

**EFFECT OF SCHOOL FEEDING PROGRAMME ON PUPILS'
PARTICIPATION IN PUBLIC PRE- SCHOOLS IN MWINGI CENTRAL
SUB-COUNTY, KITUI COUNTY, KENYA.**

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DECLARATION

I declare that this research project is my original work and it has not been submitted for any academic award in any other institution.

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This research proposal has been submitted for examination with my approval as the university supervisor.

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DEDICATION

I dedicate this research project to my beloved daughter Mercy Mutanu for her perseverance and understanding during the course.

ACKNOWLEDGEMENT

I take this opportunity to thank the almighty God for according me the opportunity to undertake the research study.

My gratitude to my supervisor, Dr. Bonface Ngaruiya, my parents Julius Ukungu and Elizabeth, to my daughter Mercy, and to my classmates for their support during my research study.

TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
LIST OF TABLES	viii
LIST OF FIGURES	ix
LIST OF ABBREVIATIONS	x
ABSTRACT	ii

CHAPTER ONE

INTRODUCTION

1.1 Background of the Problem	1
1.2 Statement of the Problem.....	3
1.3 Purpose of the Study	4
1.4 Objectives of the Study.....	4
1.5 Research Questions	5
1.6 Significance of the Study	5
1.7 Assumptions of the Study	6
1.8 Limitations of the Study.....	6
1.9 Delimitation of the Study	6
1.10 Definition of Significant Terms	7
1.11 Organization of the Study	7

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction.....	9
2.2 School Participation	9
2.3 Quality of Food and School Attendance	10
2.4 Effect of SFP Amount of Food on Enrolment	11
2.5 The Effect of Frequency of Food by SFP on Absenteeism	13

2.6 Theoretical Frame Work	16
2.7 Conceptual Framework.....	18
2.8 Summary of Literature Review.....	18

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction.....	20
3.2 Research Design.....	20
3.3 Target Population.....	21
3.4 Sample Size and Sampling.....	21
3.5 Research Instruments	21
3.6 Piloting.....	21
3.6.1 Instrument Validity.....	22
3.6.2 Reliability of the Instruments	22
3.7 Data Collection Procedures.....	23
3.8 Data Analysis	23
3.9 Ethical Considerations	24

CHAPTER FOUR
DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction.....	25
4.2 Questionnaires Return Rate	25
4.3 General Information.....	26
4.3.1 Pre-School Class Enrolment.....	26
4.3.2 Time Feeding Programme Began	27
4.3.3 Food Source	28
4.3.4 Challenges Encountered by Schools in Managing Food Programmes..	28
4.4 Amount of Food Served and Pupils' and presence.....	29
4.5 Food Quality and Enrolment of Pre-School Children.....	31
4.6 Meals Frequency and Pupils' Absenteeism of Pre-School Pupils	33
4.7 Pupils Perception of School Feeding Programme and their Attendance	35

CHAPTER FIVE

SUMMARY, DISCUSSION AND CONCLUSIONS

5.1 Introduction.....	37
5.2 Summary of the Findings.....	37
5.3 Conclusions from the Study.....	39
5.4 Recommendations from the Study.....	40
5.5 Suggestions for Further Research.....	40
REFERENCES.....	41
APPENDICES.....	49
Appendix I: Transmittal Letter	49
Appendix II: Head Teachers' Questionnaire	50
Appendix III: Pre-School Teachers' Questionnaire.....	52
Appendix IV: Children Questionnaire	55

LIST OF TABLES

Table 1: Questionnaires Return Rate	26
Table 2: Class Enrolment	26
Table 3: Time Feeding Programme Began	27
Table 4: Source of Food	28
Table 5: Amount of Food Served per Meal	29
Table 6: ANOVA on the Relation between Amount of Food and Attendance.....	30
Table 7: ANOVA on the Relation between Enrolment and Type of Sponsor	31
Table 8: ANOVA on the Relation between Amount of Food and Attendance.....	31
Table 9: The Food Type Provided by Schools	32
Table 10: ANOVA on the Relation between Quality of Food and Attendance.....	32
Table 11: Meals Frequency.....	33
Table 12: Meals Frequency.....	33
Table 13: Chi-square Results on Association between Meals Frequency and Enrolment of Pre-School Children.....	34
Table 14: Pupils Perception Feeding Programme and Attendance of Pre-School Children	35
Table 15: Influence of Feeding Programme on Pupil's Motivation.....	36
Appendix IV: Children Questionnaire	55

LIST OF FIGURES

Figure 1.1: Relationship between independent and dependent variables	18
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LIST OF ABBREVIATIONS

ASALs	Arid and Semi-Arid Lands
ECDP	Early Childhood Development Program
ESMP	Expanded School Meals Programme
FFE	Food for Education Programme
FPE	Free Pre- Education
GoK	Government of Kenya
HGSFP	Home Grown School Feeding Programme
MDGs	Millennium Development Goals
MOEST	Ministry of Education Science and Technology
NCPB	National Cereals and Produce Board
NARC	National Rainbow Coalition
NGOs	Non-Governmental Organizations
SFP	School Feeding Programme
SPSS	Statistical Package for Social Sciences
UN	United Nations
WFP	World Food Programme

ABSTRACT

The objective of this research was to study the effect of school feeding program on pupils' participation in public preschool in Mwingi Central Sub-county, Kitui County, Kenya. This was achieved through the following objectives: to determine the relationship between the amount of food served on pupils' attendance in public pre- schools in Mwingi central sub-county; to establish the effect of quality of food on pupils' enrolment in public pre- schools in Mwingi central sub-county; To establish the relationship between meals frequency and pupils' absenteeism in public pre- schools in Mwingi central sub-county; and to determine the relationship between pupil's perception of school feeding programme and their attendance in public pre- schools in Mwingi central sub-county. This study adopted a descriptive research design to formulate a problem for more clear investigation as well as discovery of ideas and thoughts. The population of the study comprised 14 principles and pre-school teachers in all the 14 public school in Mwingi central sub-county as well as one sub-county director of education. The data collected was collected through self-administered questionnaires and was analyzed. The research findings indicated that the amount of food offered in primary schools significantly influenced the enrollment of pre-school children. The schools which give more food had more children than those with little or no food. The study found out that the quality of food provided in school's influences enrollment of pre-school children. The schools with good quality of food attracted pre-school children more than those without. The study also found that the food frequency influences enrollment of pre-school children to a great extent. The schools which provide meals for more days in a week ended up having more pupils. The study finally concluded that the children were not most very satisfied with the meals in their schools. The study recommends that the government should increase the provision of food to schools. This would improve the enrolment of pre-schools. The primary school administration should encourage parents to continue supporting school feeding programme. This is by providing enough food. The schools should increase the amount of food provided to children as well as the quality of food provided. Further research suggests that the influence of the parents social economic status on enrolment of pre-school children. Home based factors influences enrolment of pre-school children and the impact of school administration in the provision of food for early childhood education.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Problem

The mental, social and physical traits of an infant health can be adversely affected due to an early micronutrient and malnutrition deficiencies. School based feeding programs are adopted to encourage attendance of children, ensure their growth, and provide opportunity for educational achievements among other health aspects (Diderickson (2001) School feeding program is a planned and scheduled activity of providing good quality food which is well planned. Health need and nutrition of pre-school children should be met for their basic growth and development.

A report published by USGAO (2002) argued that school feeding programs may not be cost effective when compared with alternative interventions such as providing quality teaching and offering nutritional and health packages directed at pregnant women and at mothers with their preschool children. School based feeding programs in Kenya have been in existence for at least the last 36 years which was introduced through government school milk programme. According to (UNESCO 2005), at least 115 million pre and primary school age pupils benefiting from school meals in 2001/2002; were mostly from third world countries. According to (FAO, 2004) global estimate at least 852 million people globally were under nourished in the period between 2000-2002 where majority of these were children mostly from third world countries.

Kenya is one of the ten nations working with NEPAD and AU to cultivate a domestically grown school feeding program, however SFP has been under implementation in Kenya since 1980s and have attained a number of success and impacts in children's enrollment and attendance to schools.

The Kenya government introduced free primary education in 2003 to all public primary schools in Kenya under the leadership of President Mwai Kibaki. The main aim of this was to increase the enrollment of learners to these public institutions starting from ECD to standard 8 and also to retain attendance for most of these schools which are situated in rural areas where most parents are peasant farmers and sometimes cannot afford to pay fees for their children to join ECD centres.

World Food Program (WFP) which is the largest global humanitarian food provider among schools, partners with governments and other parties to reduce children malnutrition, support children education and promote children development particularly in times of emergencies and crisis. According to Bwibo et al (1989), alleviation of hunger is the main reason as to the establishment of school feeding programs in most areas as they are necessary in ASAL areas where food supply is not sufficient and food stuffs in majority of schools are donated by donors and well-wishers (MOE, 2007).

A survey done by WFP, (2005) indicated that making available food rations in schools had boosted learning and performance also encouraged regular attendance from children who came from poor family background. According to (UNESCO 2005), at least 115 million pre and primary school age pupils benefiting from school meals in 2001/2002; were mostly from third world countries .SFPs also help to expand the reach of a number of other important activities including de-worming campaigns and HIV/AIDS education. According to Allen, (2001), the major objectives of school based feeding programs may differ in different countries but in most cases it is used to relieve short-term hunger, micronutrients status improvements, growth cognition and academic performance both in developed and developing states.. In Kenyan schools, the school based feeding program has been implemented over time since 1980's with changing degrees of success. This study prompted the researcher to focus on the effects of feeding programme in schools in public pre- schools in Mwingi central sub-county, Kitui.

1.2 Statement of the Problem

Education is very crucial for any country's long term economic development. Private and social returns to educational investments have proved to be high particularly in pre- education. To support learning and training in human resource that forms an essential source of human capital. On to transition towards more sustainable alternatives, feeding programm was introduced in 2009 though, despite government's initiative the programme has not fully been established in Mwingi Central as a whole. In centers where the programm is operational, the

absenteeism problem has not yet been solved an indication that there could be other factors in play. Earlier studies have focused on the effect of nutrition on cognitive development of pre-school children, challenges facing school feeding programs and development. None of these studies investigated the effects of feeding programme in schools on pupils' participation in pre- schools, which is a study gap which this study seeks to fulfill.

1.3 Purpose of the Study

The aim of the survey was to explore the effects school feeding programme on pupils' contribution in public pre- schools in Mwingi central sub-county, Kitui County, Kenya.

1.4 Objectives of the Study

- i. Establish whether the amount of food served affects pupils' attendance in public pre- schools in Mwingi zone.
- ii. To ascertain the effect of quality of food on pupils' enrolment in Mwingi central zone.
- iii. Determine the relationship between meals frequency and pupils' absenteeism in public pre- schools in Mwingi central sub-county.
- iv. Identify the relationship between pupil's perception of school feeding programme and their presence.

1.5 Research Questions

- i. What is the connection between the amount of food served on pupils' and attendance in public pre- schools in Mwingi central sub-county?
- ii. Does the effect of the quality of food affect pupils' enrolment in public pre- schools in Mwingi central area?
- iii. What is the relationship between meals frequency and pupils' absenteeism in pre- schools of Mwingi central sub-county?
- iv. What is the relationship between pupil's perception of school feeding programme and their attendance in Mwingi?

1.6 Significance of the Study

It is hoped that the findings may help teachers, parents and community stakeholders to develop positive attitude towards the support of feeding programm and embrace its benefits to children's participation in pre- schools. The school administrators are hopped to acquire enough information and find ways of accessing food from small-scale farmers. The policy makers in county government might get information which will help to finance school feeding programs more. The Kenyan Ministry of Education may also utilize the research finding in improving learning ways and pre-schools management, as government will be able to go through it and look for supportive measures to ensure there is effective provision of school feeding programmes in pre-schools within the

country. The researchers are hoped to use the findings of this study to identify the knowledge gaps for further studies.

1.7 Assumptions of the Study

This study assumed that, all parents have taken their children to school and that learners are developing well and being retained in schools due to feeding programm. The study is also assumed that the community members have been sensitized on the importance of the school feeding program. The findings may also make additional contribution to generating knowledge to existing literature and give information to interested scholars to carry out more research on the topic.

1.8 Limitations of the Study

This study was limited by its descriptive research design in which the participants ‘attitude was not controlled by the researcher in responding to the research instruments. The data was collected in September 2017, in the third term.

1.9 Delimitation of the Study

Delimitations are boundaries of the survey (Mugenda & Mugenda, 2003). The study delimited itself to public pre- schools hence leaving out private schools. It was also restricted itself to Mwingi central sub-county. The information from participants, questionnaires and interview schedules were used to make generalization opinion.

1.10 Definition of Significant Terms

Absenteeism: The number of school sessions missed by a child.

Children: Learners aged between three to five years.

Feeding Programme: An organized format to provide food in learning centers.

Home-Grown School Feeding: This is a school feeding programme that offers food produced and purchased within a country. WFP's HGSF particular focus is to produce and purchase food for the school feeding programme from local small-scale farmers. From WFP's perspective, an HGSF programme aims to both increase children's well-being and promote local agricultural production and development by providing an ongoing market for small scale farmers.

Participation: Involvement in school by enrolment, and attendance in a school.

Retention: Keeping pupils in school until they complete their primary education cycle

School Feeding Program: Refers to meals provided in schools to children.

1.11 Organization of the Study

The study is organized in five stages. Section one underlines the survey background ,statement of the problem, purpose and objectives of the survey, research questions, significance, assumptions, limitations and delimitations, key terms definition, and list of acronym. Part two focuses on literature review,

summary of the literature, conceptual frame work and theoretical frame work. Chapter three covered research methodology covering research design, target population, sample size and sampling procedures, research, instruments validity and reliability, data collection methods, data analysis and ethical analysis.

Stage four covered data analysis presentation and interpretation consisted of questionnaire return rate, demographic characteristics of respondents, presentation and analysis of the questions and regression analysis. Chapter five covered summary, conclusion and recommendations consisted of summary of the findings, research findings, conclusion, recommendations and suggestions for further studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the related literature concerning enrolment of pre-school children based on the objectives, theoretical review, summary of literature reviews and the conceptual frame work. This chapter presented the effect of the SFP on enrolment, nutritional value, and academic performance.

2.2 School Participation

Food is any solid or liquid substance that when consumed by people or animals provide energy growth and sustains life according to Catherine Nyika and Irine Tambo (2012). Vermeersh and Kremer (2004) identified two major links that improved children participation to school activities by improving their health when there is provision of school meals namely improves children's health status by enabling them gain sufficient nutrients and secondly leads to better educational achievements.

Different states with the support of World feeding program introduced regular school feeding program in slum schools of major cities and in arid areas and semi-arid areas (ASALS. Through this program, pre-school and primary school pupils are provided with mid-day meals. Pollit (1995) in one of the American journal about a big question while read "does breakfast make a difference in school?"

Revealed that failure to take breakfast have revealed to seriously impact cognitive tasks performance especially for nutritionally at-risk kids. In Niger where children enrolment to school was among the lowest globally was improved by World Food Programme. The funded programme provided in particular areas, what is equal three meals a day food intake recommended and also providing learners with meals to take home which aimed to attract pastoralist's learners to attend schools. According to statistics, the closure of school canteens immediately resulted to high rate of school absenteeism and school drop-out by children. WFP, (1996) affirms that, in some nomadic areas schools cannot open until food stocks arrive.

2.3 Quality of Food and School Attendance

Pre- school years are perhaps the most important in the life of children as food practices and choices made during these years affect the nutrition status of the concerned individuals later in life. Lack of enough good quality food leads to malnutrition which is described as a state in which the physical function of an individual is impaired to the point where he/she can no longer maintain adequate bodily performance processes such as growth, pregnancy, lactation, physical work, and resisting and recovering from disease (The Sphere Project, 2004). The consequences of malnutrition are immediate and far-reaching. Immediate causes are evidenced by presence of disease while the far reaching consequence include reduced scholastic performance in children and hence, a lower productivity in adult life. Malnutrition has a devastating impact on children's education outcomes (Prado and Dewey, 2012).

It restricts their cognitive development, that means they are more likely to be sick and miss out on school, and reduces their ability to learn. In the longer term, malnutrition can have a negative impact on earnings when children reach adulthood. The effects of malnutrition on physical stature, the ability to do physical work, and on cognitive development, can lock children into poverty and entrench inequalities (Fund, 2013).

In the study conducted by Save the Children, it was revealed that children who are malnourished go on to earn 20% less as adults than the children who are well nourished (Grantham, 2007).

The direct impact of school feeding programs on nutrition has often been measured in terms of the diet of food consumed by the student over a 24-hour period. For this diet one needs to take into account the content and frequency of school meals.

2.4 Effect of SFP Amount of Food on Enrolment

A survey made on various countries revealed that the underlying challenges yet face the effort of providing the essential feeding programs expected to curb the above problems. Lack of regional equality in finances allocation for the SFP and increasing children's enrolment in schools without considering increasing of food supply, teachers and other non-teaching staffs as well as limited number of classrooms are other challenges.

In Kenya, the challenges range in almost the same tune having different areas with different experience. Also, constant seasonal migration by nomadic families which interrupts school attendance by the children's. Traditions and cultural practises especially early marriages among girls causing them to drop out of school as well as insufficient funding towards schools programs which are necessary for maintain ace of SFP. Feeding programs are entirely funded by donors, diverse feeding programs in different schools, slow implementation of various arrangements due to weak concerned institutions; seasonal long unpredicted droughts, flooding making food supply and local market access difficult, poor infrastructure facilities, community conflicts, and political instability.

The ASAL, homes have suffered through the crippling social effects of recently intensifying droughts and food shortages and therefore Espejo (2009), says that school feeding program is the “magnet effect” that had attracted huge number of kids to schools in order to improve the attendance rates and lower the initial dropouts compared to schools don't offer feeding programs. Great concern was shown on low enrollment through various development plans including the most recent (2002-2008) [Ministry of Education, 2010].

Langinger (2011), highlights that the primary aim of introducing school feeding program in Kenya was to act as an incentive for children's' enrollment and retention in schools within rural areas. According to Bittenheim et al (2011), the

prospective purpose of using school meals programs to target school going children is so as to maximize their educational accomplishment in order to potentially improve their future productivity and earning.

Between the years 2002 and 2007 in Kenya, the net pre- school enrolment increased from 77 percent to 92 percent while enrollment in the ASAL increased from 17 percent to 29 percent Finan (2010). An evidence that, ASAL continue to lag behind their counterparts in the urban areas; in terms of education expansion and accessibility. Children's learning and performance in school is strongly influenced by their health and nutrition status (Joy and Rosso, 1999).

Children lacking essential nutrients especially iodine, iron and insufficient proteins in their diets usually don't have equal learning capability compared to children's who are health and well nourished. Provision of school meals programme is an inducement for less privileged family to provide education to their children and also inspires vulnerable household to enroll their children to school and aids to maintain them at school (WFP, 2008).

2.5 The Effect of Frequency of Food by SFP on Absenteeism

According to Kasina (2016), feeding programs in schools can increase attendance rates especially for girls. Therefore, food for education programs ensures that children spend more time in schools and specifically to learning activities. One of the MDGs goals of 2015 was to provide universal pre- education. School feeding

program or take away home ratios serve as incentives for enrolling children in school and encouraging daily attendance.

As for Pollit (1984), in California on perspective of overcoming hunger, affirms that the learning processes of school children is mostly affected by hunger. This is because majority of kids attend schools having not taken breakfast and in some instances don't take lunch as well. This affects children adversely mostly in concentration, problem solving and cognition.

Attendance and school performance are greatly enhanced by school feeding program Pediatre (2001).The burden of food distribution in many schools make management to struggle to manage functional education systems. Lack of finance for provision of school feeding programme will also make the programme unsustainable in that parents who come from low social economic status are not able to support the programme as they are extremely poor. They may wish that the programme should continue but are unable to provide to the programme due to their status.

Parents who are non-cooperative may make feeding programme not sustainable in that they will be reluctant in contribution of finances needed for promotion of school feeding programme and their children will lack school feeding programme which may lead to malnutrition, in attendance, lack of concentration, poor enrolment and poor performance. This will make school manager/head teachers to strain a lot to cater for school feeding programme or rather do away with it as

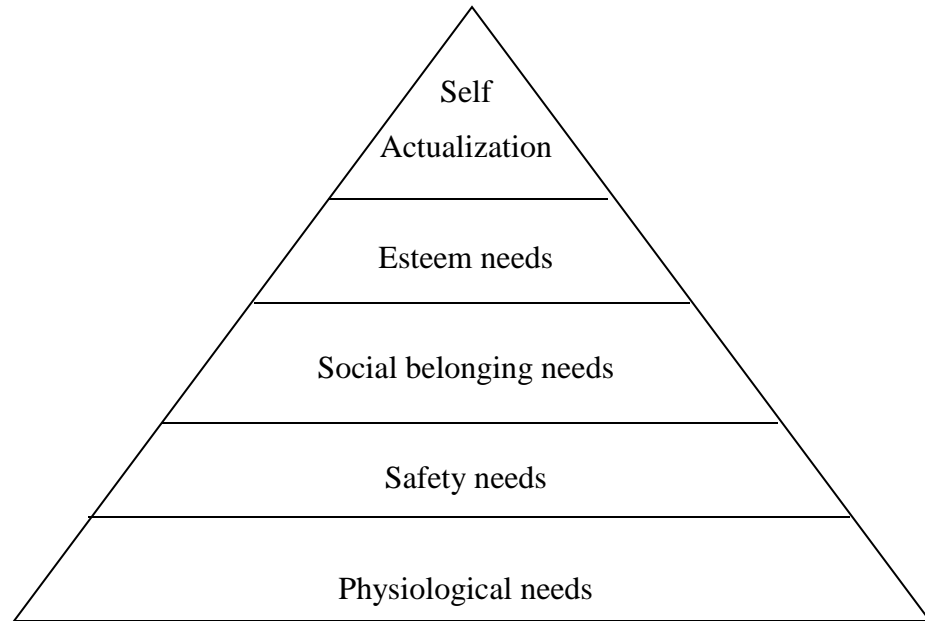
parents seem to be less concerned. Many times, when the programme is done away learners also miss to come to school.

According to Jackson Gitunji (2015), his study on effects of school feeding programme on pupils' enrolment in ECDE says that school feeding programme raise the school operations cost whereby the general society is required to supply fresh vegetables and fruits, firewood to be used for cooking and other important cooking stuffs (Budy et al 2009). Additional the society is also required to produce school cooks as well as store personnel's who are to be in charge of all essential food provisions. Given that, the school based feeding programs are specific to different communities, the overall programme require proper planning since the overall sustainability of these programs have proved to be a concern for many countries. In order to ensure that they run the feeding program for a significant amount of time, majority of countries depend upon financial and personal help since they usually have limited resources and infrastructures necessary to remain in operation.

For example, increases in enrollment may lead to overcrowding and lowering effectiveness of classroom time or stretch the limited amount of school resources such as books. Depending on how the SFP is set up, teaching time may be reduced if teachers are used in overseeing the meal time (Grantham-McGregor et. al., 1998).

2.6 Theoretical Frame Work

The study was steered by the human needs theory of Abraham Maslow (1943). According to this theory, there are certain minimum requirements that are essential to decent standards of living i.e food, shelter, health and clothing. Maslow's proposed that all motives can be arranged in a hierarchy from the lowest to the highest motives. The lower motives are relatively simple; they spring from our body states and must be satisfied. As the motives become higher and higher they spring from other things outside our body states. The satisfaction of higher motives depends on satisfactions of lower ones, for an individual to reach the motive of self-actualization he must have had all his lower motives satisfied. So this demonstrates that when needs are met or fulfilled pupils are generally happy and contented, it means that the atmosphere in school is good and learners will participate in all activity areas. The reverse is true in that if the needs are not met or fulfilled there is discontentment. The Maslow hierarchy of needs diagram was presented as shown below.



According to Maslow higher motive will only appear after lower once have been satisfied hence the motives are inter related. In the light of hierarchy, the food is at the base and the safety is demonstrated by the short-term alleviation of hunger, protection of diseases and good performance. The children may reach their sense of self actualisation when they are confident that they can do something constructive.

2.7 Conceptual Framework

The following diagram show conceptual framework.

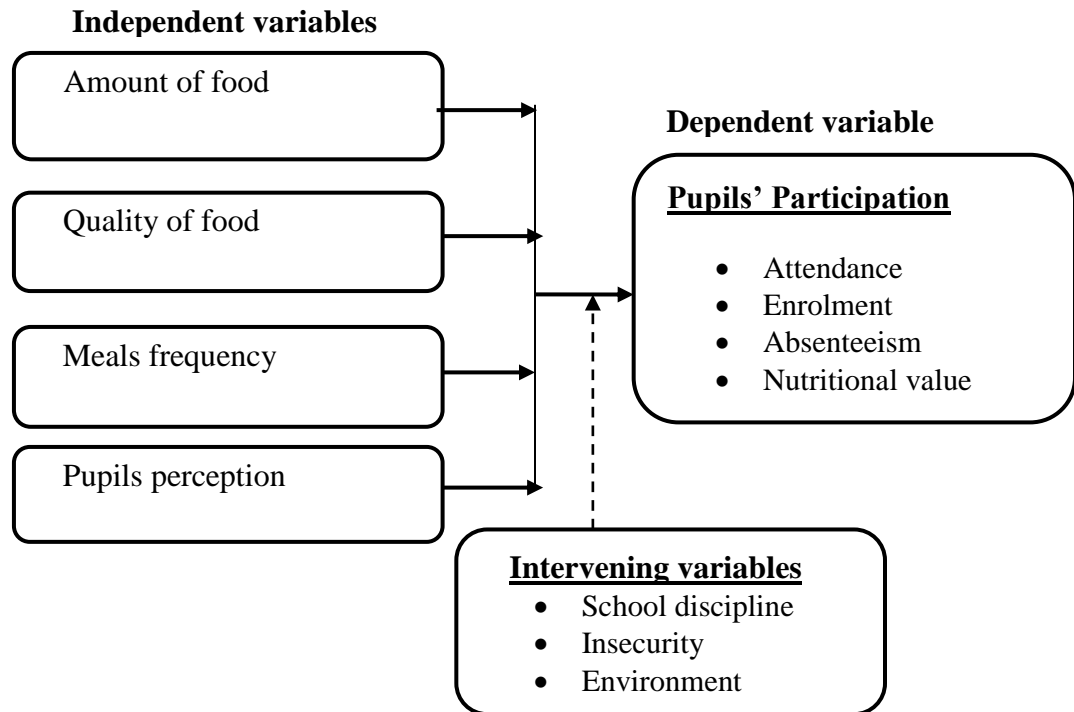


Figure 1.1: Relationship between independent and dependent variables

2.8 Summary of Literature Review

Duflo (2006), in the Kenyan based study, noted that the level of participation of pupils is higher in schools where free breakfast was given. The Sphere Project, (2004) revealed that lack of enough food leads to malnutrition of which consequences are immediate and far reaching.

According to Bowlby (1988), food quantity and quality should be looked into. Children should be given right nutrients to enhance their growth, development and survival in the community. Kenya is a third world country in East Africa region with an estimated population of over 40 million people (CIA World Fact Book, 2010) with at least half the population living below the national poverty level of which about 7.5 million peoples live in extreme poverty. The staple Kenyan food is maize. However, ugali, which is the most common food among Kenyans, is eaten with cooked vegetables, meat, or fermented milk. Other common food stuffs among Kenyan people include rice in urban areas, sweet potatoes, arrowroots, bananas and cassava. The fighting hunger in Kenya with school meals campaign in assisted schools in some parts of the country generally increased attendance rates of children in school (Lambers, 2009).

Feeding programs are entirely funded by donors, diverse feeding programs in different schools, slow implementation of various arrangements due to weak concerned institutions; seasonal long unpredicted droughts, flooding making food supply and local market access difficult, poor infrastructure facilities, community conflicts, and political instability. The study gap is that none of these studies focused the effects of programs concerning feeding of pre-school children in schools in which this study seeks to fulfill.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, the researcher presents the methodology in the following subsections: Research design, target population, sample size and sampling techniques, description of research instruments, piloting, instrument validity, reliability of the instruments, data collection procedures, data analysis techniques and ethical considerations.

3.2 Research Design

This study used descriptive survey design because it is suitable for this study since the researcher focused on gathering and justifying the current information and conditions. According to Cresswell (2003) survey design is economical and has a rapid turn round in data collection, the design can facilitate gathering of information from a large area within a short period of time at a low cost. Survey design is appropriate in collecting data qualitatively. The research was aimed at finding out the effects as viewed by different people. The design was also good to use search that to elicit a wide range of baseline information in Mwingi central.

3.3 Target Population

The study targeted 14 Principals and pre-school class teachers in all the 14 public pre- schools in Mwingi central sub-county as well as one sub-county director of education.

3.4 Sample Size and Sampling

According to Orodho and Kombo (2002), sampling is the process of selecting a number of individuals or objects from a population such that the selected group contains elements representative of the characteristics found in the entire group. The researcher used simple random sampling method of 30% of the population selected. This was sufficient according to Mugenda and Mugenda (2003). The sample sizes were therefore being 14 head teachers, 14 pre-school class teachers.

3.5 Research Instruments

In this study, the researchers used the questionnaires as the main data collection tool because they can be used to develop to address a specific objective and also are easily administered within a short time. There were two questionnaires: One for the head teachers and the other for the pre-school class teachers.

3.6 Piloting

In this study, the research instruments were piloted in two public pre- schools with similar characteristics. The pilot study involved two head teachers and two class teachers. The two schools were selected randomly and were not be part of the main study. The pilot study was assisted by the researcher to identifying

inappropriate and ambiguous items in the instruments in order to make amendments and improve its quality and validity (Mugenda & Mugenda, 2003).

3.6.1 Instrument Validity

Validity is the degree to which a research instrument actually measures what it's supposed to measure. In addition, it focuses on the appropriateness, meaningfulness and usefulness of the influence researchers make based on data they collect. (Orodho, 2004). The researcher sought assistance from research experts who included the experienced supervisors in the department of Educational Management, University of Nairobi in order to ascertain whether the content is appropriate and relevant in this study.

3.6.2 Reliability of the Instruments

Reliability is a measure of degree to which a research instrument yields consistent results after repeated trials. The researcher employed the Split-half technique to test for the reliability of the questionnaire whereby the pilot instruments will be divided into two equivalent halves. One half was of even numbered items and the other of odd numbered items. Using Pearson Product Moment Correlation Coefficient, the coefficient of relationship for the two halves was computed using the two sets of values. The researcher preferred this technique because it required only one session. A correlation of 0.81 was obtained which was sufficient (Orodho, 2009).

3.7 Data Collection Procedures

Upon attainment of permission from NACOSTI, the researcher presented the authorization letter to the sub-County deo in Mwingi central and the DEO. The researcher then made appointment with the head teachers of the sampled schools. The researcher gave the introduction letter to the head teachers and explains the purpose of the study. After establishing a rapport, the researcher administered the research instruments personally. She gave adequate time to participants to fill the questionnaires and then collect them. While in the schools the researcher checked the school records to gather information from the school registers on enrollment and absenteeism.

3.8 Data Analysis

The collected data was coded keyed into Statistical Package for Social Sciences (SPSS) computer programme for analysis. Quantitative data to be derived from the demographic section and the closed items in the research instruments was analyzed using descriptive statistics. The Qualitative generated from the open ended items in the research instruments was organized into themes and patterns based on the study objectives and questions. The data was also analyzed using inferential statistics like correlation and Chi-square analysis. The researcher then discussed the findings, made conclusions and recommendations for the study and suggestions for further research.

3.9 Ethical Considerations

The researcher in this study obtained a permit from the Kitui County Director of Education in order to be allowed to collect data. She got informed consent from all the participants through a dialogue during which each participant will be informed of the purpose of the study and was assured of the anonymity and confidentiality of his/her responses. After obtaining the participants' consent, the researcher will clarify that participation were entirely voluntary. She will instruct the research assistants to treat all the participants with respect and courtesy.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter consists of data presentation, interpretation and discussion of research findings. The -purpose of this study is to investigate the effects of school feeding programme on pupils' participation in public pre- schools in Mwingi central sub-county, Kitui County, Kenya. The objectives of the study were; to determine the connection between the amount of food served on pupils' and presence in public pre- schools, to establish the effect of quality of food pupils' enrolment in public pre- school, to establish the relationship between meals frequency and pupils' absenteeism in public pre- schools, and to determine the relationship between pupil's perception of school feeding programme and their attendance in public pre- schools in Mwingi central sub-county.

4.2 Questionnaires Return Rate

The study sampled 14 principals and class teachers who were served with questionnaires as profiled below table. The questionnaires for this study were administered on principals and Pre-school class teachers and pupils.

Table 1: Questionnaires Return Rate

Respondents	Returned	Not Returned	Total
Head teachers	14(100%)	0(0.0%)	14 (100%)
Pre-schoolteachers	14(100%)	0(0.0%)	14(100%)

From Table 1 above, all 14 principals and pre-school teachers gave a 100% response rate of the total sampled. A response rate above 70% is excellent according to Mugenda (2003).

4.3 General Information

The participants were asked in the survey to specify the general information about their schools. This information included; school enrolment, feeding programme duration, food source and challenges encountered in management of feeding programme.

4.3.1 Pre-School Class Enrolment

The information on pre-school class enrolment was given by class teachers were shown in Table 2.

Table 2: Class Enrolment

Enrolment	Frequency	Percentage
20-30	2	14.3
31-40	7	50.0
41-50	2	14.3
Over 50	3	21.4
Total	14	100.0

Table 2 demonstrates that as many as 50% of the principals had an enrolment of 31- 40. This enrolment was in recommendation with the Ministry of Education that a pre-school class should have 35-40 pupils (MoE, 2017).

4.3.2 Time Feeding Programme Began

The respondents were requested to indicate the time the feeding programme began in their schools. Since the schools are the same, only responses from the head teachers were presented in Table 3.

Table 3: Time Feeding Programme Began

Time	Frequency	Percent
Less than 2 years	3	21.4
2 – 4 years	8	57.2
5- 7 years	3	21.4
More than 7 years	0	0.0
Total	14	100

Table 3 shows that, majority (57.2%) of head teachers reported that they had been having feeding programme for 2-4 years. It was also observed that, no school had been having school feeding programme for more than 7 years. This shows that all schools investigated had been having feeding programs and therefore were in a better position to give information about its impact on enrolment.

4.3.3 Food Source

The researcher further sought to establish the source of food for the pre-school children.

Table 4: Source of Food

	Frequency	Percent
None	2	21.4
Government	4	28.6
Parents	8	50.0
Total	14	100

Table 4 illustrates that most (50%) of Pre-school pupils were getting their food from parent's contribution. It was also observed that the government was also supporting school feeding programs with 28.6% and none 21.4% responses respectively.

4.3.4 Challenges Encountered by Schools in Managing Food Programmes

The respondents were requested to indicate the challenges they encountered in the provision of school feeding programmes. Since the question was an open ended the responses were presented in a narrative way. It was reported that most schools were experiencing problems with the supply of food staffs. There was reported inconsistency in the supply as results of uncooperative parents. In the case where food was supplied by the government, there was reported cases of delayed supplies. The amount supplied in some cases was not adequate forcing some

schools to give very little food per day. The management of the supplied food was also a challenge as some of the committee members were not cooperative making it difficult for the food to be provided with ease.

4.4 Amount of Food Served and Pupils' and presence

The respondents were first required to indicate the amount of food served per day. Since the question was the same for both head teachers and pre-school teachers, the responses were combined and presented in Table 5.

Table 5: Amount of Food Served per Meal

Amount	Frequency	Percent
One mug	13	92.9
One and half mug	1	7.1
Total	14	100

Table 5 shows that majority (92.9%) of the schools were giving their pupils one mug per meal while only 7.1% were giving one and half mug. It was however noted that none of the schools were giving two or more mugs of 300mls per meal. This was likely to be enough bearing in mind that the pre-school children are small and may need little food to be full. Otherwise for the other pupils, the food might not be enough. This was likely to encourage the pre-school pupils to attend school. This agrees with Espejo (2009) who calls school feeding program the magnetic effect that had attracted huge numbers of children to school to improving the attendance rates and lowering the initial dropout compared to

schools that do not offer feeding programs. With the improved school enrolment, the relationship between education and development and the power of education as a panacea for individual and societal problems, it was soon perceived that the low education participation rate needed immediate attention (Wahome, 2005).

An evidence that, ASAL continue to lag behind their counterparts in the urban areas; in terms of education expansion and accessibility. ANOVA was used to determine whether there is a significant difference between amount of food and attendance. The results are presented in Table 6.

Table 6: ANOVA on the Relation between Amount of Food and Attendance

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	63.227	2	11.221	0.708	.108
Within Groups	11.114	12	.153		
Total	74.338	14			

The relation between amount of food and attendance was not significant. (F=.708, d.f=2, P=.108)

- i) Enrolment depends on the type of sponsor

Similarly, the guess that enrolment in a school may depend on the type of feeding programs sponsor was also found to be not significant. (d.f=2=2.740.df=2.sig.108)

Table 7: ANOVA on the Relation between Enrolment and Type of Sponsor

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	60.111	2	10.321	2.74	.108
Within Groups	10.122	12	.254		
Total	70.233	14			

ii) Attendance depends on food type

iii) ANOVA was used to test the hypothesis on significance of food types offered in the feeding programs.

Table 8: ANOVA on the Relation between Amount of Food and Attendance

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	62.147	2	9.32	0.708	.514
Within Groups	10.114	12	.214		
Total	72.251	14			

The relation between amount of food and attendance was not significant. (F=.708, sig .514) significant.

4.5 Food Quality and Enrolment of Pre-School Children

To achieve on the second objective of quality food and enrollment, the results were presented in Table 7.

Table 9: The Food Type Provided by Schools

Responses	Frequency	Percent
Githeri/Muthokoi	9	64.3
Rice and beans	3	21.4
Porridge	2	14.3
Total	14	100%

From Table 9, most schools (64.3%) were feeding their children with Githeri/Muthokoi. This was followed by 21.4% who are feeding their pupils with Rice and beans. It was also established that, 14.4% of schools were giving their pre-school children porridge only. This shows that all schools were not giving children the same type of food. The results are presented in Table 10.

Table 10: ANOVA on the Relation between Quality of Food and Attendance

	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	63.227	2	11.221	0.708	.514
Within Groups	11.114	12	.153		
Total	74.338	14			

The relation between food quality and attendance was not significant ($F=0.708$, $df=2$, $P=.514$)

4.6 Meals Frequency and Pupils' Absenteeism of Pre-School Pupils

Table 11: Meals Frequency

Responses	Frequency	Percent
Five times per week	14	100
Total	14	100

Table 11 shows that majority (100%) of the respondents indicated that they offered food for pre-school children five days per week. This implies the food was offered during the week days since most of the children do not go to school over the weekend. The researcher further sought to establish the times the meals were offered per week. From the class attendance register, it was observed that there was an increase in school attendance by pupils during those days when food was provided, meaning the frequency of meals significantly influenced school attendance.

Table 12: Meals Frequency

Responses	Frequency	Percent
Lunch only	12	85.7
Ten o' clock and Lunch	2	14.3
Total	14	100

Table 12: Established that most (85.7%) of the schools provided lunch only for their children. However, other two 14.3% provided ten o'clock meal as well as lunch. From the class attendance register and the observation schedule, it was revealed that the schools which provided meals had improved attendance. This was a proof that, the frequency of food significantly influenced enrollment of pre-school children.

The study also used Chi-square to ascertain the association between frequency of school meals and enrolment of pre-school children.

Table 13: Chi-square Results on Association between Meals Frequency and Enrolment of Pre-School Children

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	123.062 ^a	13	.000
Likelihood Ratio	88.127	13	.001
Linear-by-Linear Association	45.1049	1	.000
No. of Valid Cases	14		

a. 20 cells (80.0%) have expected count less than 14. The minimum expected count is .03.

From the Chi-square Table, the p-value 0.000, 0.001 and 0.000, which is $P < 0.05$. This is an indication that there is a significant association between frequency of meals and enrolment of pre-school children. This shows that majority of parents

would be willing to take their children to schools which provide more meals. These results agree with Pediatre (2001).

4.7 Pupils Perception of School Feeding Programme and their Attendance

The last objective for this study was to determine the relationship between pupil's perception of school feeding programme and their attendance in public pre-schools in Mwingi central zone. The responses were presented in Table 14 below to show how satisfaction about quality and amount of food as well as the extent to which school feeding programme motivate them to come to school.

Table 14: Pupils Perception Feeding Programme and Attendance of Pre-School Children

	Frequency	Percent
Satisfied	3	21.4
Moderately satisfied	10	71.4
Not satisfied	1	7.2
Total	14	100

Table 14 shows that majority (71.4%) of respondents indicated that they were moderately satisfied by the school feeding programme while 21.4% were satisfied and only (1%) was not satisfied.

Table 15: Influence of Feeding Programme on Pupil's Motivation

	Frequency	Percent
Very great extent	3	21.4
Great extent	8	57.1
Some extent	2	14.3
No extent	1	7.2
Total	14	100

Table 15 shows that majority (57.1%) of respondents indicated that great extent school feeding programme motivates pre-school children while 21.4% indicated very great extent 14.3% some extent and (1%) no extent. This was because children prefer going to schools with a feeding programme.

CHAPTER FIVE

SUMMARY, DISCUSSION AND CONCLUSIONS

5.1 Introduction

This chapter presents a summary of major findings, and conclusions, recommendations as well as implications of the study and areas for further research.

5.2 Summary of the Findings

The aim of this study is to investigate the effects of school feeding program on learners' participation in public pre- schools in Mwingi central sub-county, Kitui County, Kenya. The objectives of the study were; to determine the relationship between the amount of food served on pupils' and attendance in public pre-schools, to establish the effect of quality of food pupils' enrolment in public pre-school, to establish the relationship between meals frequency and pupils' absenteeism in public pre- schools, to determine the influence of feeding programme on pupils enrolment in public pre- schools and to determine the relationship between pupils perception of school feeding programme and their attendance in public pre- schools in Mwingi central sub-county.

The study established that, majority (82.1%) of the schools were giving their pupils one mug per meal while only 17.9% were giving one and half mug. The study also established that, that majority (42.9%) of the respondents strongly agreed with the statement that the amount of food served in school's influences

pupils school attendance. There was a strong positive correlation ($r = 0.821$, $P < 0.05$) between amount of food and the school attendance of pre-school children.

The study established that majority of the schools (64.3%) were feeding their children with Githeri/Muthokoi. Also majority (50%) of the respondents indicated that food type influences enrollment of pre-school children to a great extent. Majority (71.4%) of the respondents strongly agreed with the statement that, quality food at school reduces malnutrition among pre-school pupils. It was also ascertained that there was a strong positive correlation ($r=0.652$, $P < 0.05$) between food quality in school and enrolment of pre-school children.

As many as (92.9%) of the participants indicated that they offered food for pre-school children five times per week and that most (42.9%) of the schools provided lunch only for their children. Majority (57.1%) of the respondents strongly agreed with the statement that, school which provide two meals per day have little absenteeism for their children to pre- school. There was also a significant ($p < 0.05$) association between frequency of meals and enrolment of pre-school children.

Majority (70%) of respondents indicated that to a Great extent school feeding programme influences enrolment of pre-school children. Also majority (57.1%) of the respondents strongly agreed School feeding programme improve children's enrolment. It was also found out that, there is a strong positive correlation

($r=0.755$, $P < 0.05$) between school feeding programme and enrolment of Pre-school children.

The study established that majority (60.7%) of pupils indicated that they were moderately satisfied by the school feeding programme and majority (53.6%) of respondents indicated that Great extent school feeding programme influences enrolment of pre-school children.

5.3 Conclusions from the Study

Based on the findings of this study the researcher made the following conclusions;

The amount of food offered in primary schools significantly influenced the enrollment of pre-school children. The schools which give more food had more children than those with little or no food.

It can also be concluded that, the quality of food provided in school's influences enrollment of pre-school children. The schools with good quality of food attracted pre-school children more than those without.

The study also concluded that the food frequency influences enrollment of pre-school children to a great extent. The schools which provide meals for more days in a week ended up having more pupils. The study finally concluded that the children were not most very satisfied with the meals in their schools.

5.4 Recommendations from the Study

- i. The government should increase the provision of food to schools. This would improve the enrolment of pre-schools.
- ii. The primary school administration should encourage parents to continue supporting school feeding programme. This is by providing enough food.
- iii. The schools should increase the amount of food provided to children as well as the quality of food provided.

5.5 Suggestions for Further Research

The following can be surveyed in future:

- i. The influence of the parents' social economic status on enrolment of pre-school children.
- ii. Home based factors influences enrolment of pre-school children.
- iii. The impact of school administration in the provision of food for early childhood education.

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APPENDICES

Appendix I: Transmittal Letter

University of Nairobi

Faculty of education

Department of Educational Communication and Technology

P.O. Box 30197, Nairobi.

Date.....

Dear Sir/Madam,

RE: REQUEST TO FILL QUESTIONNAIRES

I am a post graduate student pursuing a Degree in Master of Education in Early Childhood Education of the University of Nairobi. As part of the requirements for this degree am supposed to write a project under the tittle; the effects of school feeding programme on pupils' participation in public pre- schools in Mwingi central sub-county, Kitui County, Kenya.

I do kindly request you to assist in filling my questionnaires.

Yours faithfully,

SUSAN MBESA KITIVUI

Appendix II: Head Teachers' Questionnaire

You are kindly requested to participate by honestly filling in the blank spaces or ticking (✓) the appropriate response.

SECTION A: General Information

1. What is your school enrolment? _____
2. How long has the feeding programme been in existence in your school in years?
3. Less than 2 years [] 2-4 years [] 5-7 years [] more than 7years []
4. 3. What is your source of food? Donations [] Government [] Parents []
5. What challenges do you encounter as a teacher in managing school feeding programme?
.....
.....
.....

PART B: Amount of food and pupils school attendance

6. How much food do you serve per meal?
One mug [] One and half mugs [] Two mugs []
More than two mugs []

SECTION C: Food quality and enrolment

7. What type of food does your school provide?
 - a. Githeri/ Muthokoi []

- b. Ugali and Cabbages/sukuma []
- c. Rice and beans []
- d. Boiled Maize []
- e. Any other (specify).....

SECTION D: Meals Frequency and Pupils’ Absenteeism

8. How many days in a week does your school programm provide food to pre-school pupils?
- a) Once per week []
 - b) Twice per week []
 - c) Thrice per week []
 - d) Four weeks per week []
 - e) Five days per week []
9. How many meals does your school provide to pre-school pupils in a day?
- a) Breakfast only []
 - b) Ten o’ clock only []
 - c) Lunch only
 - d) Ten o’ clock and Lunch []
 - e) Others (specify).....

Thank you for your participation

Appendix III: Pre-School Teachers' Questionnaire

You are kindly requested to participate by honestly filling in the blank spaces or ticking (√) the appropriate response.

SECTION A: Demographic Information

1. What was your class enrolment at the beginning of this year?
2. 2. When did school feeding programme begin? January this year []
Two years ago [] three years ago [] 51-60 [] more than 60 []
3. 3. Who provides the food you serve your children? Parents []
Government [] Sponsors []
4. What are the challenges facing school programme?

.....
.....
.....

PART B: Amount of Food and Pupils School Attendance

5. How much food do you serve per meal?
One mug [] One and half mugs [] Two mugs []
More than two mugs []

SECTION C: Food Quality and Enrolment

6. What type of food does your school provide?
 - a) Githeri/ Muthokoi []
 - b) Ugali and Cabbages/sukuma []
 - c) Rice and beans []

- d) Boiled Maize []
- e) Any other (specify).....

7. To what extent does food quality influence enrolment?

- a) Very great extent []
- b) Great extent []
- c) Moderate extent []
- d) No extent []

8. Please tick to indicate the extent to which you agree with the following statements in a 5-Likert scale where: **SA= Strongly Agree, A= Agree, N=Neutral, D= Disagree, SD= Strongly Disagree.**

	Statement	SA	A	N	D	SD
i.	Food quality provided by schools determine the pre-school enrolment.					
ii.	Poor diet at school leads to diseases of pre-school children.					
iii.	Lack of quality food contribute to pupils inability to go to school					
iv.	Quality food at school reduces malnutrition among pre-school pupils					

SECTION D: Meals Frequency and Pupils' Absenteeism

9. How many days in a week does your school provide food to pre-school pupils?

- a) Once per week []
- b) Twice per week []
- c) Thrice per week []
- d) Four weeks per week []
- e) Five days per week []

10. How many meals does your school provide to pre-school pupils?

- a) Breakfast only []
- b) Ten o' clock only []
- c) Lunch only
- d) Ten o'clock and Lunch []
- e) Others (specify).....

Appendix IV: Children Questionnaire

Children Perception about School Feeding Programme

1. What is your level of satisfaction about quality of food served in school?

(a) Very satisfied []

(b) Satisfied []

(c) Moderately satisfied []

(d) Not satisfied []

2. Explain the reason for your answer

above.....

.....

3. What is your level of satisfaction about amount of food served in school?

(a) Very satisfied []

(b) Satisfied []

(c) Moderately satisfied []

(d) Not satisfied []

4. Explain the reason for your answer

above.....

5. To what extent does school feeding programme motivate you to come to school daily?

a) Very great extent []

b) Great extent []

c) Some extent []

d) No extent []