

**INFLUENCE OF SCHOOL FEEDING PROGRAM ON ACADEMIC
PERFORMANCE OF PRE-SCHOOL CHILDREN IN KAYOLE ZONE, NAIROBI
COUNTY**

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DECLARATION

This research proposal is my original work and has not been presented for any degree or any other award in any other University.

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This research proposal has been submitted for examination by my approval as the University Supervisor.

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ABSTRACT

A school feeding program is essential to provide a balanced diet to ECD children which would in turn enable the children to increase their attention span hence better academic achievement in this study. It was hypothesized that school feeding program has an impact on the success academic achievement at ECDE level. The school feeding program is a crucial component in the development of a holistic child. Nutrition and health are powerful influences on a child's learning and how well a child performs in school. The effect of under nutrition on young children aged (0-8) can be devastating and enduring. In the areas of cognitive development, when there isn't enough food, the body has to make decision about how to invent the limited food stuffs available. Survival comes first, growth comes second. Good nutrition involves consumption of a variety of foods in appropriate amounts, since no single kind of food can provide all the necessary nutrients. Undernourished children have short attention span which is linked to low glucose levels

ABBREVIATIONS AND ACRONYMS

ASAL	Arid and Semi-arid Lands
CBS	Central Bureau of statistics
CRC	Convention on the Rights of children
ECE	Early Childhood Education
ECDE	Early Childhood Development and Education
K.I.E	Kenya Institute of Education
MoE	Ministry of Education
NGO	Non-Governmental Organization
UNESCO	United Nations Education, Scientific and Cultural program
USAID	United States Aids
WHO	World Health Organization
ECCD	Early Children Care and Development
FAO	Food and Agricultural Organization

CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Various child psychologists have said that growth and development of a child depends among other things the nutrition of mother before and after birth. The provision of adequate nutrition aims at promotion of good health recognized as constituting the found action of proper growth of children. Various researchers assert that, a child's fastest growth in physical, mental and socio emotional characteristics take place during this age and children are found to be most vulnerable to environmental influence. More traumatizing is that growth deficiencies that occur during preschool years are difficult and sometimes impossible to reverse .Following this argument then , attention to raise preschool enrolment and quality due to its importance should provide numerous opportunities focusing in raising the nutrition and health of 0 to 6 years age group .It's clear that improved nutrition and health are seen as necessary conditions for increasing enrolment , retention and learning achievements in preschoolers (MOEST 1998).

In developing World Africa for instance, malnutrition results from deficiencies and most always poverty. The evidence is unequal in demonstrating that short stature school children a product largely resulting from growth retardation in early childhood combined with environmental factors related to poverty is an indicator of risk of poor school performance. In Kenya, the issue of nutrition and health of children has been of great concern. At a UNESCO (1990) meeting in Kenya reported that the government has had many years of experience in running programs that address the educational, health needs of the school age children

including policies, extended access to different levels of schooling, school feeding programs by the communities and government in arid and semi-arid areas.

Effects of nutrition and health during early years of life are potentially capable of having long term consequences that can affect a child's history of formal education. Children's readiness for school is determined in part by a child's physical development aptitudes and motivation to learn. A number of prevalent nutrition and health conditions are shown to affect school participation and educational outcomes. Infant mortality rate in Kenya in 1996 was 76% where children died directly because of malnutrition. The survey found out that up to six months of age, Kenyan children grow well. Thereafter, apparently growth starts to slow down. This points a glooming picture especially towards the future of ECD, as it is true that this is a slow growth and is prevalent within the preschool system hence has serious developmental implications.

Children are the future of any society. For this reason, children should be a starting point in any society that emphasizes human development. It is the children whose individual growth, development and society contribution will shape the future of the world. The education of children in Kenya has become the primary importance to educators, parents and society in general resulting in the involvement of numerous related philosophies. Many institutions and government bodies have often ignored the importance of child health and nutrition and can be rampaged for improved children's performance. This study therefore expects to fill the gap.

1.2 Statement of the problem

Nutrition has been seen as crucial in the child's physical, emotional and cognitive development. Food has been acknowledged as life and a power in activating people's life as well as supporting various aspects of child development and that is depended upon correct amount and quality (Omago1990). This fact has not been fully embraced within preschools in Dandora Zone. Most of these schools receive children from disadvantaged households within. These children have no guarantee of daily meals due to their poor socio economic background. Balanced diet is necessary because it builds, protects and repairs the body. Human beings require sufficient food for sustainability and functionality. The problem of malnutrition and its effects on brain development, physical and intellectual functioning has tremendous implications. As a result, many children end up experiencing stunted growth and development.

1.3 Purpose of the Study

The purpose of this study was to investigate the effects of school feeding programs on performance of children in preschool in Kayole Zone.

1.4 Research Objectives

The study was guided by the following objectives

- i. To establish the extent to which school feeding programme affects performance of children in preschool.
- ii. To determine the influence of food served to children on academic performance.
- iii. To investigate the relationship between the quality of food and academic performance

1.5 Research Questions

The following research questions guided the study:

- i. To what extent does school feeding programme affects performance of children in preschool?
- ii. To what extent does the frequency of food served to the children influence their academic performance?
- iii. How does the quality of food served to the pre-school children influence their academic performance?

1.5 Significance of the study

The study sought to generate useful information that may be of great value to education policy makers, health officials, ECDE teachers and parents at all levels. It is expected to contribute towards enhancement of feeding programmes for children. The research may also assist the MoE and MoH in improving the feeding programmes in preschools.

1.6 Limitations of the study

The study anticipated some difficulties in that some small sample of ECDE centers in Kayole Zone plus the use of interviews and questionnaires instruments for the study led to the loss of crucial information, since large samples and other key instruments would have added some interesting input. The researcher dealt with respondents from different groups. Therefore the researcher involved interpreters in order to achieve the right information.

1.7 Delimitations of the study

The study was particularly confined to Kayole Zone. Respondents for the study included head teachers, teachers of preschool, children and parents of preschoolers. The study focused on effects of school feeding programmes on performance of preschool children in Kayole Zone.

1.8 Basic Assumptions of the study

The study had the following basic assumptions

That the respondents were provided truthful and honest response to the information in the questionnaire and interview schedules to help in establishing gaps between actual feeding programme , provision and expected levels of feeding programmes provisions

1.9 Definition of significant terms as used in the study

Nutrition: A process by which organs utilizes food

Preschool: Education set up serving 3 to 6 years old before joining primary school

Diet: Type of food or drinks taken regularly by individual or group

Child: A young person below the age of physical development to age 5

Health: State of complete physical, emotional and social wellbeing

Performance: Status of a pupil in respect to the attainment of knowledge and skills in comparison with others and usually evaluated through formal examination

School attendance: Attendance at any regular accredited educational institution for organized learning.

1.10 Organization of the study

This study is organized into three chapters. Chapter one is introduction which consist of the background of the study , statement of the problem , purpose of the study , objectives of the study , research questions , significance of the study , assumptions of the study , limitations of the study and delimitations of the study and definition of significant terms.

Chapter two is focusing on the literature review basing on the following sub headings; introduction, nutritional status of children, nutritional programmes for preschool children, child health and nutrition, effects of nutrition, effects of malnutrition on children's performance, food nutrients and their functions, what makes a healthy diet , theoretical framework and conceptual framework of the study. Chapter three consist of the research methodology, research design, target population, sample and sampling techniques, research instruments, research validity, instrument reliability, data collection procedures and data analysis techniques. Chapter four is about the research findings and discussions while chapter five is presenting conclusion and recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Literature review is about locating and evaluating what has been written relevant to the research title. Literature reviewing is an appropriate step in the research process which makes the research problem clear more so literature review helps a researcher to get acquainted with relevant theories to tie to the investigation.

According to Regenade (1993), feeding programs contribute to good children's performance. She stated that in most impoverished settings, short term effects are worthwhile (food as a human right). She also stated that there is impact of education and the link between hunger and learning. She also found out that children who are hungry or chronically malnourished are less able to learn regardless of the setting.

According to Lambers (2013), there has been urging to establish appropriate school feeding programs. Brown (2013) recently visited Haiti and saw what difference school feeding program makes to children.

2.1 Impact of school feeding programs on children attendance

According to Feingold (1970), there is evidence strongly suggesting that school feeding programs can increase attendance rates especially for girls. One of the millennium development goals MDGs is to provide universal primary education by 2015. School feeding

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

According to Jensen (2010), school feeding mostly takes place within the context of broad national school reform programs. These reforms should focus on other essential inputs to education and learning such as teacher development, curriculum reforms and student assessment. National ministries or organizations dealing with education should not be encouraged to take on school feeding at the expense of other educational inputs as it is difficult politically to refuse food aid. According to Pediatre (2001), attendance and school performance are greatly enhanced by school feeding program. Many schools are already struggling to manage barely functional education systems and to assume the additional burden of food distribution.

2.2 Impact of school feeding programs on children's learning

On food to have any impact on learning, additional monetary inputs are required. Food has to be accompanied by additional resources. According to the World Bank Global Food Crisis Response Program and subsequent pilot crisis response window provided rapid assistance by supporting existing school feeding programs and essentially linking access to both food and education for children.

According to Taylor (2010), complementary inputs are needed in order to overcome the reliance on outside food sources such as school feeding programs. She emphasized on complementary health and nutrition inputs to accompany the feeding program.

2.3 Impact of quality and quantity of feeding programmes on academic performance

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. He also argued that the frequency of the meals should be noted. Food should be served regularly and the schools set good designs and programs to affect this. He also said that there should be a design or department to deal with this issue within the school.

Providing proper nutrition and promoting stimulation of a child's sense are vital components of children in the sense that they enhance the development and organization of the brain. According to Ann (1986), confirms that human body functions best when supplemented by the right kinds of food in the correct proportion. Food is a basic need and a right for survival for all humanity especially for children whose rights are to enjoy the highest attainable standard of health, nutrition and education, C.R.C (1989).

Food is a basic biological need, Maslow (1970) has emphasized that human beings have a hierarchy of needs ranging from lower level needs of food survival and safety to higher needs. So this should be provided before we can ask the children to be motivated to learn.

Nutrients in food are like food that functions in a number of ways to keep the body healthy. The body should receive enough of each nutrient because foods also vary in their chemical composition (K.I.E 1998).

2.4 School feeding programs on nutrition and children's health

It is the children whose individual growth and development and society contribution will shape the future of the world. Research has shown that malnutrition in Kenya among the preschool children is on the increase. 3% of preschool children are severely malnourished. (CBS, 1979), 40% of children under age 5 suffer from protein energy, malnutrition. About half of the children suffer from nutritional anaemia (UNESCO 1990).

The UN declaration of the Rights of the child and philosophies of WHO, UNICEF , and UNESCO emphasized that it is the task of all those working with children whether they are parents or teachers or members of the community to provide health nutrition and education during the important and formative years of early childhood . The purposed objectives for health and nutrition services in preschools, ECE programmes should provide essential health, nutrition and educational services to preschool children for their optimal development. Health and nutrition are factors of utmost significance in the child's total growth and development and in provision of a totally adequate environment. Early investment in children's health and nutrition education will lay the foundation for future growth and development of the whole nation.

2.5 Nutritional programme for school children

Very many children in the third world are malnourished in the early years of their childhood. The adverse effects of malnutrition on the development of the brain have been known to the medical profession for a number of decades now. The capacity of child to adapt him/herself to changing environment and circumstances from home to school and the cognitive function

of the brain. For instance, two areas where malnutrition in a young child leaves its effects and makes him/her specifically ill equipped for progress in schooling. At Nutritional Planning Workshop on child Health, nutrition and school participation held in November 1990, through deliberation and exchanges between those in education and health, it was suggested that possible problems hindering children educational participation and suggested possible intervention measures such as in attendance, performance, repetition and drop outs may be influenced by common health and nutrition problems especially in the disadvantaged areas of the country.

Another effort representing a joint government and world food program undertaking provides a mid-day meal to preprimary and primary school children in semi-arid and arid areas of the country. The government of Kenya provides yearly grant to the National school feeding council to supplement contributions from other non-governmental organizations and individuals (MoE 1987).

Another school feeding programme ran by the National School Feeding Council of Kenya has revised its policy in recent years rather than provide meals to school children in needy areas, it encourages school feeding programs in areas in which parents can afford to maintain them. The main objective of these feeding activities was to provide food supplements to pre-primary and primary school children in order to help improve their health and nutritional states and provide them the energy to participate in school.

Feeding begins during programme when the expectant mother eats sufficient proteins, fresh fruits, carbohydrates and vegetables to supply enough nourishment for her and the developing fetus. There is evidence that early quality care improved brain size, complexity and show increase in dendrite, breathing, growth in support gland cells and capillaries (Michael and Moore 1995). Good nutrition which contains all the necessary food substances does not need to be expensive neither does it mean all the times and all meals are balanced but simply means over the course of several days the body needs to take enough substance to grow and stay healthy. Nourishing foods are often less expensive than high calories food.

Research on school age children investigating the relationship between health, nutrition and school performance indicated that children who are healthy and well-nourished had better peers academic performance than their peers who are sick and poorly nourished (Nkinyangi, 1991). There is an effect of feeding on development of the body and brain (KIE, 1990). No child can develop his or her brain to the maximum without feeding properly. Proper nutrition in the first years increases potentials for doing well in school and having a successful life. Notably, a child has contentious individualized process of change in complex levels of cognitive, emotional, social and body movement and speech if the diet of a child is of nutritious value (Magers, 1985).

Vanvynckt (2006) provided an overview of the current state of knowledge about nutrition and health conditions on learning and school participation. She indicated over the past few years there has been an accumulation of research findings from different countries documenting association between nutrition, health and children school participation. A

number of prevalent nutrition and health conditions are shown to affect school participation and educational outcomes e.g. recent studies from Kenya and a number of other countries report significant findings on the relationship between poor health, nutrition and school outcomes. Consequently, better nutritional history and present nutritional status are associated with higher cognitive test scores or better school performance. Nutritionally stunted children are found to enroll later and drop out earlier than their normal size peer.

Professor Michael Crawford (1990) has undertaken a good deal of research in the pre-conception nutrition and its effects on the future of the child in the institute of brain chemistry and human nutrition which says that poor nutrition during early phase of brain development affects the brain permanently.

2.6 Effects of malnutrition on children's academic performance

Malnutrition implies insufficient food intake by quality (protein and carbohydrates). This is according to Kokal (1991). Malnutrition occurs when food does not supply sufficient nutrients to cover body needs. Even though food alone will not provide care or prevention of malnutrition, it remains crucial. There are other environmental factors detrimental to good health. Stock and Snthe (1963) have showed that the critical period of brain growth unfortunately coincides i.e. the early childhood of 2 to 5 years. Thus their case study have shown that the average skill capacity of the malnourished child has been 14% less than that of the controls in the community and their IQ was minus 15 points.

Malnutrition and its associated complications accounts for approximately 30% of child mortality. Various researchers also confirm that malnutrition in early childhood is one of the major health problems in most developing countries (Barnett, 1993). Malnourished children are found to have higher rates of mortality and morbidity related to decreased cellular immunity (Murray, 1988) and increased incidence and duration of illness (WHO, 1988).

A child who is malnourished has little energy for play and exploring environment around and failure to interact effectively with human and physical environment minimizes the child's ability to acquire new knowledge concepts and skills that promote brain development. There is overwhelming evidence that at preschool age malnutrition impairs intellectual development (Brozek, 1978).

2.7 Food Nutrients and their Functions

Foods provide energy and nutrients required for growth, body maintenance, activity, reproduction and lactation. They also provide nourishment and protection from diseases. So far the maintenance of healthy growth and development of children's knowledge of food groups and their function is quite crucial (K.I.E, 1998). Carbohydrates are obtained from cereals e.g. maize, millet, wheat, rice and tubers e.g. arrowroots. Carbohydrates provide energy, heat and protect the body. The deficiency of carbohydrates makes the body weak. Proteins are body building food obtained from peas, beans, nuts, meat, fish, beef, insect and chicken. Proteins repair worn out tissue and body building. The lack of proteins leads to kwashiorkor, oedema and distended stomach. A healthy diet is what makes a healthy person. When one is healthy, we often think of mental alertness, energy, good sight and sparkling eyes on the side of an individual.

2.8 Theoretical framework

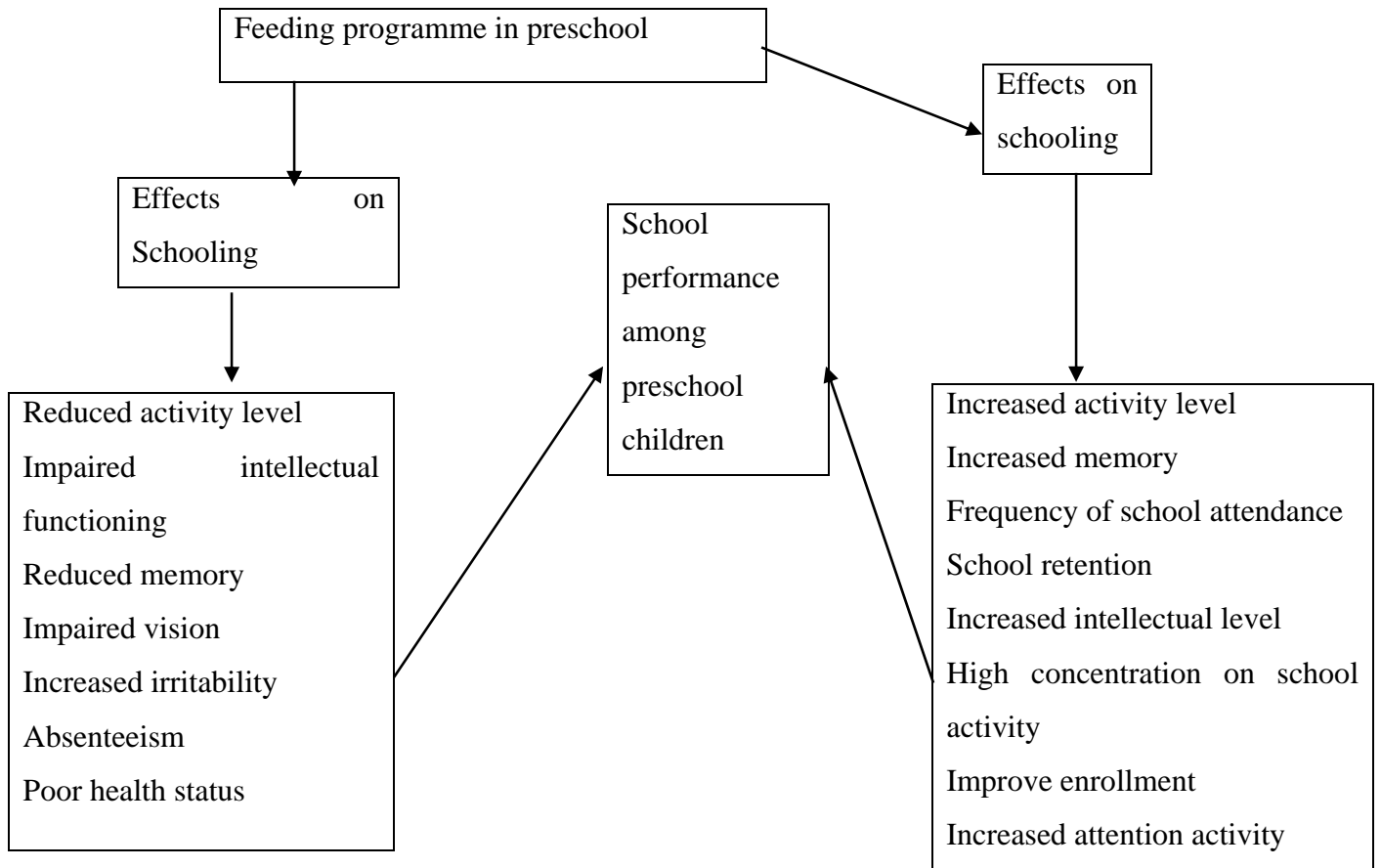
Theoretical framework is a collection of interrelated ideas based on the theories attempting to clarify why things are the way they are based upon theories introducing new views of the research problem allowing understanding realms of the problem helping to conceptualize topic. Its entirety and also to acknowledge problem from wider perspective for objectivities (Korobo and Tromp, 2006) Theoretical framework for this study is based on motivation theory by Abraham Maslow. Motivation has the following functions: motivates, energize and sustain behavior. It energizes the behavior of the organisms and arouse it for action .It also sustains behavior for longer periods in the activity.

In Maslow hierarchy of needs, the physiological needs must be met .That children need food in the right quality and quantity .Food is necessary because it builds, protects and repairs the body. The malnutrition and its effects on brain development has tremendous implications on child performance. Poorly fed children are more exposed to disease infections and emotional frustrations as compared to well fed children.

2.9 Conceptual Framework

According to Rachel and Ramey (1987) and by Korobo and Tromp (2006), the above conceptual framework is a set of broad ideas and principles taken from relevant field of inquiry and used to structure subsequent preventions. This Conceptual framework is based on the idea that school feeding program plays a crucial role on school outcomes

Fig 1: Effects of school feeding program on performance of preschool children.



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This section covers research methodology. It's organized under the following sub heading: research design, target population, sample and sampling, procedure of data collection, instruments, validity and reliability of research instruments and data analysis techniques.

3.2 Research Design

The study adopted qualitative approach research approach using a descriptive survey to investigate the effects of school feeding program of preschool children .Descriptive survey design suited this study because it the research allows the researcher gathered information, summarized, presented and interpreted for the purpose of clarification.

3.3 Target population

According to Borg and Gall (1989), target population or universe of study is described as all members of red or hypothetical set of people, events or objects from which a researcher wishes to generalize research study.

The study concentrated mainly on preschool within Kayole Zone .The study assessed how ECE centres responded issues of child care, survival and development as far as feeding programmes are concerned. To generate data, parents, teachers, children were used to

respond to issues. These institutions were being selected based on geographical positions within the Zone and on the provision of feeding programmes.

3.4 Sampling procedure and sample size

According to Koul (1984), sampling is a process by which relatively small number of individuals or objects are selected and analyzed in order to find out something from the entire population from which they are selected .A sample is a small proportion of population selected using some predetermined procedure.

Purposive sampling was used to identify private and public schools each on their own category. A combination of simple random and classified sampling will be used to select the number of parents, teachers and head teachers. Simple random sampling was applied to select children after obtaining a list from the headteachers.

3.5 The Research Instruments

These are tools used for data collection .Questionnaire were designed for the head teachers and children to form a major data collection tool as it allows the study to include a large sample for representativeness to inform the study on practice ,opinions and attitudes of the respective respondents with regard to school feeding programmes on aspects of performance of ECE children .Observation form were designed to collect data to document adequacy ,availability and resources and facilities for provision of adequate nutrition ,health status of children ,frequency of school attendance and children performance .

Interview schedule was designed for parents and children in the ECE centres to give insight information that may not have covered by questionnaires.

3.6 Validity and Reliability of Instruments

This section dealt with validity and reliability of the instruments used in the study.

3.7 Validity of Instruments

The validity of an instruments represents the extent to which the instrument measure what it purports to measure .Validity of questions and other research instruments is validated by experts in the field of early childhood education who will be given the instruments to go through to avoid ambiguity and misinterpretation by respondents which could arise at the time of data collection.

3.8 Reliability of Instruments

Instrument reliability refers to the internal consistency of measuring device (Mugenda, 1999) A pretest method was used to test reliability of instruments before they are administered to assess their clarity .It was done by administering them to a group of respondents and collecting the responses .Then after one week, the same instruments was administered to the same respondents to compare the results of initial responses with latter .

3.9 Procedure for Data collection

In order to carry out the study, a research permitted, sought and obtained a letter from the University of Nairobi College of Education and External Study department of educational

communication and technology. A cover letter stating the purpose value and importance of responding was attached guaranteeing participants confidentiality.

The researcher visited the schools and parents of preschool children after making arrangement and personally interviews them on one to one basis on clarity of issues on the interview schedule form and for the purpose of interpretation since the tool was designed in English.

Schedule of activities was drafted showing activities to review successes to uphold and failure to address on daily work plan so as to tackle areas that need improvement and to avoid omissions. After collection of instruments, they were examined for completeness, comprehensiveness, consistency and reliability.

3.10 Data analysis

Data analysis is the breaking down of data into consistent parts to obtain answers to research questions. Editing to ensure accuracy and reliability of the information contained in transcripts will be done to raise accuracy of information and ensuring that all desired information is conceptualized (Korobo and Tromp, 2006).

The responses from the questionnaires observations forms and interview schedules were organized and analyzed using simple frequencies and percentages .After careful examination of questionnaire, interview schedules and explaining ,describing and analyzing their importance to research as captured from data purposefully will be used to draw conclusions.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

This chapter presents research findings and discussion using descriptive statistics, calculation of percentages and presentation of data in table forms.

4.2 Academic qualification of the respondents

Pre-school academic performance are influence by most of the factors not only the provision of school feeding programme, availability of adequate resource, academic qualification of the pre-school teachers greatly influence the academic performance of the pre-school children.

The table below shows the academic qualification of the pre-school teachers;

Table 4.1: Academic qualification of the respondents

Response	Frequency	Percentage (%)	Performance
B.A/B.ED Arts/ M.E.D ECE	1	10	Excellent
DIPLOMA	4	40	Good
KACE/EACE	2	20	Above average
KCA/KCSE	3	20	Average
Total	10	100	

From the above table, 70% of the pre-school teachers have undergone through training on how to handle the pre-school children. It shows that the academic qualification of the pre-

school children improve with the academic qualification of the pre-school teacher. The table also shows that at least most of the pre-school teachers understand the significance of the school feeding programme and the impacts on the school academic performance of the pre-school children.

10% of the pre-school teachers who took part in the research have not gone through any training pertaining early childhood education.

4.3 School feeding programme and pre-school academic performance

Providing proper nutrition and promoting stimulation of a child’s sense are vital components of children in the sense that they enhance the development and organization of the brain. According to Ann (1986), confirms that human body functions best when supplemented by the right kinds of food in the correct proportion.

The table below shows the influence of school feeding programme on academic performance.

Table 4.2: School feeding programme and pre-school academic performance

Response	Frequency	Percentage (%)	Performance
OFFERS SFP	7	70	Excellent
NO SFP	3	30	Below average
TOAL	10	100	

Table 4.2 show that school feeding programme greatly influence the academic performance of the pre-school children. 70% of the respondents who took part in the research provide

offer school feeding programme which greatly influence the pre-school performance. Children in schools that provide school feeding programme performs better academically. 30% of the respondents who took part in the research provide no school feeding programme in their pre-schools. This greatly affects the children's academic performance.

4.4 Frequency of food

Apart from provision of school feeding programme to the pre-school children, the number of times food are served also has been found to further positively influence the pre-school academic performance. Proper frequency of nutrition enhances academic performance. School feeding programs have shown the effective role of nutrition in enhancing academic performance proper frequency of School feeding Programs improves school performance.

Table 4.3 Frequency of food

Response	Frequency	Percentage (%)	Performance
ONCE	1	10	Above average
TWICE	9	90	Excellent
THRICE	0	0	
TOTAL	10	100	

Frequency of food served to the pre-school children also significantly influence their academic performance, from the a above table, 90% of the pre-schools that took part in the research provide their pre-school children twice a day has a positive influence on the

academic performance of the pre-school children. 10% of the Pre-school provide once a day meals to the pre-school children this reflects the poor performance of the pre-school children.

4.5 Quality of food and academic performance

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.

The table below shows the quality of food served to the pre-school children.

Table 4.4: Quality of food at breakfast

Response	Frequency	Percentage (%)	Percentage
Banana + porridge	2	20	Excellent
Porridge	6	60	Above average
No meal at break time	2	20	Average
Total	10	100	

From the above table, 80% of the pre-school that took part in the research provide meals to the pre-school children; this positively reflects the academic performance of the pre-school children. This shows that most of the pre-school teachers have understood the significance of the school feeding programme on the academic performance. 10% of the pre-school that took part in the research provide no meal to the pre-school children at break; this affects the academic performance of the children.

Table 4.5: Quality of food at lunch time

Response	Frequency	Percentage (%)	Percentage
Githeri	2	20	Above average
Ugali+ kales+ meat	2	60	Excellent
Rice + Beans	6	20	Good
Total	10	100	

From the above table 60% of the respondents who took part in the research provide their pre-school children with all the nutrients essential for all the body functions, children served with rice and beans performed better in their academic performance as compared to children served with Githeri at lunch time. The table also shows that at least the pre-school school feeding programme planners understand the need to provide balanced diet to the pre-school children

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Conclusion

From the research findings, it is therefore clear that school feeding programme plays a significant role in the pre- academic performance. It is also clear that lack of school feeding programme in most of the pre-schools has been among the contributors of poor performance among the pre-school children.

Other than providing school feeding programme, quality and frequency of food served to the pre-school children has also been considered. Pre-school that just offers school without considering the quality and the frequency of food have no differences with those pre-schools that lack school feeding programme, hence there is need to ensure that school feeding programmes should have balance diet and should be served at the right time to the pre-school children.

5.2 Recommendation

The researcher came up with the following recommendations;

That the communities should be sensitized on the significance of the school feeding programmes among the pre-school children, and that there is need for them to ensure they support the programme by availing different types of food to the pre-schools and should pay the school fee in time to ensure smooth management of the school feeding programme.

That the school administration together with the school feeding programme developers are sensitized on the need to provide balanced school feeding programme

REFERENCES

- Ann, (1986). *Child Development*. New York: Longman Publisher
- Best J. and Kahn, J. (1992). *Research in Education 6th ed.* New Delhi: Prentice Hall Limited
- Borg W.R and Gall M.D (1989). *Education Research on Introduction 3rd Edition*, New York: Longman
- Brown, S. (2013). *Children Feeding Programme*. Harvard: Stanford Publishers
- Crawford, M. (1990). *Effects of Nutrition*. Cleverages Press: Oxford Publishers
- Feingold, B. (1970). *Food and Nutrition*: New York: Oxford Publishers
- Hoorweg, J. and Niemeyer, R. (1987). *Invention in child Nutrition: Evaluation studies in Kenya*: Africa Medical Research Foundation: Nairobi.
- Jensen A.A.J. (1987). *Food and Nutrition in Kenya*. Nairobi: UNICEF
- Jensen, (2010). *Health and Nutrition*: Harvard: Oxford Publishers.
- K.I.E, (1989). *Health and Nutrition for the Child*. ECE Care News vol. 2, Newsletter: Nairobi, K.I.E.
- K.I.E, (1990). *The Report of Symposium on ECE*. Nairobi: Becline Printing Limited.
- K.I.E, (1993). *An Evaluation of Health and Nutritional Status of preschool children in Meru District*. Nairobi: K.I.E.
- K.I.E, (1996). *Food Nutrition Module for Training ECE teachers and Caregivers*. Nairobi: K.I.E.
- Lamber, W. (1990). *Children Feeding Habits*. New York: Oxford Publishers
- Levinger, B. (1989). *Malnutrition school Feeding and Educational Performance UNESCO*: Paris.
- Michael .W. (1979). *Social and Education Research in Action*, USA: New York, Longman.

- MOEST. (1998). *Master Plan on Education and Training 1997-2010*: Nairobi.
- Mugenda, M.M. (1999). *Research Method Quantitative /Qualitative Approaches*, Nairobi: Act Press.
- Myer. J.P. (1983), *Educational System of Kenya*. Education Credential Evaluation, Inc.
- Oniango, (1988). *Feeding the child*, Nairobi: Heinemann.
- Pediatre, J. (2001). *Effects of Children Nutrition*. Paris: Longhorn Publishers
- Sen, A.K. (1991). *An Essay on Entitlement and Deprivation*. Clevenger Press: Oxford.
- Sessional Paper 1, (2005). *On a policy Framework for Educational Training and Research*. Nairobi: Longhorn Publisher.
- Stoell and Snthe, (1963). *Brain Growth and Development*. New York: Heinemann Publishers
- Taylor, A.K. 92010). *Invention in Child Nutrition*. New Delhi: Prentice Hall Publishers.
- UNESCO, (1982/1983). *Maternal and Young child Nutrition Action to Improve Material and Nutritional Status*. Paris: UNESCO Press.
- UNESCO, (1982/83). *Maternal and Young Child Nutrition Action to Improve Maternal and Nutritional Status*. Paris: UNESCO Press.
- UNESCO, (1990). *World Food Programme Handbook*. Rome: UNESCO Press.
- UNESCO, (1991/1995). *Child Health, Nutrition and School Participation*; Paris: UNESCO Press.
- UNESCO, (1991/95). *Child Health, Nutrition and School Participation*. London: UNESCO Press.
- UNESCO, (2005-2014). *The concept of Education for sustainable Development*: UNESCO Press.

UNICEF, (1990). *World Summit for children. A Kenyan Perspective*. Nairobi: Initiative Publishers.

UNICEF, (2000). *The State of the World's Children in UNICEF*: New York: UNICEF Press.

UNICEF, (2003). *The State of the World Children*. USA: New York: UNICEF Press.

UNICEF, (2003). *The State of the World's Children USA*. New York: UNICEF Press.

Vanyyncih, V. (2006). *Knowledge*. Harvard: Longhorn Publishers

Wanyiku M. and Wanyira M (1994). *The Road to Empowerment*. Nairobi: FEMNET.

William R. and Kenner J. (1985). *Lecture Series on Food and Nutrition Policy: Nutrition and Income Tightly wedded on Loosely Meshed?* USA: New York.

APPENDICES

APPENDIX I: OBSERVATION CHECKLIST

Preliminary information

1. Name of the school _____
2. Type of the school Private () Public ()

INTERVIEW SCHEDULE FOR CHILDREN

1. Religion _____ Birth order _____ Age _____
2. Sex Male () Female ()
3. Class _____ School _____ Residence _____
4. What is the name of your school? _____
5. At what time do you come to school? _____
6. How far is your home from school? _____
7. How do you come to school?
 - a) Public means ()
 - b) Private means ()
 - c) By foot ()
8. What do you often take for breakfast? _____
9. Who prepares your breakfast at home? _____
10. Do you take meals at school?
 - a) Yes ()
 - b) No ()

If yes, how many times in a day?

a) One ()

b) Two ()

c) Others ()

11. What do you often take at midday meal? _____

12. How do you feel before and after meal time? _____

13. What is your favorite meal at school? _____

APPENDIX II: QUESTIONNAIRE FOR THE HEAD TEACHER OF PRESCHOOL

Please complete each of the sections in this questionnaire as illustrated. DO NOT write your name or institution as this information given is confidential.

SECTION A

1. What is your gender?

a) Male ()

b) Female ()

2. What is your age in years? _____

3. For how long have you worked as a head teacher? _____

4. (a) what is your highest academic qualification?

i) KCE/KCSE ()

ii) KACE/EACE ()

Others specify _____

(b)What is your professional qualification?

a) ATS/DIPLOMA ()

b) B.A/B.ED Arts/M.E.D ECE ()

Others specify _____

5. Indicate the type of institution you lead

a) Private

b) Public

6. Indicate the enrolment by gender

Fill in the table below on enrolment for the last 4 years

Year	Baby class (2-3) years	Nursery 4years	pre unit (5-6) yrs
2010			
2011			
2012			
2013			
2014			

7. (a) is there feeding programme in the school? _____

(b) If yes how long has the feeding programme been operational _____

(c)What promoted the need to have the feeding programme in the centre? _____

(d)How many meals do you serve in a day?

(e)Who supports /funds the school feeding programme?

i) Parents ()

ii) W.F.P ()

Others specify _____

8. Of what assistance if any have the government agencies, NGOs to you in support of the programmes? _____

9. How much do you charge per pupil to finance feeding programmes? _____

10. What is your rating on parent's subscription towards sentence of school feeding programme?

a) Very good ()

- b) Fair ()
- c) Good ()
- d) Poor ()

11. Rate the pupil's enrolment /attendance

- a) High ()
- b) Low ()

12. (a) What quality of service providers do you prefer to prepare food for your children?

- a) Professional cooks ()
- b) Teacher ()
- c) Volunteers ()

(b) Where is food prepared? _____

(c) What is your source of water? _____

(d) What are the conditions of the equipment's or facilities children use at feeding times? _____

(e) Comment on the adequacy _____

APPENDIX III: QUESTIONNAIRE FOR ECE TEACHERS

Please complete each of the section in this questionnaire as introduced .Do not write your name or institution as the information given is confidential.

1. What is your gender?
 - a) Male ()
 - b) Female ()
2. What is your age in years? _____
3. What is your highest educational qualification?
 - a) C.P.E/K.C.P.E ()
 - b) K.S.E/K.C.S.E ()
 - c) E.A.C.E ()
4. What is your highest professional qualification?
 - a) Certificate ()
 - b) Diploma ()
 - c) Post Diploma ()
 - d) None ()
5. Indicate the range of learner's enrolment in your class _____
6. Comment on children's participation in class activities _____
7. Comment on learner's school attendance _____
8. Is there feeding programme in your school? _____
 - a) Yes ()
 - b) No ()

(a) If yes what is your role in the programme? _____

(b) Is the food given to children age appropriate? _____

9. Suggest possible ways to improve status of children in your ECE centre

**APPENDIX IV: INTERVIEW SCHEDULE FOR THE PARENTS OF THE
PRESCHOOL CHILDREN**

This interview schedule is designed to gather information on the ongoing research to seek your opinion on nutritional status of your child/children

Your opinion will be treated with a lot of confidentiality .This information is purely for academic purposes.

1. What is your gender?
 - a) Male ()
 - b) Female ()
2. What is your religion?
 - a) Christianity ()
 - b) Islam ()
 - Others _____
3. Residence _____
4. Marital status
 - a) Married
 - b) Single
5. What is your age?
6. What is your occupation?
 - a) Self-employed
 - b) Labourer
 - c) Employed
7. Range of income per month kshs _____

8. Comment on your child/children daily school attendance _____

9. Comment on your child/children school performance. _____

10. (a) Does the school offers any meal to your child/children? _____

(b) If yes what is your opinion about the arrangement?

11. Indicate foods served to children

a) Cereals e.g. rice, wheat

b) Roots and tuber

c) Legumes

d) Vegetables

e) Beef and dairy products

12. Are those types of food locally available?

a) Yes

b) No

13. What role do you play in support of the school feeding programme?
