_2: There is no statistically significant association between school feeding program policies and pre-primary learners' attendance in public schools in Nyali sub-county.

Table 12: Chi-square test of association between school feeding program policies and pre-primary learners' attendance in public schools

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	661.225[a]	62	.000
Likelihood Ratio	180.104	62	.000
Linear-by-Linear Association	139.051	1	.000
N of Valid Cases	82		

a. 74 cells (92.5%) have expected count less than 5. The minimum expected count is .01.

Table 12 shows that the p value (p=0.000) for school feeding program policies and pre-primary learners' attendance was less than 0.05. Therefore, the hypothesis, "there is no statistically significant association between school feeding program policies and pre-primary learners' attendance in public schools in Nyali sub-county" was rejected. This implies that there is statistically significant association between school feeding program policies and pre-primary learners' attendance in public schools in Nyali sub-county. These findings are in tandem with that of Yunusa (2012), who observed that in many developed and developing

countries, the school feeding program has intervened critically to address poverty issues that impede school enrollment and participation, and as a result, student performance has improved. Furthermore, he stated that this program enabled students to attend school on a regular basis and focus effectively. Their regular attendance and concentration improved their performance. Providing food for consumption at school is important for learning because it alleviates hunger in a short period of time.

4.4 School feeding program demographics and pre-primary learners' attendance in public schools

This section presents the findings related to school feeding program demographics and pre-primary learners' attendance in public pre-primary schools in Nyali sub-county, Mombasa County, Kenya. The school feeding program demographics are critical factors influencing the success of the program and its impact on pre-primary learners' attendance. Thus, the study began by requesting the respondents to rate the overall quality of food served and the results are shown in Table 13.

Table 13: Overall quality of food served

Quality Rating	Frequency (F)	Percentage (%)
Excellent	35	42.68
Good	32	39.02
Average	9	10.98
Poor	5	6.10
Very Poor	1	1.22
Total	82	100.00

Table 13 illustrates that a significant majority of respondents rated the overall quality of food served as either excellent (42.68%) or good (39.02%). Specifically, 35 respondents rated the food as excellent, while 32 found it to be good, indicating a strong perception of food quality among stakeholders involved in the education sector. Only 10.97% rated the food quality as average, and 6.11% rated it as poor. Notably, only 1.22% of the respondents indicated that the food quality was very poor. Such positive feedback on food quality is critical, as nutritious and appealing meals can substantially enhance student engagement and encourage regular attendance.

The study further requested the respondents to state the variety of food provided and the results are as shown in Table 14.

Table 14: Variety of food provided

Variety Rating	Frequency (F)	Percentage (%)
Very Satisfactory	24	29.27
Satisfactory	37	45.12
Neutral	15	18.29
Unsatisfactory	5	6.10
Very Unsatisfactory	1	1.22
Total	82	100.00

Table 14 presents the responses regarding the variety of food provided through the feeding program. A total of 74.39% of respondents rated the variety of food as either very satisfactory (29.27%) or satisfactory (45.12%). This indicates that most schools are offering a reasonable diversity of food options, which is essential for meeting the nutritional needs of children. However, it is concerning that 18.29% of respondents remained neutral regarding the variety,

and 6.10% indicated it as unsatisfactory. These responses suggest that while there is a generally positive view of the variety offered, there is still room for improvement to ensure that all learners have access to diverse food items, which is crucial for balanced nutrition and improved student satisfaction.

The study also requested the respondents to provide information on the quantity of food served to each child and the results are as shown in Table 15.

Table 15: Quantity of food served to each child

Quantity Rating	Frequency (F)	Percentage (%)
Too Much	7	8.54
Just Right	53	64.63
Too Little	22	26.83
Total	82	100.00

Table 15 reveals the responses regarding the quantity of food served to each child. A significant proportion of respondents (64.63%) indicated that the quantity of food served is "just right." However, a concerning 26.83% reported that the quantity is "too little," and only 8.54% believed that it is "too much." This disparity raises important questions about the adequacy of the food provided, as insufficient quantities can adversely affect the nutritional health of the children and their capacity to participate fully in educational activities. The responses highlight the importance of regularly assessing food quantities to ensure that all learners receive sufficient nutrition to support their growth and learning. This suggests that as the quantity of food served increases, attendance rates may also improve significantly. These findings underscore the importance of ensuring sufficient food portions within the feeding

program to positively influence student attendance. This was evidenced by one of the head teachers who had the following to say:

> *"....in the school feeding program the food quantities are regularly assessed to ensure that all learners receive sufficient nutrition to support their growth and learning. This also provides parents with the confidence to bring their children to school."*

In addition, the study requested the respondents to provide information on the quantity of food served to each child and the results are as shown in Table 16.

Table 16: Perception of food adequacy for program needs

Perception of Food Adequacy	Frequency (F)	Percentage (%)
Very Sufficient	10	12.20
Sufficient	44	53.65
Neutral	15	18.29
Insufficient	10	12.20
Very Insufficient	3	3.66
Total	82	100.00

Table 16 provides insights into respondents' perceptions of the adequacy of food available for the program. While 53.65% felt that the food supplies are sufficient, a combined 15.86% indicated that the food availability is either insufficient or very insufficient. This variability in perceptions about food adequacy is concerning, as inadequate food supply can lead to gaps in the program's effectiveness, ultimately affecting learners' health and attendance. Furthermore, perceptions of insufficient food availability could lead to disparities in educational outcomes, particularly for vulnerable populations that rely heavily on school meals for their daily nutritional needs.

In addition, the study requested the respondents to provide information on the quantity of food served to each child and the results are as shown in Table 17.

Table 17: Staff Training for food preparation and serving

Frequency of Training	Frequency (F)	Percentage (%)
Regularly (once a month)	15	18.29
Occasionally (once every few months)	43	52.44
Rarely (once a year)	21	25.61
Never	3	3.66
Total	82	100.00

Table 17 summarizes the frequency of training provided for staff involved in meal preparation and serving. A majority (70.73%) of respondents indicated that training occurs either occasionally (52.44%) or regularly (18.29%). However, 25.61% of respondents noted that training is rarely provided, and 3.66% indicated that staff never receive training. This inconsistency in training availability can affect the quality of food preparation and service, which, in turn, may impact the overall effectiveness of the feeding program and its role in enhancing student attendance. Providing regular training can ensure that staff are up-to-date with best practices in food preparation and hygiene standards, ultimately contributing to better health and safety outcomes for learners.

The study also requested the respondents to provide information on the frequency of food quality assessment and the results are as shown in Table 18.

Table 18: Frequency of food quality assessment

Frequency of Assessment	Frequency (F)	Percentage (%)
Weekly	14	17.07
Monthly	26	31.71
Quarterly	27	32.93
Annually	14	17.07
Never	1	1.22
Total	82	100.00

Table 4.16 shows the frequency of assessments conducted to evaluate food quality within the feeding program. A notable 32.93% of respondents indicated that assessments are conducted quarterly, while 31.71% reported monthly assessments. However, 17.07% mentioned weekly assessments, and another 17.07% stated that assessments are conducted annually. The absence of respondents indicating that no assessments are ever conducted is a positive sign. Regular assessments are essential for ensuring the ongoing quality and adequacy of the food provided, as they can identify areas that require improvement and help maintain high standards.

The study also requested the respondents to provide information on the sources of food for the program and the results are as shown in Table 19.

Table 19: Sources of Food for the Program

Source of Food	Frequency (F)	Percentage (%)
Local Farmers	29	35.36
Government Supplies	32	39.02
Non-Governmental Organizations	12	14.63
Other	9	10.99
Total	82	100.00

Table 19 highlights the sources of food for the school feeding program. A substantial number of respondents (39.02%) indicated that food is sourced from government supplies, indicating the reliance on centralized food distribution systems. Local farmers provide food to 35.36% of respondents, while 14.63% mentioned non-governmental organizations as their source, and 10.99% identified other sources. These findings emphasize the importance of collaboration between different stakeholders, including governmental and non-governmental entities, in ensuring that schools have access to quality food. This was evidenced by one of the head teachers who had the following to say:

> *"....in the school feeding program most of the food is sourced from the government. Despite this some of it is gotten from the parents and other well-wishers such as the NGO's."*

The study also requested the respondents to provide information on the sources of food for the program and the results are as shown in Table 20.

Table 20: Barriers to food quality and adequacy

Barrier	Frequency (F)	Percentage (%)
Insufficient Funding	34	41.46
Poor Logistics	26	31.71
Lack of Training	14	17.07
Inconsistent Supply	8	9.76
Total	82	100.0

Table 20 presents data on barriers reported by respondents that hinder food quality and adequacy. A significant number of respondents (41.46%) identified insufficient funding as a primary barrier, while 31.71% pointed to poor logistics as a contributing factor. Additionally, 17.07% indicated a lack of training for staff as a hindrance, and 9.76% cited inconsistent supply as a challenge. Addressing these barriers is crucial for enhancing the overall effectiveness and sustainability of the school feeding program.

These descriptive statistics of objective one was followed by a Chi-square test of association. The Chi-square test at $p \leq 0.05$ significance level illustrating statistically significant association between school feeding program demographics on pre-primary learners' attendance in public pre-primary schools within Nyali sub-county is as summarized in Table 21. To achieve this, the hypothesis below was tested.

HO_2: There is statistically no significant association between school feeding program demographics and pre-primary learners' attendance in public schools in Nyali sub-county

Table 21: Chi-square test of association between school feeding program demographics and pre-primary learners' attendance in public schools

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	738.342[a]	62	.003
Likelihood Ratio	202.622	62	.000
Linear-by-Linear Association	141.543	1	.000
N of Valid Cases	82		

a. 74 cells (92.5%) have expected count less than 5. The minimum expected count is .01.

Table 21 shows that the p value (p=0.003) for school feeding program demographics and pre-primary learners' attendance was less than 0.05. Therefore, the hypothesis, "there is no statistically significant association between school feeding program demographics and pre-primary learners' attendance in public schools in Nyali sub-county" was rejected. This implies that there is statistically significant association between school feeding program demographics and pre-primary learners' attendance in public schools in Nyali sub-county..

4.5 School feeding program rations and pre-primary learners' attendance

This section presents the findings related to the availability of resources that support the implementation of the school feeding program in public pre-primary schools within Nyali sub-county, Mombasa County, Kenya. Resource availability is crucial for the effective delivery of the program and can significantly influence the impact of the school feeding initiative on learners' attendance.

The study requested the respondents to provide information on availability of food required for the program and the results are as shown in Table 22.

Table 22: Availability of food required for the program

Food Availability	Frequency (F)	Percentage (%)
Very Available	18	21.96
Available	38	46.34
Neutral	11	13.41
Not Available	11	13.41
Very Not Available	4	4.88
Total	82	100.00

Table 22 presents the findings regarding the availability of food required for the school feeding program. A substantial proportion of respondents (46.34%) reported that food supplies are available, while 21.96% indicated that food is "very available." However, a notable 13.41% of respondents rated the food availability as neutral, and an equal percentage (13.41%) stated that food is "not available," with 4.88% categorizing it as "very not available." This variability in responses highlights the importance of ensuring consistent food supplies, as shortages can adversely affect program effectiveness and subsequently impact student attendance. This was evidenced by one of the head teachers who had the following to say:

> *"…. substantial proportion of food supplies that is used in the school feeding program is locally available. Thus, the issue of procuring is a problem to many of us. Once the resources from the government are available then we can easily access the food….."*

The study requested the respondents to provide information on number of workers available for the program and the results are as shown in Table 23.

Table 23: Number of workers available for the program

Number of Workers	Frequency (F)	Percentage (%)
Very Adequate	27	32.93
Adequate	31	37.81
Neutral	16	19.51
Inadequate	5	6.10
Very Inadequate	3	3.65
Total	82	100.00

Table 23 summarizes the responses regarding the adequacy of the number of workers available to implement the school feeding program. A significant number of respondents (37.81%) rated the number of workers as adequate, and 32.93% indicated that the number of workers is very adequate. However, 19.51% remained neutral, while 9.75% noted a lack of adequate staffing, with 6.10% indicating the situation as inadequate and 3.65% rating it as very inadequate. This data suggests that while staffing levels are generally perceived to be sufficient, discrepancies exist that may affect the smooth operation of the program.

The study further requested the respondents to provide information on availability of utensils for meal preparation and serving for the program and the results are as shown in Table 24.

Table 24: Availability of utensils for meal preparation and serving

Utensil Availability	Frequency (F)	Percentage (%)
Very Available	29	35.36
Available	39	47.56
Neutral	9	10.98
Not Available	4	4.88
Very Not Available	1	1.22
Total	82	100.00

The availability of utensils for meal preparation and serving is addressed in Table 24. A substantial majority (82.92%) of respondents reported that utensils are either very available (35.36%) or available (47.56%). Only a small portion of respondents (5.10%) indicated that utensils are insufficient for the program's needs, with 4.88% stating that utensils are not available and 1.22% categorizing them as very not available. The high level of utensil availability suggests that the infrastructure for meal preparation is generally well-supported, which could contribute to the overall effectiveness of the feeding program. The study also requested the respondents to provide information on availability of financial resources for the program and the results are as shown in Table 25.

Table 25: Availability of financial resources for the program

Financial Resource Availability	Frequency (F)	Percentage (%)
Very Sufficient	13	14.7
Sufficient	35	42.68
Neutral	17	22.1
Insufficient	17	22.1
Total	82	100

Table 25 provides insights into the availability of financial resources allocated to the school feeding program. A total of 42.68% of respondents rated the financial resources as sufficient, but a combined 22.1% indicated that resources are insufficient. Moreover, 14.7% of respondents viewed financial resources as very sufficient. These findings emphasize the necessity for reliable funding to sustain the program, as inadequate financial resources can hinder the procurement of quality food and affect the overall success of the initiative.

The study also requested the respondents to provide information on frequency of allocation of resources for the program and the results are as shown in Table 26.

Table 26: Frequency of allocation of resources for the program

Resource Allocation Frequency	Frequency (F)	Percentage (%)
Weekly	19	23.17
Monthly	38	46.34
Quarterly	19	23.17
Annually	6	7.32
Total	82	100.00

Table 26 summarizes the frequency of resource allocation for the feeding program. A majority (46.34%) indicated that resources are allocated monthly, while 23.17% reported weekly allocations. Additionally, 23.17% stated that allocation occurs quarterly, and only 7.32% noted annual resource allocation. Regular resource allocation, particularly on a monthly basis, is essential in ensuring that the program's operational needs are met and that the feeding initiative remains sustainable.

The study also requested the respondents to provide information on training for staff on resource utilization and the results are as shown in Table 27.

Table 27: Training for staff on resource utilization

Staff Training on Resource Utilization	Frequency (F)	Percentage (%)
Regularly (once a month)	19	23.17
Occasionally (once every few months)	37	45.12
Rarely (once a year)	23	28.05
Never	3	3.66
Total	82	100

Table 27 presents the responses regarding training provided to staff on the effective utilization of resources. A significant percentage of respondents (45.12%) indicated that training occurs occasionally, while 23.17% stated that it happens regularly. However, 28.05% noted that training is rarely provided, and 3.66% of respondents reported that staff receive no training at all. This inconsistency in the provision of training indicates that while some staff may be well-equipped to manage resources effectively, there may be gaps in knowledge among others, potentially impeding the program's overall efficiency. This was evidenced by one of the head teachers who had the following to say:

> *"…. There is consistency in the provision of training to staff on the effective utilization of resources. This is because thre is a lot of accountability issues on the utilization of resources in the school feeding program….."*

The study requested the respondents to provide information on areas needing improvement in resource management and the results are as shown in Table 28.

Table 28: Areas needing improvement in resource management

Areas Needing Improvement	Frequency (F)	Percentage (%)
Food Supplies	31	37.81
Staff Training	24	29.27
Financial Resources	17	20.72
Utensil Availability	6	7.32
Other	4	4.88
Total	82	100.00

Table 28 identifies areas that respondents believe require improvement in resource management for the school feeding program. A significant proportion of respondents (37.81%) pointed to food supplies as an area needing enhancement, while 29.27% indicated that staff training should be prioritized. Additionally, 20.72% highlighted the need for improved financial resources, while 7.32% mentioned the availability of utensils. The responses underscore the key areas where focused interventions could enhance resource management and improve the efficacy of the feeding program.

In addition, the study requested the respondents to provide information on overall satisfaction with resource availability and the results are as shown in Table 29.

Table 29: Overall satisfaction with resource availability

Overall Satisfaction	Frequency (F)	Percentage (%)
Very Satisfied	16	19.51
Satisfied	29	35.37
Neutral	23	28.05
Dissatisfied	13	15.85
Very Dissatisfied	1	1.22
Total	82	100.00

Table 29 summarizes the overall satisfaction levels of respondents with respect to resource availability for the school feeding program. A total of 54.88% of respondents expressed satisfaction (35.37% satisfied and 19.51% very satisfied), indicating a generally positive perception. However, a considerable percentage (28.05%) indicated neutrality regarding their satisfaction, and 15.85% expressed dissatisfaction, with none indicating being very dissatisfied. This mixed feedback suggests that while many stakeholders perceive resource availability positively, there are still areas of concern that need to be addressed to enhance overall satisfaction levels.

These descriptive statistics of objective one was followed by a Chi-square test of association. The Chi-square test at $p \leq 0.05$ significance level illustrating statistically significant association between school feeding program rations on pre-primary learners' attendance in public pre-primary schools within Nyali sub-county is as summarized in Table 30. To achieve this, the hypothesis below was tested.

HO_2: There is statistically no significant association between school feeding program rations and pre-primary learners' attendance in public schools in Nyali sub-county

Table 30: Chi-square test of association between school feeding program rations and pre-primary learners' attendance in public schools

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	966.004[a]	62	.001
Likelihood Ratio	198.482	62	.000
Linear-by-Linear Association	136.333	1	.000
N of Valid Cases	82		

a. 74 cells (92.5%) have expected count less than 5. The minimum expected count is .01.

Table 30 shows that the p value (p=0.001) for school feeding program rations and pre-primary learners' attendance was less than 0.05. Therefore, the hypothesis, "there is no statistically significant association between school feeding program rations and pre-primary learners' attendance in public schools in Nyali sub-county" was rejected. This implies that there is statistically significant association between school feeding program rations and pre-primary learners' attendance in public schools in Nyali sub-county. The findings are supported by the findings of Simeon (1998) who observed that students who are not hungry are more motivated to learn and have higher cognitive skills, resulting in improved academic performance. When students' hunger is alleviated at school, their performance in school tests improves, and they progress normally from level to level or grade to grade in order to complete their basic education. An investigation was conducted on Grade 2 students in Jamaica

4.6 School feeding program resources availability and pre-primary learners' attendance

This section presents the findings from the questionnaire regarding the perceived impact of the school feeding program on attendance and student performance in public pre-primary schools in Nyali sub-county, Mombasa County, Kenya.

The study requested the respondents to provide information on impact of resource availability on attendance and the results are as shown in Table 31.

Table 31: Impact of resource availability on attendance

Impact on Attendance	Frequency (F)	Percentage (%)
Strongly Agree	38	46.34
Agree	26	31.71
Neutral	13	15.85
Disagree	3	3.66
Strongly Disagree	2	2.44
Total	82	100.00

Table 31 illustrates the respondents' perceptions regarding the impact of resource availability on student attendance. A notable majority (78.05%) of respondents agreed that resource availability positively influences attendance, with 46.34% strongly agreeing and 31.71% agreeing. The absence of any respondents who strongly disagreed indicates a strong consensus on the importance of adequate resources in promoting a conducive learning environment that encourages regular student attendance. This was evidenced by one of the head teachers who had the following to say:

> *"…. resource availability in the school feeding program has positively influences attendance among pupils in pre-primary. Resources in in the school feeding program has greatly promoted a conducive learning environment that encourages regular student attendance ….."*

The participants were also asked whether they believed the school feeding program had positively impacted student attendance. The responses are summarized in Table 32.

Table 32: Perceived impact on learners' attendance

Response	Frequency(F)	Percentage (%)
Strongly Agree	37	45.12
Agree	26	31.71
Neutral	11	13.41
Disagree	4	4.88
Strongly Disagree	4	4.88
Total	82	100.00

A significant majority of participants (76.83%) either "Strongly Agree" or "Agree" that the school feeding program has positively impacted student attendance. This reflects a strong consensus among stakeholders on the effectiveness of the program in improving attendance rates. The high percentage of respondents who view the program favorably underscores its role in encouraging regular school attendance, thereby contributing to better educational outcomes for pre-primary learners.

These descriptive statistics of objective one was followed by a Chi-square test of association. The Chi-square test at $p \leq 0.05$ significance level illustrating statistically significant association between school feeding program resource availability on pre-primary learners' attendance in public pre-primary schools within Nyali sub-county is as summarized in Table 33. To achieve this, the hypothesis below was tested.

HO_2: There is statistically no significant association between school feeding program resource availability and pre-primary learners' attendance in public schools in Nyali sub-county

Table 33: Chi-square test of association between school feeding program resource availability and pre-primary learners' attendance in public schools

	Value	df	Asymp. Sig. (2-sided)
Pearson Chi-Square	746.354[a]	62	.000
Likelihood Ratio	222.345	62	.000
Linear-by-Linear Association	144.254	1	.000
N of Valid Cases	82		

a. 74 cells (92.5%) have expected count less than 5. The minimum expected count is .01.

Table 33 shows that the p value (p=0.000) for school feeding program resource availability and pre-primary learners' attendance was less than 0.05. Therefore, the hypothesis, "there is no statistically significant association between school feeding program resource availability and pre-primary learners' attendance in public schools in Nyali sub-county" was rejected. This implies that there is statistically significant association between school feeding program resource availability and pre-primary learners' attendance in public schools in Nyali sub-county. Yunusa observed higher Arithmetic scores of students during the implementation of feeding at their schools. It was discovered that the program not only motivated parents to enroll their children, but it also improved the learners' performance through various influencing factors. Many researchers have investigated the impact of the school feeding program on student performance, and Adenkule et al. (2016) discovered that the School Feeding Program has a positive impact on student performance.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of the key findings from the study, draws conclusions based on the results, and presents recommendations for future research and policy improvement. The study investigated the program policies, food quality, rations, and resource availability in relation to the effectiveness of the school feeding program in pre-primary public schools in Nyali Sub-County, Mombasa County, Kenya. The chapter concludes with suggestions for future studies aimed at strengthening the school feeding initiative and addressing identified gaps.

5.2 Summary of findings

The study aimed to assess the influence of the school feeding program on pre-primary learners' attendance, guided by four specific objectives. Firstly, it was found that a significant majority of respondents indicated a positive impact of the school feeding program on attendance. Most schools provided three meals per day, and timely meal provision was noted by the respondents. A Chi-square test revealed a statistically significant association between meal policies and attendance ($p=0.000$), supporting the hypothesis that effective meal policies enhance attendance rates among students.

Secondly, the analysis of school feeding program demographics highlighted that the quality and variety of food served were favorably rated by the respondents. Most participants found the food satisfactory and nutritious, which is essential for maintaining student engagement. Adequate training for staff involved in food preparation and service emerged as a critical factor for ensuring food quality. The Chi-square test confirmed a significant relationship

between program demographics and attendance (p=0.003), indicating that better demographic practices correlate with improved attendance.

The third finding addressed the school feeding program rations. The availability of food was generally reported as sufficient, with most respondents indicating that the quantity of food served to each child was adequate. Despite this, some concerns regarding occasional shortages were noted, underscoring the need for a consistent supply to maximize the program's effectiveness. The Chi-square test indicated a significant association between rations and attendance (p=0.001), reinforcing the importance of adequate food provision in encouraging regular attendance.

Finally, the study examined the resources available for the school feeding program. The availability of financial support and adequate staffing was identified as vital for the program's effectiveness. A significant majority of respondents agreed that resource availability positively influences attendance, and the Chi-square test confirmed a significant association between resource availability and attendance (p=0.000). These findings suggest that when resources are sufficient, the likelihood of improved attendance among pre-primary learners increases significantly

The findings show that the p value (p=0.000) for school feeding program policies and pre-primary learners' attendance was less than 0.05. Therefore, the hypothesis, "there is no statistically significant association between school feeding program policies and pre-primary learners' attendance in public schools in Nyali sub-county" was rejected. This implies that there is statistically significant association between school feeding program policies and pre-primary learners' attendance in public schools in Nyali sub-county.

5.3 Conclusions

The findings of this study illustrate the critical role that school feeding programs play in enhancing attendance among pre-primary learners in Nyali sub-county. The positive perceptions of food quality, availability, and the overall policies supporting the program indicate that when implemented effectively, such programs can significantly improve educational outcomes. This study underscores the importance of continuous assessment and improvement in various aspects of the school feeding program, including the quality and variety of food, timely provision, staff training, and resource availability. Together, these factors are indispensable in ensuring the program meets its objectives and contributes to improved attendance rates.

In conclusion, this study provides empirical evidence supporting the hypothesis that school feeding programs are instrumental in promoting regular attendance among young learners, thereby contributing to their nutritional needs and overall educational engagement. The findings highlight the interdependence of quality food provision, effective policies, and adequate resources in fostering a conducive learning environment for pre-primary students.

5.4 Recommendations

Based on the findings and conclusions drawn from the study, several recommendations are proposed. Firstly, schools should prioritize offering high-quality and diverse food options to meet the nutritional needs of pre-primary learners. Regular assessments should be conducted to evaluate food quality and variety, ensuring that meals provided are both appealing and nutritious for young children.

Secondly, training programs for staff involved in meal preparation and service should be implemented regularly. This will ensure adherence to best practices in food safety and

nutrition, which is crucial for maintaining high standards in food delivery and preparation. Additionally, stakeholders should establish effective logistics and supply chains to ensure consistent availability of food supplies. Regular inventory assessments and partnerships with local farmers and suppliers can help mitigate shortages and ensure all learners receive adequate nutrition.

5.5 Suggestions for Future Research

1. Future research should focus on the long-term effects of school feeding programs on student attendance, academic performance, and health outcomes. Longitudinal studies would provide deeper insights into how sustained nutritional support influences learners' cognitive development and educational success over time.
2. Comparative studies between regions with different school feeding models or funding structures could provide valuable insights into the best practices for maximizing the program's impact. This research could also explore the differences between rural and urban areas in the availability of resources and program outcomes.
3. Exploring the Impact of Parental Involvement: Research could examine the role of parental involvement in supporting the success of school feeding programs. Understanding how parents perceive the program and contribute to its sustainability could highlight ways to enhance community participation and resource mobilization.

REFERENCES

Gokah, T. K. (2008). *School feeding programs in developing countries: Impacts and challenges*. Cambridge Scholars Publishing.

Adams, J. S. (1963). Towards an understanding of inequity. *Journal of Abnormal and Social Psychology*, *67*(5), 422-436.

Ahmed, A. U. (2004). Impact of Feeding Programs on School Participation in Rural Bangladesh. *FCND Discussion Paper No. 98*. International Food Policy Research Institute (IFPRI)

Ahmed, A. U., Hoddinott, J. F., & Roy, S. (2010). Evidence of the impact of school feeding programs on enrollment, attendance, and academic performance in primary schools in Bangladesh. *FCND Discussion Paper No. 98*. International Food Policy Research Institute (IFPRI).

Alderman, H., & Headey, D. (2018). How important is parental engagement for the success of school feeding programs? *Food Policy, 76*, 1-13.

Aurino, E., Gelli, A., Adamba, C., Osei-Akoto, I., & Alderman, H. (2019). Food for thought? Experimental evidence on the learning impacts of a large-scale school feeding program. *Journal of Human Resources, 0618-9579R2*.

Blau, P. M. (1964). *Exchange and power in social life*. New Brunswick, NJ: Transaction Publishers.

Branscum P, Kaye G, Warner J.(2013) Impacting dietary behaviors of children form low income communities: an evaluation of a theory-based nutrition education program. *California Journal of Health Promotion.;11*(2):43–52. https://doi.org/10.32398/cjhp.v11i2.1530

Bundy, D. A., Burbano, C., Grosh, M., Gelli, A., Jukes, M., & Drake, L. (2009). *Rethinking School Feeding: Social Safety Nets, Child Development, and the Education Sector.* The World Bank.

Bundy, D., Burbano, C., Grosh, M., Gelli, A., Jukes, M., & Drake, L. (2009). *Rethinking school feeding: Social safety nets, child development, and the education sector*.

Buttenheim, A. M., Alderman, H. and Friendman, J. A. (2011). Impact Evaluation of School Feeding Competition: evidence from a randomized evaluation. *World Bank Policy Research*

Chakraborty, T., & Jayaraman, R. (2019). School feeding and learning achievement: Evidence from India's midday meal program. *Journal of Development Economics, 139, 249-265.*

Drake, L., Fernandes, M., Aurino, E., Gelli, A., Kusi-Amponsah, A., Giyose, B., & Alderman, H. (2020). School feeding programs in middle childhood and adolescence. *In Child and Adolescent Health and Development*(3rd ed.). The International Bank for Reconstruction and Development/The World Bank.

Drake, L., Fernandez, M., & Sibson, V. (2016). Home-Grown School Feeding and School Systems. *World Food Programme*.

Espejo, F. (2009). *Home-grown School Feeding:* A framework to linking Schoool Feeding with local Agricultural production Rome: *World Food program*. Evaluation 2002-2006;Rome

FAO. (2020). *School feeding: A global overview of school feeding policies and practices.* Food and Agriculture Organization of the United Nations.

Finan, T., (2010). Impact Evaluation of WFP school Feeding program in Kenya (1999- 2008): for Education programs on Learning Achievement and cognitive Development

Food and Agriculture Organization of the United Nations (FAO). (2020). *School Food and Nutrition Framework*. Rome.

Fowler, F. J. (2014). *Survey Research Methods*. Sage Publications.

Gelli, A., Asfaw, A., & Vermeersch, C. (2020). *The impact of school feeding on educational outcomes: A systematic review of the evidence*. Journal of Development Studies, 56(4), 667-685.

Gelli, A., Aurino, E., Folson, G., Arhinful, D., Adamba, C., Osei-Akoto, I., & Alderman, H. (2020). A school meals program implemented at scale in Ghana increases height-for-age during midchildhood in girls and in children from poor households: A cluster randomized trial. *The Journal of Nutrition, 150*(11), 2896-2904.

Gelli, A., Meir, U., & Espejo, F. (2007). The impacts of school feeding programs in sub-Saharan Africa. *World Food Programme (WFP)*. (2013).

Gelli, A., Meir, U., & Espejo, F. (2007). The impacts of school feeding programs in sub-Saharan Africa.

Hungi, N., Ngware, M., & Abuya, B. (2014). Examining the impact of age on literacy achievement among grade 6 primary school pupils in Kenya. *International Journal of Educational Development, 39*, 247–259.

Kafle, B., Sharma, A., & Ghimire, S. (2023). Community engagement in school feeding programs: A case study in Nepal. Journal of Child Nutrition and Management, 47(2), 1-15.

Kamau, J. M., et al. (2022). "The Role of School Feeding Programs in Enhancing Educational Outcomes in Pre-Primary Education in Kenya." *Journal of Educational Development, 5*(1), 45-60.

Kariuki, D., Wambua, S., & Nganga, L. (2021). Socioeconomic factors influencing school feeding program participation and its effect on attendance in Mombasa County, Kenya. *Journal of Public Health, 34*(2), 295-302.

Kathuri. M.J.(1986). *Factors that influence the performance of pupils in C.P.E*. Nairobi

Macharia-Mutie, C. W., Moretti, D., Van den Briel, N., Omusundi, A. M., Mwangi, A. M., Kok, F. J., & Zimmermann, M. B. (2018). The effect of NaFeEDTA-fortified fish sauce on iron intake and anemia among young children in an urban poor community in Kenya. *Public Health Nutrition, 21*(6), 1106-1114.

Maslow, A. H. (1943). A theory of human motivation. *Psychological Review*, *50*(4), 370-396

Maslow, A. H. (1943). A Theory of Human Motivation. Psychological Review, 50, 370-96. https://doi.org/10.1037/h0054346

Meme, M. M., W.Kogi-Makau, N.M. Muroki, and R.K. Mwadime. (1998). Energy and protein intake and nutritional status of primary School Children 5 to 10 years of age in schools with and without feeding programs in Nyambene District, Kenya. *Food and Nutrition Bulletin 19*(4).

Meng, x., and Ryan,J.(2003). Evaluating the Food for Education program in Bangladesh.

Mensah, E. O., Amoako-Arhen, A., & Annor, G. A. (2021). *School feeding programmes in Africa: A review of the evidence on impact, challenges and sustainability*. International Journal of Educational Development, 85, 102458.

Ministry of Education. (2022). *National Education Survey Report 2022. Government of Kenya.*

Mogaka, S., et al. (2021). "Impact of School Feeding Programs on Learner Performance in Kenya: A Case Study in Nyali Sub-County." *International Journal of Educational Research, 111, 101829.*

Mokoro, T., Lozano, M., & Nyonje, R. (2020). School feeding programs and child development: Evidence from Kenya. *International Journal of Educational Development, 78*, 102-135.

Moore, E., and L. Kunze. (1994). Evaluation of the Burkina Faso school feeding program. *Catholic Relief Services*, Consultant Report (Unpublished)

Mugenda, O. M., & Mugenda, A. G. (2003). *Research Methods: Qualitative and Quantitative Approaches.* African Centre for Technology Studies.

Nanivazo, M., & Agbonlahor, M. (2021). Public-private partnerships in school feeding programmes: Evidence from sub-Saharan Africa. *Development Policy Review, 39*(3), 471-490.

Nyali Sub-County Education Office. (2023). *Annual Report on Enrollment and Attendance in Nyali Sub-County Schools.*

Nyashanu, M. (2015). *School* Feeding Programs and Attendance: A Case Study of Kenyan Schools.

Nyashanu, M. (2015). *School Feeding Programs and Attendance: A Case Study of Kenyan Schools*. Unpublished Thesis. Kenyatta University

Peel, F., (2016) Improving Africa school feeding program: (MBA, University of Nairobi 2016):

Powell, C., and S. Grantham–McGregor. (1983). An evaluation of giving the Jamaican government school meal to a class of children. *Human Nutrition. Clinical Nutrition. 37C.*

Roberts, M.; Tolar-Peterson, T.; Reynolds, A.; Wall, C.; Reeder, N.; Mendez, G.R. (2022) The Effects of Nutritional Interventions on the Cognitive Development of Preschool-Age Children: *A Systematic Review. Nutrients, 14*, 532.

RoK (Republic of Kenya). (2014). The Government of Kenya and WFP School Feeding Programme. *Ministry of Education, Science, and Technology.*

Smith, L. C., Alderman, H., & Aduayom, D. (2006). Food insecurity in sub-Saharan Africa: New estimates from household expenditure surveys. *Research report 146.* International Food Policy Research Institute.

Smith, L. C., Haddad, L., & Son, N. T. (2003). How potent is economic growth in reducing undernutrition? What are the pathways of impact? New cross-country evidence. *Economic Development and Cultural Change, 51*(1), 55-76.

Sumberg, J. (2019). The political economy of school feeding in Kenya. *Food Policy, 83*, 25-35.

Tull, K., & Adu-Afarwuah, S. (2021). The impact of school feeding programmes in low-and middle-income countries: A systematic review and meta-analysis. *Nutrition Reviews, 79*(9), 1022-1040.

United Nations Educational, Scientific and Cultural Organization (UNESCO). (2015). *School Feeding and Learning: Feeding Minds to Combat Poverty*. UNESCO

United Nations. (2018). *United Nations Development Assistance Framework (UNDAF).*

Wall, C.; Tolar-Peterson, T.; Reeder, N.; Roberts, M.; Reynolds, A.; Rico Mendez, G.(2022). The Impact of School Meal Programs on Educational Outcomes in African Schoolchildren: *A Systematic Review. Int. J. Environ. Res. Public Health, 19*, 3666.

Wanjohi, A M. (2010). Factors affecting the sustainability of school feeding program in Magadi. Washington, D.C

World Food Programme (WFP) (2016). School feeding: *A global overview of school feeding policies and practices*. World Food Programme.

World Food Programme (WFP) (2019). *The State of School Feeding Worldwide 2019*. World Food Programme.

World Food program (2001). *Global school food campaign into school out of hunger*, WFD Zone, Kajiado County.

World Food program (WFP). (2002). *School feeding works for girls' education Policy Brief*. Rome

World Food Programme (WFP). (2017). *The State of School Feeding Worldwide 2017*. WFP

APPENDICES

Appendix I. Informed Consent

Title of the study: Effects of school Feeding program on pre-primary Learners' attendance in Public Schools in Nyali sub-county, Kenya

Introduction

I am inviting you to participate in a research study to investigate the effects of a school feeding program on pre-primary learners' attendance in public schools in Nyali sub-county, Kenya. Before you decide whether to participate, you must understand why the research is being conducted and what your participation will involve.

Purpose of the study

The purpose of this study is to examine the impact of the school feeding program on the attendance of pre-primary learners in public schools in Nyali Sub-County. The information gathered will contribute to our understanding of the potential benefits of school feeding programs and their influence on attendance patterns.

Procedures

If you agree to participate, you will be asked to [describe the specific activities participants will engage in, e.g., complete a questionnaire, participate in interviews, etc.]. Your participation is voluntary, and you may choose not to participate or withdraw from the study at any time without any penalty.

Risks and benefits

There are no anticipated risks associated with participating in this study. However, your participation will contribute valuable information that may enhance our understanding of the impact of school feeding programs, potentially benefiting educational policies and practices.

Confidentiality

Your identity will be kept confidential to the extent provided by law. Your personal information will not be disclosed in any publications or presentations resulting from this study.

Voluntary participation

Your participation in this study is entirely voluntary. You are free to decline to participate or withdraw from the study at any point without facing any consequences.

Contact Information:

If you have any questions about the study or your rights as a participant, please contact the researcher, Agnes Awuor Owano, at agnesdatcha@gmail.com or +254 798 621 187.

Consent

I have read and understood the information provided above. I have had the opportunity to ask questions and any questions I have asked have been answered to my satisfaction. I voluntarily agree to participate in the study.

Participant's Name: _____

Signature: _____ Date: _____

Appendix II: Questionnaire for teachers and PTA members

Dear respondent, I am a student at Mount Kenya University conducting research on **Effects of School Feeding Program on Pre-Primary Learners' Attendance. A case Study of Public Pre-Schools in Nyali Sub-County, Mombasa County, Kenya.** The findings of this research will be beneficial to improvement of the school feeding program which in turn will lead to the improvement of learners' school attendance. The information provided therein will be confidential as the status of response will be anonymous.

Yours Sincerely,

Agnes Awuor Owano

Instructions: Tick where applicable

Section A: Demographic Information

1. School Name: _____
2. Position:

a) Headteacher

b) Pre-primary Teacher

c) PTA Representative

3. Gender:

a) Male

b) Female

c) Other

4. Age:

a) Under 25

b) 26-35

c) 36-45

d) 46-55

e) Over 55

5. Years of Experience in Education:

a) Less than 1 year

b) 1-3 years

c) 4-6 years

d) 7-10 years

e) More than 10 years

Section B: Program Policies

6. How many meals are provided per day in your school's feeding program?

a) 1 meal

b) 2 meals

c) 3 meals

d) Other: _____

7. How timely are the meals served?

a) Very Timely (within scheduled time)

b) Timely (within 5 minutes of scheduled time)

c) Somewhat Timely (5-10 minutes late)

d) Not Timely (more than 10 minutes late)

8. How effective are the methods of serving meals?

a) Very Effective

b) Effective

c) Neutral

d) Ineffective

e) Very Ineffective

Section C: Attendance Information

9. What was the average attendance rate before the implementation of the feeding program?

a) Less than 60%

b) 60-70%

c) 71-80%

d) 81-90%

e) More than 90%

10. What is the current average attendance rate after the implementation of the feeding program?

a) Less than 60%

b) 60-70%

c) 71-80%

d) 81-90%

e) More than 90%

11. Have you observed a change in student attendance since the implementation of the feeding program?

a) Yes, increase

b) Yes, decrease

c) No change

Section D: Food Quality and Rations

12. How would you rate the overall quality of food served?

a) Excellent

b) Good

c) Average

d) Poor

e) Very Poor

13. How would you rate the variety of food provided through the feeding program?

a) Very Satisfactory

b) Satisfactory

c) Neutral

d) Unsatisfactory

e) Very Unsatisfactory

14. On average, how would you rate the quantity of food served to each child?

a) Too Much

b) Just Right

c) Too Little

Section E: Resource Availability

15. How sufficient are the food supplies available for the program?

a) Very Sufficient

b) Sufficient

c) Neutral

d) Insufficient

e) Very Insufficient

16. How would you rate the number of workers available to manage the feeding program?

a) Very Adequate

b) Adequate

c) Neutral

d) Inadequate

e) Very Inadequate

17. Are the necessary utensils and equipment available for meal preparation and serving?

a) Yes No

18. Is there a dedicated budget for the school feeding program?

a) Yes No

19. How often is training provided for the staff involved in the feeding program?

a) Regularly (once a month)

b) Occasionally (once every few months)

c) Rarely (once a year)

d) Never

Section F: General Impact

20. Do you believe the school feeding program has positively impacted attendance?

a) Strongly Agree

b) Agree

c) Neutral

d) Disagree

e) Strongly Disagree

21. Do you believe the school feeding program has positively impacted student performance?

a) Strongly Agree

b) Agree

c) Neutral

d) Disagree

e) Strongly Disagree

Appendix III: Interview Schedule for head teachers

1. How many meals are provided per day in your school's feeding program?
2. How timely are the meals served?
3. What was the average attendance rate before the implementation of the feeding program?
4. What is the current average attendance rate after the implementation of the feeding program?
5. How would you rate the variety of food provided through the feeding program?
6. How sufficient are the food supplies available for the program?
7. How would you rate the number of workers available to manage the feeding program?
8. Are the necessary utensils and equipment available for meal preparation and serving?
9. How often is training provided for the staff involved in the feeding program?
10. Do you believe the school feeding program has positively impacted attendance?
11. Do you believe the school feeding program has positively impacted student performance?

Appendix IV. NACOSTI Approval

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **948628**

Date of Issue: **09/July/2024**

RESEARCH LICENSE

This is to Certify that Miss.. AWUOR AGNES of Mount Kenya University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Mombasa on the topic: EFFECTS OF SCHOOL FEEDING PROGRAMME ON PRE PRIMARY LEARNERS ATTENDANCE. A CASE STUDY OF PUBLIC PRE SCHOOLS OF NYALI SUB COUNTY MOMBASA-KENYA for the period ending : 09/July/2025.

License No: **NACOSTI/P/24/37455**

948628

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

See overleaf for conditions

Appendix V. Letter of introduction

Mount Kenya University

DIRECTORATE OF GRADUATE STUDIES

MED/2021/84836

19th June, 2024

National Commission for Science Technology & Innovation (NACOSTI)
Off Waiyaki, Upper Kabete
P.O Box 30623- 00100
NAIROBI, KENYA

Dear Sir/Madam,

RE: AGNES AWUOR OWANO– REGISTRATION NO. MED/2021/84836

The purpose of this letter is to introduce the above named student who is pursuing **Master of Education** in the **Department of Educational Management and Curriculum Studies** in the **School of Education.**

The title of the research is **"Effects of School Feeding Program on Pre-Primary Learners Attendance: A Case Study of Public Pre-Schools in Nyali Sub-County, Mombasa County, Kenya."** It has been cleared by the University's Ethics Review Committee (Certificate attached) and now has to proceed to the field to collect data between **June, 2024 and August, 2024.**

Any assistance accorded to the student will be highly appreciated.

Thank you.

Mount Kenya University
P.O. Box 342 - 01000, THIKA
Office of the Director,
Graduate Studies

Dr. Samuel M. Karenga, Ph.D
Director, Graduate Studies
Enc.

Appendix VI. ERC Certificate

Mount Kenya University

REF: **MKU/ISERC/3817**
TO: **AGNES AWUOR OWANO**

Date: 19 June 2024

REG: **MED/2021/84836**

Dear Sir/Madam,

RE: EFFECTS OF SCHOOL FEEDING PROGRAM ON PRE-PRIMARY LEARNERS' ATTENDANCE: A CASE STUDY OF PUBLIC PRE-SCHOOLS IN NYALI SUB-COUNTY, MOMBASA COUNTY, KENYA

This is to inform you that **Mount Kenya University** has reviewed and approved your above research proposal. Your application approval number is **2861.** The approval period is **19/06/2024 - 18/06/2024.**

This approval is subject to compliance with the following requirements;

i. Only approved documents including informed consents, study instruments, MTA will be used
ii. All changes including amendments, deviations and violations are submitted for review and approval by **Mount Kenya University**
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to **Mount Kenya University** within 72 hours of notification
iv. Any changes, anticipated or otherwise that may increase the risks or affect the safety or welfare of study participants and others or affect the integrity of the research must be reported to **Mount Kenya University** within 72 hours
v. Clearance for export of biological specimens must be obtained from relevant institutions
vi. Submission of a request for renewal of approval at least 60 days prior to expiry of the approval period. Attach a comprehensive progress report to support the renewal
vii. Submission of an executive summary report within 90 days upon completion of the study to **Mount Kenya University**

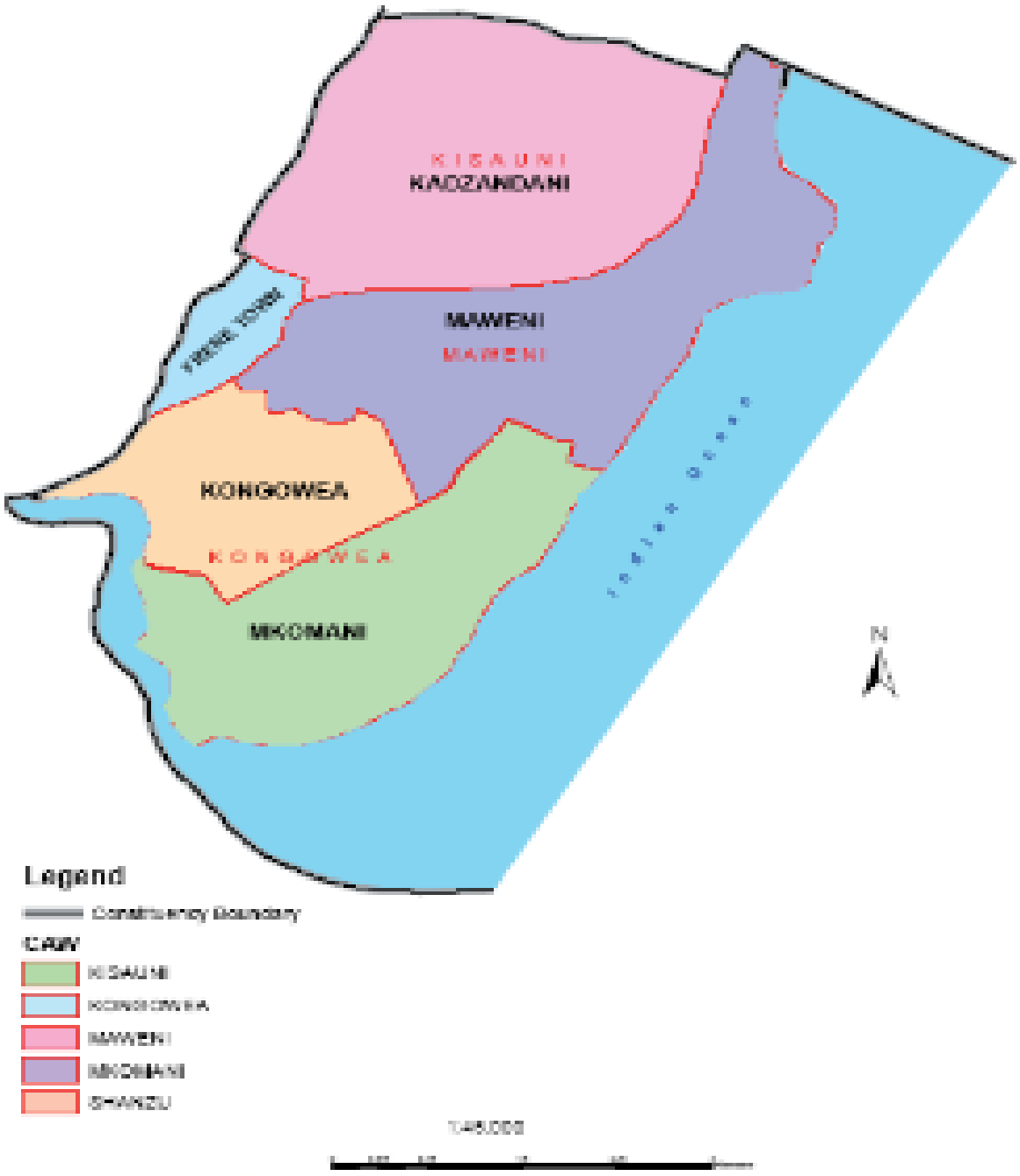
Prior to commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology and Innovation (NACOSTI) https://research-portal.nacosti.go.ke and also obtain other clearances needed.

The Chairman
Mount Kenya University
Ethics Review Committee
P. O. Box 342 - 0100, Thika

Yours sincerely,

Dr. Alfred Owino, PhD
Chairman, Mount Kenya University ISERC

Appendix VII: Map of Nyali sub-county



Appendix VIII: Document Analysis Guide

Title: Document Analysis Guide for School Feeding Program Impact Study

1. Document Purpose and Context

- Objective: Provide a comprehensive overview and analysis of the findings regarding the effects of the school feeding program on pre-primary learners' attendance in Nyali sub-county, Kenya.
- Context: Analyze qualitative and quantitative data collected through questionnaires and interviews to understand stakeholder perceptions, program effectiveness, and demographic influences.

2. Data Collection Methods

- Questionnaires: Administered to pre-primary teachers and PTA members to gather quantitative data on demographics, program policies, and attendance impacts.
- Interviews: Conducted with headteachers to gain qualitative insights into the operational aspects and perceived benefits of the program.

3. Key Findings

- Response Rate: Analyze the response rates and implications for data reliability.
- Demographic Information: Evaluate the gender, age, and experience of respondents to understand the contextual background for the results.
- Consider the influence of a majority female workforce (Table 4).
- Discuss the implications of age distribution (Table 5) on program engagement.
- Analyze the significance of respondents' teaching experience (Table 6) on perceptions of the program.
- Attendance Rates Before and After Implementation: Compare attendance rates pre- and post-implementation of the program (Table 11) to highlight the program's impact.

4. Analysis by Research Objectives

4.1 Influence of School Feeding Program Policies:

- Discuss meal frequency and its correlation to attendance (Table 7).
- Examine meal provision timeliness and effectiveness (Tables 8 and 9).
- Analyze perceptions of the program's impact on attendance (Table 10).
- Perform Chi-square analysis to validate statistically significant associations (Table 12).

4.2 School Feeding Program Demographics:

- Evaluate the quality, variety, and adequacy of food served (Tables 13, 14, and 15).
- Discuss training frequency and food quality assessment (Tables 17 and 18).
- Analyze the association between demographics and attendance outcomes using Chi-square tests (Table 21).

4.3 School Feeding Program Rations:

- Investigate the availability of food and resources (Tables 22-26).
- Assess staff training and resource utilization (Tables 27 and 28).
- Validate statistical associations through Chi-square analysis (Table 30).

4.4 Resource Availability Impact:

- Evaluate perceptions of resource availability and its influence on attendance (Table 31).
- Analyze the perceived impact of the program on attendance (Table 32).
- Conduct Chi-square tests to demonstrate associations between resource availability and attendance (Table 33).

5. Conclusions and Implications

- Summarize the overall findings and their implications for policy, practice, and future research on school feeding programs.
- Discuss how the results align with existing literature and theoretical frameworks.
- Identify potential areas for improvement in the program based on stakeholder feedback and analysis.

6. Recommendations

- Provide actionable recommendations for policymakers and stakeholders involved in school feeding programs to enhance their effectiveness and sustainability.
- Suggest areas for further research to expand understanding of the long-term impacts of school feeding on educational outcomes.