

**INFLUENCE OF HOUSEHOLD FOOD SECURITY IN THE IMPLEMENTATION  
OF ORPHANS AND VULNERABLE CHILDREN PROGRAMS IN BUURI  
DISTRICT OF MERU COUNTY, KENYA**

**BY  
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## DECLARATION

This research project is my original work and has not been presented for examination in any other university.

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## **DEDICATION**

This research project is dedicated to my late mum Mrs. Triphosa Kiambi and dad James Kiambi whose sacrifices and dedication in their life enabled me realize my dream of attaining higher education. They instilled in me discipline, hard work and selflessness.

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## TABLE OF CONTENTS

DECLARATION .....	ii
DEDICATION.....	iii
ACKNOWLEDGMENT .....	iv
TABLE OF CONTENTS .....	v
LIST OF FIGURES .....	xi
ABBREVIATIONS AND ACRONYMS .....	xii
ABSTRACT .....	xiii
<b>CHAPTER ONE:INTRODUCTION.....</b>	<b>1</b>
1.1 Background to the study .....	1
1.2 Statement of the problem.....	4
1.3 Purpose of the study.....	5
1.4 Objectives .....	5
1.5 Research Questions.....	6
1.6 Significance of the study .....	6
1.7 Delimitation of the study .....	7
1.8 Limitation of the study.....	7
1.9 Assumptions .....	7
1.10 Definition of significant terms.....	7
1.11 Organization of the study.....	8
<b>CHAPTER TWO:LITERATURE REVIEW.....</b>	<b>9</b>
2.1 Introduction.....	9
2.2 Overview on the escalation of the orphan and vulnerable children crisis .....	9

2.3. Buuri District .....	10
2.3.1 The Context of orphans and vulnerable children in Buuri District .....	11
2.3.2 Economic factors in Buuri district.....	13
2.4 Food security .....	14
2.5 Children and food insecurity .....	17
2.6 The four dimensions of food security .....	19
2.6.1 Food availability .....	19
2.6.2 Access to resources to acquire food.....	20
2.6.3 Food Utilization requirements .....	21
2.6.4 Stability of food security systems.....	22
2.7 Orphans and vulnerable children programs .....	23
2. 8 Conceptual framework.....	26
2.9 Theoretical frame work.....	28
<b>CHAPTER THREE:RESEARCH METHODOLOGY .....</b>	<b>30</b>
3.1 Introduction.....	30
3.2 Research Design .....	30
3.3 Target population.....	30
3.4 Sampling Technique .....	31
3.5 Methods of Data Collection.....	32

3.6 Validity of Instrument.....	32
3.7 Reliability of the Instruments .....	33
3.8 Methods of Data Analysis .....	33
3.9 Ethical Consideration.....	34
3.10 Operationalization of Variables .....	34
<b>CHAPTER FOUR:DATA ANALYSIS, PRESENTATION AND INTERPRETATION</b> .....	<b>36</b>
4.1 Introduction.....	36
4.3Demographic Characteristics.....	36
4.3.1 Gender .....	36
4.3.3 Children in Respondents' Home .....	37
4.4Food Availability .....	38
4.5 Access to Resources to Acquire Food .....	40
4.6Food Utilization Requirements.....	42
4.7Stability of Food Security Systems.....	45
4.7 Implementation of Orphans and Vulnerable Children Programs .....	48
<b>CHAPTER FIVE:SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS</b> <b>AND RECOMMENDATIONS.....</b>	<b>53</b>
5.1 Introduction.....	53
5.2 Summary of Findings .....	53
5.2.1 Food Availability.....	53
5.2.2 Access to Resources to Acquire Food .....	54

5.2.3 Food Utilization Requirements .....	54
5.2.4 Stability of Food Security Systems .....	55
5.2.5 Implementation of Orphans and Vulnerable Children Programs .....	55
5.3 Discussion of the findings .....	56
5.3.1 Food Availability.....	56
5.3.2 Access to Resources to Acquire Food .....	56
5.3.3 Food Utilization Requirements .....	57
5.3.4 Stability of Food Security Systems .....	57
5.3.5 Implementation of Orphans and Vulnerable Children Programs .....	58
5.4 Conclusions.....	59
5.4.1 Food Availability.....	59
5.4.2 Access to Resources to Acquire Food .....	59
5.4.3 Food Utilization Requirements .....	59
5.4.4 Stability of Food Security Systems .....	60
5.4.5. Implementation of Orphans and Vulnerable Children Programs .....	60
5.5 Recommendations.....	60
5.6 Suggestion for Further Studies .....	61
REFERENCES .....	62
APPENDICES:Appendix I: Letter Of Transmittal Of Data Collection Instruments .....	69
APPENDIX II:QUESTIONNAIRE.....	70

## LIST OF TABLES

<b>Table 3.1:</b> Sample frame.....	30
<b>Table 3.2:</b> Operationalization of Variables.....	31
<b>Table 4.1:</b> Gender .....	36
<b>Table 4.2:</b> Age.....	37
<b>Table 4.3:</b> Children in Respondents' Home.....	37
<b>Table 4.4:</b> Number of meals the respondents' family members take in a day.....	38
<b>Table 4.5:</b> Whether children in the household are satisfied by the amount of food they take every meal in a day .....	38
<b>Table 4.6:</b> The main type of food that the respondents eat at home .....	39
<b>Table 4.7:</b> How often the respondents repeat a type of food in a meal .....	39
<b>Table 4.8:</b> Taking that food is not available from the farm where would the respondents easily source for it.....	40
<b>Table 4.9:</b> Whether the respondents have land they cultivate/practice farming.....	40
<b>Table 4.10:</b> Whether the land used for farming is able to sustain availability of food in the household.....	41
<b>Table 4.11:</b> Whether after harvesting food from the farm there is enough food to stored or sold.....	42
<b>Table 4.12:</b> Respondents' household monthly income .....	42
<b>Table 4.13:</b> Whether the respondents have access to clean drinking water in their home stead .....	43
<b>Table 4.14:</b> The main source of water for their domestic use.....	43
<b>Table 4.15:</b> How far is the nearest health facility (Hospital dispensary) away from the respondents home .....	44
<b>Table 4.16:</b> Whether any member of the respondents' family had undergone any food nutrition training/seminar: .....	44
<b>Table 4.17:</b> Organizer of the seminar/training.....	45
<b>Table 4.18:</b> How often the respondents family members especially children go to hospital.....	45

<b>Table 4.19:</b> Whether there is enough food available at the respondents’ home all the time	46
<b>Table 4.20:</b> Method of preservation used to store food in the stores .....	46
<b>Table 4.21:</b> Whether over the last five years the respondents’ had a case of people suffering due to food poisoning in their area (that is over 5km square) .....	47
<b>Table 4.22:</b> Whether the people in the respondents’ area were provided with seed to grow or farm inputs during planting season.....	47
<b>Table 4.23</b> Ranking of the interventions the organization/ institutions provided to the respondent in order of frequency or organization/ institutions priority.:.....	48
<b>Table 4.24:</b> Respondents ranking of the interventions the organizations or institution provide to them in order of their priority or if they were to be supported what would be their priority .....	49
<b>Table 4.25:</b> whether the respondent think the said programs have been successful in improving their welfare. ....	50
<b>Table 4.26:</b> Food and nutrition support the respondents had received .....	50
<b>Table 4.27:</b> School performance .....	51
<b>Table 4.28:</b> The number of days the respondents had missed school this year .....	51
<b>Table 4.29:</b> Major reason that made the respondent absent from school .....	52

## **LIST OF FIGURES**

Figure 1: Conceptual framework of the relationship between the study's independent variables and the dependent variable .....	26
Figure 2: Abraham Maslow's hierarchy of needs .....	28

## **ABBREVIATIONS AND ACRONYMS**

<b>AED</b>	: Academy for Educational Development
<b>AIDS</b>	: Acquired Immune Deficiency Syndrome
<b>CIK</b>	: Compassion International Kenya
<b>FAO</b>	: Food and Agriculture Organization
<b>FH/K</b>	: Food for the hungry/Kenya
<b>HIV</b>	: Human Immunodeficiency Virus
<b>IEBC</b>	: Independent Electoral and Boundaries Commission
<b>IQ</b>	: Intelligence Quotient
<b>KIHBS</b>	: Kenya Integrated Household Budget Survey
<b>KNPA/OVC :</b>	Kenya National Plan of Action on Orphans and Vulnerable Children
<b>OVC</b>	: Orphans and Vulnerable Children
<b>PEPFAR</b>	: Presidential Emergency Plan for Aids Relief
<b>RI</b>	: Ripples International
<b>UN</b>	: United Nations
<b>UNAIDS :</b>	United Nations Programme on HIV/AIDS,
<b>UNCRC</b>	: United Nation Convention on the Rights of the Child
<b>UNICEF</b>	: United Nations Children Fund
<b>USAID</b>	: United State Agency for International Development
<b>WFP</b>	: World Food Programme

## **ABSTRACT**

The issue of orphans and vulnerable children can no longer be ignored in the present world if the millennium development goals are to be achieved and more close at home vision 2030. It is when a child has enough food to eat at all times that they will have good health, are emotionally secure and can concentrate in their education. This study therefore is based on influence of household food security in the implementation of orphans and vulnerable children programs in Buuri District of Meru County. The study is based on four main objectives related to household food security which are food availability, access to resources to acquire food, food utilization requirements and stability of food security systems in relation to the implementation of orphans and vulnerable children programs in Buuri district. The study focused on OVC in four locations of Buuri division of Buuri District. The District was sampled for reasons that it is a grain basket, has diverse economic activities, is affected by severe droughts in equal measure and a number of Non- governmental organizations are carrying out orphans and vulnerable children interventions programs but achieving their goals has remained elusive. “Is it that these interventions have not established the association between household food security in relation to the welfare of OVC?” Descriptive research design was applied using survey method where a questionnaire was applied to 149 OVC. The data was analyzed and presented through descriptive statistics, but for qualitative data detailed narrative was used to summarize data on influence of household food security in the implementation of orphans and vulnerable children programs carried out by various NGOs in the District. The study found out that there is not enough food available all the time in households of orphans and vulnerable children in Buuri District. Based on the research findings and conclusions the study recommended that NGOs and the government should team up to address the issues of food insecurity in Buuri District in terms of providing relief food to the orphans and vulnerable children as well as capacity building to households to be self-sufficient in food security. This will help to ensure that the children get sufficient food for proper growth and development when their other needs are being addressed.

# **CHAPTER ONE**

## **INTRODUCTION**

### **1.1 Background to the study**

In November 1974, during World Food Conference, a pledge was made; “Within a decade no child will go to bed hungry, no family will fear about its next day’s bread and no human being’s future and capacities will be stunted by malnutrition” (United Nations, 1975). As observed by Mason (1996), it has turned out that setting such lofty and ambitious goals by the international community has been followed by a series of summits and conferences which have been a familiar feature in relation to food and nutrition but little success has been achieved.

Shetty (2005), based on the above statement, argues that there has been a collective failure to achieve the goal to eradicate hunger due to a complex range of reasons. The author further explain that the World Food Summit held in November 1996 provided a forum for debate on one of the most important issues facing the world leaders in the new millennium and that was the imperative need for eradicating global hunger. It was in this forum that the objective to renew global commitment at the highest political level to eliminate hunger and malnutrition and achieve sustainable food security for all individuals by setting a political, conceptual and technical blueprint to eradicate poverty in all countries was set. Thus, it was in this summit that the target of reducing the number of undernourished individuals by half, not later than the year 2015 was set.

Gregory, et al (2005), discussed in their study on climate change and food security that in 2000, the member states of the United Nations committed themselves to eight millennium development goals each with separate specific, measurable targets that should be met by 2015 and the first goal is that of eradicating extreme poverty by 2015 in relation to World Food Summit 1996. With all the above commitment the deadline i.e. 2015 for halving the world hungry people has passed and the reality of achieving this dream is very far-fetched at this time and point.

This is echoed by Bogal and Shamelis (2009) in their study, where they said that deepening food crises in several developing countries especially those in sub-Saharan Africa is still the concern of many researchers, planners, donors and international development agencies. This is a multi-dimensional development issue that needs cross sectorial integrated approach and food crises world over is hampering many development issues more so individuals can not realize their full potential when faced with chronic hunger. In families or places faced with such situation children are the ones who suffer most, especially so in relation to orphans and vulnerable children who due to their vulnerability status are severely affected by food shortage. Children nutritional status is well catered for at household levels because this is the place where they are nurtured and get prepared to go and face the world. Household facing food insecurity implies that the children of that household are not getting sufficient nutrition.

Thus to this effect, the growing number of orphans and vulnerable children is a grave concern that a holistic intervention focused on finding a long lasting solution should be sought which seems to have eluded development experts, governments and donors (Mugenda, 2008), where he further explains that by the close of 20<sup>th</sup> century it had become apparently clear that poverty was raving some parts of the world at an alarming rate and that this problem is further compounded by the HIV/AIDS pandemic, gender inequalities, social and political upheavals in the 21<sup>st</sup> century.

To focus on the transgression of the inter-generation progression of poverty (Mugenda, 2008), household food security is key in ensuring that children's lives are broadening in perspectives and are gaining new experiences, that will make them become better leaders of tomorrow and make this world a better place for many generations to come. This is specifically so in the interventions of orphans and vulnerable children where according to Kenya National Plan of Action on Orphans and Vulnerable Children (KNPA/OVC) (2008), strategic areas of OVC intervention and key among the essential services that OVC should access include education, health care, food/nutrition, psychosocial support, legal protection, shelter and economic strengthening. Household food security is overall in ensuring all the above mentioned factors fall in their rightful places when OVC intervention is put into perspective.

Looking at the geographical location of the district of this study it is called Buuri which is a Kimiiru word from which it got its name and it means “dry land”. According to Nyaga (1997), much of the district is very dry due to the fact that it lies on the leeward side of Mt. Kenya and thus receives very little rainfall. Buuri District is a cosmopolitan community comprising of almost all the tribes in Kenya due to its historical and economic diversity but the majority tribes are the Meru and Kikuyu generally called “Bantu” people who have been native to the Mt. Kenya area for many years - well before colonization of Kenya by the British in the 19<sup>th</sup> century.

According to FAO (2001), the area around the Mount Kenya region was used by the government of Kenya to settle the landless who had been displaced during the colonial period. It was after independence that the area was subdivided according to a geometrical grid, regardless of soil quality, topography, vegetation cover, and road access and water availability. The reactions of the settled population were varied. Some survived as subsistence farmers, some sought distant off-farm labour and others found a variety of local jobs to supplement their own unreliable food production. The forest belt was also penetrated and illegal timber cutting and farming in the forest had further negative impacts on water availability at lower levels. At present, the entire area is affected by overgrazing, overexploitation of agricultural land, soil erosion and gulling. This in a big way has contributed to the erratic rainfall, poor agronomic practices, limited information and weak market linkages, all of which create the condition for food security in the region unstable.

Therefore household food security is key in intervention measures being carried out by various development agents in impacting orphans and vulnerable children in the District if at all any milestones are to be realized in this area of development as well as building capacities for the local community to be self-sustenance is to be achieved. Thus, the study looks at the variables that account as to how secure orphans and vulnerable households are in terms of food security and how this influences the implementation of OVC programs being carried out by the development agents in Buuri District. These variables as outlined by FAO (2008) are: food availability, access to resources to acquire food, food utilization

requirements, stability of food security systems in relation to the implementation of orphans and vulnerable children programs in Buuri District.

## **1.2 Statement of the problem**

In Buuri District, around 20 development agencies are engaged in Orphans and Vulnerable Children (OVC) programs albeit in an uncoordinated manner. This has resulted to a lot of resources being channeled to the area, but the impact appears insignificant or has only offered temporary relief; raising the question, “what could be ailing these interventions?” “Is it possible that these interventions have not established the association between household food securities in relation to the welfare of OVC?”

In a study done by Ajao, Ojofeitimi, Adebayo, Fansi, and Ofolabi (2011), they say that the potential intellectual and technical capacity of a population depends on good nutrition, particularly for young children and women in their child bearing years. They concluded in their study that food security exists when a household can reliably gain access to food in sufficient quantity and quality for all household members to enjoy a healthy and active life. It is a fact that being Orphaned and vulnerable impacts negatively on children as they are deprived their basic needs to survival, protection, participation, development and as observed by KNPA/OVC (2008), the response to the OVC crisis is growing and it lacks the necessary urgency and remains unfocussed and limited in scope.

A study conducted by Verduijn (2004), for WFP explained that approximately 42% of OVC are taken care of by their extended families and therefore they are likely to benefit from improved food security situation as anyone else in the society. The question, however is, does society itself have enough? Verduijn (2004) in fact adds that there is insufficient statistical data and therefore it is hard to estimate the percentage of households with OVC that experience food insecurity. He points out that most of these households are found in the children and grandparents headed households that care for a large number of OVC's.

Therefore, based on the above information, it is apparent that prior researches have not established the influence of household food security in the implementation of OVC programs in Buuri District of Meru County. In particular, the study sought answers to the

questions of food availability, access to resources to acquire food, food utilization requirements, stability of food security systems on the implementation of orphans and vulnerable children programs in Buuri District. How the situation in the said households and intervention measures of development agents does responds to the UN's 1975 pledge on sufficient food for all, and in the case of this study orphans and vulnerable children. Therefore this research intended to establish whether household food security is an important intervention measure while carrying out programs on orphans and vulnerable children in Buuri District of Meru County.

### **1.3 Purpose of the study**

Food security is a situation when all people at all times have physical, social and economic access to sufficient safe and nutritious food to meet their dietary needs and preferences for an active and healthy life. Therefore this study established the influence of household food security in the implementation of orphans and vulnerable children programs in Buuri district

### **1.4 Objectives**

The objectives of the study were:

1. To establish how the level of food availability influences the implementation of orphans and vulnerable children programs in Buuri District.
2. To examine the extent to which the level of access to resources to acquire food influences the implementation of orphans and vulnerable children programs in Buuri district.
3. To examine the extent to which food utilization requirements influence the implementation of orphans and vulnerable children programs in Buuri district.
4. To determine how stability of food security systems influences the implementation of orphans and vulnerable children programs in Buuri district.

## **1.5 Research Questions**

The research questions of this study were:

1. How does the level of food availability influence the implementation of orphans and vulnerable children programs in Buuri District?
2. To what extent does the level of access to resources to acquire food influence the implementation of orphans and vulnerable children programs in Buuri district?
3. To what extent do food utilization requirements influence the implementation of orphans and vulnerable children programs in Buuri district?
4. How does stability of food security systems influence the implementation of orphans and vulnerable children programs in Buuri district?

## **1.6 Significance of the study**

(KNPA/OVC) (2008), has outlined seven strategic areas of OVC intervention essential services that OVC should access as follows: education, health care, food/nutrition, psychosocial support, legal protection, shelter and economic strengthening. Food/nutrition is the overriding essential service that ensures the other aspects falls in their rightful place. Therefore the study allowed the analysis of a wide variety of variables that defines the influence of household food security in the implementation of orphans and vulnerable children programs in Buuri district. The study is also expected to add to the body of knowledge for policy makers and researchers and the findings may be utilized to make policies that govern care and support of OVC and also the status of household food security in Buuri District. The research findings will be variable to non-governmental organizations and all stakeholders involved with children or carrying out interventions on children especially the OVC.

### **1.7 Delimitation of the study**

The study focused on influence of household food security in the implementation of orphans and vulnerable children programs. The study was conducted in Buuri District of Meru County. The study targeted 3,276 OVC thus allowing adequate and intensive data collection.

### **1.8 Limitation of the study**

The sampling frame of the study only covered Buuri District, thus limited to generalization of the findings. A sample size of 149 OVC was interviewed.

The researcher was also faced with socio economic and environmental challenges like bad weather, long distance and lack of receptiveness from the respondents because they were wary of divulging their personal information. This was avoided creating a rapport and also explaining the purpose of the exercise. Also use of research assistants selected from the area to avoid social, cultural and personal influence on the findings was also an alternative option.

### **1.9 Assumptions**

The assumptions in the study were:

1. There is a direct relationship between household food security and the success of orphans and vulnerable children programs in Buuri district.
2. There is poor resource availability and utilization of food requirement in households of orphans and vulnerable children in Buuri District.

### **1.10 Definition of significant terms**

**Food security:** This is when all people at all times have physical, social and economic access to sufficient safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life.

**Household food security:** This means access by all household members at all times enough food for an active and healthy life.

**Interventions:** A situation where development partners, NGOs, CBOs, FBOs and the government are implementing activities directed towards improving the situation of OVC.

**Orphans:** Refers to a child less than 18 years of age whose mother, father or both parents have died from any cause.

**Poverty:** A situation in which someone does not have enough money to pay for their basic needs.

**Program:** A plan of action aimed at accomplishing a clear objective in relation to intervention measures of OVC in order to improve their well-being, with details on what to be done, by whom and what resources to be used.

**Vulnerable children:** Are defined as children whose safety, well-being and development are for various reasons threatened.

### **1.11 Organization of the study**

This project has five chapters. Chapter one has given an overview on the background of the study in relation to food security in households of orphans and vulnerable children. Key concepts in this research have been defined including food security variables. It also includes research questions, delimitation of the study, the purpose of the study and the key concepts in this research are defined. Chapter two covers literature review, theoretical framework on household food security and provides conceptual framework of the study. Chapter three presents research methods, research design and sampling technique that was applied in this study and the steps adopted are logically explained. Chapter three also provide description on data collection tools, data management, ethical considerations of the study and illustrates operationalization of the variables. Chapter four presents analysis and findings of the study as set out in the research methodology. The study closes with chapter five which presents the discussion, conclusion, and recommendations for action and further research.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This section reviews literature related to the general status of orphans and vulnerable children from a global perspective and narrow it down to the Kenyan situation with a special emphasis on Buuri District of Meru County. This captured both empirical and theoretical literature that has been written in regard to the area of this study.

#### **2.2 Overview on the Escalation of the Orphan and Vulnerable Children Crisis**

The United Nations Children's Funds (2004), states that the sheer number of orphans is staggering and the levels have always been high in sub-Saharan Africa, as a result of high mortality in general and high maternal mortality in particular. The AIDS pandemic, however, targeting the age group consisting of caregivers and parents, increases the number of orphans to unprecedented levels. It is estimated that there were 43.4 million orphans in Africa at the end of 2003, a number projected to have reached 50 million by 2010. The increase is largely due to AIDS, with an estimated 12.3 million AIDS orphans at the end of 2003, rising to 18.4 million in 2010. The scale of the crisis is masked by time lag between HIV infection, death and orphaning. Even if all new HIV infections were to stop today, the numbers of orphans would continue to rise for at least the next 10 years.

The issues of orphans and vulnerable children have different effects and at the household level, the orphan crisis leads to changes in the household composition, as well as to the present rise in numbers of child-headed households, child caregivers, and elderly caregivers. At the national level, this raises a number of issues: increased mortality, fall in life expectancy, changing age structures, increased food insecurity, and reduced household saving. Orphan hood exacerbates gender inequalities: girl orphans are overworked and often sexually exploited by their caregivers, they are more likely to drop out of school, and they are more often dispossessed of their parents' property (Tadria 2004 and UNICEF 2004).

The National plan of Action for OVC in Kenya (NPAOVC) (2000), has come straight to ascertain that the issue of orphaned and vulnerable children remains a major challenge today in Kenya mainly because of the deepening economic crisis and the issue of HIV/AIDS has made the situation even worse. It was estimated that by 2005, the number of orphans was 2.4 million, 48% of these being as a result of HIV/AIDS. This figure is besides a higher number of children rendered vulnerable by factors such as poverty, emergencies, diseases, abandonment, disasters and recently the 2007 post-election violence among other causes.

The Kenya Integrated Household Budget Survey (KIHBS), (2005/6) estimates that about 36% of children in Kenya do not live with their parents. Nationally only 64% of children aged 0-14 years live with both of their parents while 20.5% live with their fathers and not their mothers.

### **2.3. Buuri District**

Buuri is a unique district of Meru county in terms of social-economic and geographical factors and though the living conditions in Buuri are more or less similar for all the people, differences in the culture, taboos and language phonetics amongst them reflect the varied Bantu origins and influences (Nyaga 1997).

Under the 2010 constitution which came into effect following elections in March, 2013, both the provinces and the former districts that were 46 legal districts in Kenya excluding Nairobi which constituted a 47<sup>th</sup> district have been replaced by 47 counties, which now form the basis for rolling out devolution as set out in the constitution of Kenya, (The standard, September 4<sup>th</sup> 2009). In early 2007, 37 new districts were created by the government. Many more districts have since been created such that by July 2009 there were 254 districts. It was during the creation of the latter new districts that Buuri was heaved from the larger North Imenti district and it is one of the districts that form Meru County (Info(a) synergy.co.ke).

Buuri district is situated on the Northern slopes of Mt. Kenya within the geographical co-ordinates of 0 30'0" North 37'39'0" east and an altitude of 5.199m asl. The Buuri region constitutes a large area that covers 918.7 Km<sup>2</sup>, stretching northward towards Isiolo and

Tigania West Districts and southward towards Nyeri North and Laikipia East Districts. It borders Laikipia North District to the west, Imenti North and Imenti Central Districts to the east with the highest point being the summit of Mt. Kenya which greatly influences the climate of the area. According to Nyaga (1997), the rainfall pattern in the region is bimodal with long periods of rains occurring from mid-March – May and short periods occurring from October – December.

### **2.3.1 The Context of Orphans and Vulnerable Children in Buuri District**

According to the population census of 2009, Buuri district accounted for 209,803 of the total population of Kenya with a population density ranging from 100 persons per square kilometers in lowland areas to over 400 persons per square kilometer in highland areas. In terms of administrative and Political units, the district comprises of two (2) divisions, sixteen (16) locations and thirty nine (39) sub locations. It is one of new constituencies established by Independent elections and Boundaries Commission (IEBC).

Much of Buuri district is dominated by scattered trees, stretches of dry grass and shrubs as the main vegetation types, with a number of forests both natural and man-made in the neighborhood, the largest being Mt. Kenya forest. The topography of the district was largely influenced by the volcanic activity of Mt. Kenya. The dominant soil types are the deep red loam soils, which are well drained and fairly fertile (Nyaga, 1997) where he further describes Buuri district with very conducive climate for the production of wheat and potatoes in the highland areas whereas in the lowlands it very conducive for the production of Maize and a variety of legumes key among them being beans. However, the erratic weather conditions in the region often leads to crop failure with the farmer going for as many as 6 seasons without significant harvest. In Timau area, horticulture farming is very popular and is done both in small and large scale which the region is famously known for. This has led to the upsurge horticulture farming with approximately 14 large scale horticulture farms in the region having a capacity to employ 10,000 employees who are drawn from all over the country and this again has contributed to the social dynamics associated with such a setup of low income earners key among them HIV and AIDS and

issues of orphans and vulnerable children. Thus, as stated by (NPAOVC-Kenya (2008), children of parents with HIV and AIDs become vulnerable long before their parents die. Girls in particular assume caring responsibilities for ailing parents and parenting responsibilities for their siblings, when primary bread winners are unable to work, the entire family food security is increasingly threatened affecting adversely the nutritional status of children. Children from affected families may drop out of school while the quality of education of all children is affected by the impact of the pandemic on teachers. Deteriorating circumstances due to the family's increasing poverty level and the impact of HIV and AIDs expose children to exploitation and abuse, while escalating crime and social disorganization are also contributing factors to the increasing number of OVC, (NPAOVC- Kenya 2000). Therefore, these farms and the frequent droughts in the region are associated to be contributing significantly to the crises of OVC and it is evident that the number of orphans and vulnerable children is disturbing and there is eminent poverty languishing households in Buuri district.

According to KNBS (2008), these are the facts about the region: Under five mortality rate is 54 per 1,000 live births while the infant mortality rate is 39 per 1,000 live births. About 8% of children aged 6-59 months are severely or moderately underweight, while 14% are severely stunted. One in two (50%) children of school going are attending primary school. The net primary school attendance rate is 88% while that of secondary school stands at 31%. The female adult literacy is 82%. About one in five (19%) children aged 5-14 years are engaged in child labour. However 93% of children involved in child labour also attend school. The total fertility rate is 3 children per woman and teenage pregnancy is at 20% for women aged 15-19 years. This age group contributes 10% of the total fertility in the region with fertility peaks in the age group 20-24 years. About 17% of the children under 18 years are orphans and vulnerable. One in nine children aged below 18 years (11%) in the district is an orphan. About 15% of children in the same age group do not live with any biological parent.

### **2.3.2 Economic Factors in Buuri District**

According to the Welfare Monitoring Survey III of 1997, about 50% of the population in the region is considered to be poor. This situation is common in households with 6 or more members, the most vulnerable groups being women, youth and the aged. The report further explains that 41% of the population who were food poor contributed to about 1.32% of the national poverty level. The main causes of poverty in the district include; inadequate and unreliable rainfall leading to crop failure, long droughts and lack of water for irrigation in dry areas and inadequate land or landlessness. The high cost of agricultural inputs, poor infrastructure, a high rate of school drop outs due to inability to pay school fees, high consumption of illegal brews and drug taking by the youth leading to low working capacity, further causes poverty. This is according to the Meru Central District strategic plan 2005-2010. This is further affirmed by Southal (2005), who explains that the region is faced with landlessness on a large scale and recurrent land disputes among individuals and between communities.

KIHBS 2005/2006 explains that poverty is multifaceted and is typically manifested through a deterioration of living conditions, a situation caused by one or all of the following: unemployment, exclusion, and insecurity, increased vulnerability to diseases, low educational attainment and limited participation in economic and political decisions that govern one's existence. This situation is not in any way different from that in Buuri District. Severe changes in environmental conditions in Buuri have led to reduced agricultural production. Notably, agriculture is what is supposed to support a majority of the population in the catchment. This has in turn led to reduced incomes and as well as uncertain food security. Indeed, a large section of the population lives from hand to mouth especially in the lowlands. In response, among other initiatives, the government has perennially been providing food relief to the residents for the last couple of years. This has inevitably led to a cycle of poverty that has led to adverse effect on the people in the district, orphans and vulnerable children included.

The Meru District strategic plans 2005-2010 reveals that the region has slightly over 15 health facilities that are spread all over the district. This is an indicator to the problem of accessibility of health facilities since the average distance to the nearest health facility is 7kms. Besides, there is only 1 doctor for every 33,259 (1:33,259). This therefore, implies that most of the health facilities in the district are manned by other cadres of healthy workers. The most prevalent diseases in the district are Malaria, disease of the respiratory systems and intestinal worms. HIV/AIDs is a major health challenge. The current prevalence is estimated at 38% and this further account for the deepening crises of orphans and vulnerable children in the district. There are approximately 126 primary schools distributed across the region with an approximate population of 22,791 children, where 15% are orphans and vulnerable children.

## **2.4 Food Security**

Tansey and Rajotte (2008) states that after decades of neglect there has recently been reawakening interest in the contested issue of food security, following the food price crisis of 2007 and 2008, which sparked riots in over a dozen countries, and the continuing impact of the financial crisis. With around one billion undernourished people in the world today, the global food and agricultural governance architecture is facing diverse and escalating pressures, from climate change and population expansion, to increased urbanization and threatened scarcity of fertile land, water and fossil fuels.

According to Nyariki, Wiggins and Steve (2002), ensuring food and nutrition security is a critical challenge especially in sub-Sahara Africa and that often the information on the level of food insecurity is either scanty or unavailable.

In their study Iram and Butt (2004), wrote that food security is a broad concept, encompassing issues related to the nature, quality, and security of the food supply as well as issues of food access. The world has been facing a paradox of widespread food insecurity and malnutrition amid net food surpluses. Increased food supplies do not automatically enhance access to food by the poorer groups of society. Food security measures alone may have a limited effect on the nutritional well-being of individuals, unless the reinforcing

detrimental linkages between food insecurity, disease, poor sanitation and inadequate education are addressed. Current theory holds that good nutrition for pre-school children depends on household food security, an adequate health environment, and adequate maternal and childcare.

Food insecurity on the other hand as explained by Claudia and Elizabeth (2010) is a non-sustainable food system that interferes with optimal self-reliance and social justice. Individuals experiencing food insecurity lack nutritionally adequate and safe foods in their diet. Resources play a significant role in food security by affecting whether or not people obtain culturally and socially acceptable food through regular marketplace sources as opposed to severe coping strategies, such as emergency food sources, scavenging, and stealing. Persons who are living in poverty, female heads of household, single parents, people living with many siblings, landless people, migrants, immigrants, and those living in certain geographical regions constitute populations at risk and most vulnerable to food insecurity. In conclusion the study analyzed that food insecurity influences economics through annual losses of gross domestic product due to reduced human productivity. Food insecurity affects individuals and households and is largely an unobservable condition, making data collection and analysis challenging. Policy and research have focused on macronutrient sufficiency and deprivation, making it difficult to draw attention and research to food insecurity and finally on clinical relevance, persons experiencing food insecurity exhibit clinical signs such as less healthy diets, poor health status, diabetic complications and chronic disease management, and impaired cognitive function.

In a study by Atieno and Odingo (2010), it is stated that poor and hungry populations are less resilient to stress and disasters and rely a great deal on the natural environment, as they lack the capacity and the resources required to recover from disasters. The current projected climatic change is likely to have a great impact among food-insecure and poor populations due to the projected effects on food availability, water resources, and health, as well as accessibility to infrastructural services, which is minimal, if not lacking completely, among vulnerable and poor households.

Atieno et al (2010), research findings reveal that in terms of food security, poverty was the main contributor to food insecurity, although climate complicated the issue, with the health of the farmer and her experience emerging as the most important in the fight against food insecurity among smallholder farmers. As part of the research conclusion, it was recommended that to deal with food insecurity and poverty, policies must emphasize increased food production using suitable environmental conservation techniques to adapt to climate change while also encouraging sustainable livelihood systems.

Countries which have severe levels of food insecurity generally have low levels of, and unequal distribution of food, plus unequal distribution of land and other assets to produce food. They will usually also have low levels of investment to increase and stabilize their food production. Small countries, frequently threatened by political embargo, encounter large changes in the price of foods and grains they need to import. Therefore, food security and/or insecurity can be chronic or transitory situations. It may occur at regular or random intervals. Thus the greatest challenge which faces developing countries is to eliminate hunger and to overcome poverty. The challenge is greatest in rural areas where employment and supplies are not as readily available as in the towns (George 1977). Therefore, food production is very important in the economies of tropical developing countries, and agriculture provides the means to increase food production. Through agriculture, a country can harness natural resources on land, in the forests, in the rivers, streams, lakes and sea to provide all the people's needs to promote national development. George further adds that, experts have tried to place the burden of hunger literally on the laps of the hungry, specifically on their reproductive organs, thus the best publicized "solution" to the crisis is the need for population control – but population will never decline until better distribution of resources is achieved. "Weather" or "climate" is another convenient scapegoat because acts of God are supposed to be off limits to rational examination and alteration.

UN claims that one in every eight people in the world is literally starving, and that almost half suffer from malnutrition of one kind or another. Death is only one of possible consequences of hunger and a few of the others include; Chronically hungry people are physically less developed and mentally less alert than people who eat enough ; they have far

less resistance to diseases and are more susceptible to invasion by the parasites that proliferate in the poor countries. 70 per cent of third world people die of parasitic or infectious diseases of which hunger provides the favorable terrain. If a person's diet is monotonous, made up of very few foods, not even enough of those, he will invariably suffer from a specific protein, vitamin or mineral deficiency with serious consequences of his health.

## **2.5 Children and Food Insecurity**

A multi – sectorial approach is needed to address the diverse and often complex needs of orphans and vulnerable children. As documented by KNPA – OVC 2008, the core interventions OVC need for their well-being and future development are food/nutrition, shelter, protection, health care, psychosocial support and education. It is when an OVC household is food secure that the impact of implementation of OVC programs can be felt.

According to Fogel (2004), human population responds to chronic widespread hunger and malnutrition by decreasing body size known in medical terms as stunting or stunted growth and this is a process that starts in the uterus if the mother is under malnourishment, where this effect continues through approximately the third year of life. This leads to higher infant and child mortality and once stunting has occurred, improved nutritional intake later in life cannot reverse the damage, Fogel (2004) further argues that stunting itself is viewed as a coping mechanism, designed to bring body size into alignment with the calories available. Thus limiting body size is a way of adapting to low levels of energy (calories) and this affects the body in the following ways: premature failure of vital organs occurs during adulthood, stunted individuals suffer a high rate of diseases and illnesses than those who have not suffered stunting.

Besides, severe malnutrition in early childhood often leads to defects in cognitive development. This is supported by George (1977), where he stated that perhaps the most morally revolting aspect of the injustices caused by malnutrition is that it can prevent hosts of people from realizing even their genetic potential. Nutritionists have proved to nearly everyone's satisfaction that the baby who lacks sufficient calories and protein during his

final intra- uterine weeks and his first months on earth will be permanently damaged mentally, because the brain cells that were “programmed “ to multiply during this period were not able to do so for lack of food. Even if by some miracle the child is entirely well fed later on, this condition is irreversible. George further says that this is confirmed in various studies carried out from Guatemala to India, Mexico to Palestinian refugee camps where one study for a sample of 500 middle-class children, only 1% had an IQ lower than 80, but 500 poor children who had suffered serious protein/ calorie malnutrition in the first months, 62% had IQs lower than 80. These people will not be able to hold productive jobs and their personal under-development will be passed on to their children. Such under-development will also be socially perpetuating. While in another study it revealed that mothers who had themselves been malnourished as babies and thus had IQs under 80 or even under 60, were generally unable to cope with their environment effectively to feed their own children; whereas higher IQ mothers living under the same socio economic conditions with the same meager resources still managed to feed their children adequately enough to avoid the more serious effects of malnutrition

A study by Daniel, Patrick, Jennifer and James (2010) concluded that food insecure children had moderately higher levels of emotional problems relative to food secure children. Another study by Ashiabi (2005) revealed that food insecurity had negative significant effect on child health, emotional well-being to school engagement. Ashiabi did another study on children’s nutritional status, health and educational attainment in Ghana, where the conclusion was that poverty limits the ability of families to obtain sufficient food and contributes to high levels of malnutrition with long term adverse effects. The study further concludes that poverty is linked to the health status of children due to the inability of families to secure adequate health services and engage in health promoting behavior. Besides, poverty is related to children’s educational attainment and future employment in that it affects decisions about school and child labour. Also in a different study by Ashiabi and Keri (2007), it revealed that heightened food insecurity was associated with increased parental emotional distress, poor quality of parenting and increased adolescent adjustment problems.

## **2.6 The Four Dimensions of Food Security**

Food security exists when all people, at all times, have physical and economic access to sufficient safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life, (1996 World Food Summit). This widely accepted definition points to the different dimensions of food security as described below by Food and Agricultural Organization (FAO) 2008).

### **2.6.1 Food Availability**

This is the availability of sufficient quantities of food of appropriate qualities. It addresses the “supply side” of food security and is determined by the level of food production, stock levels and net trade. In other words food availability is having sufficient quantities of food of appropriate quality, supplied through domestic production or imports (including food aid) (FAO 2008). WHO 2006 defines Food availability as having sufficient quantities of food on a consistent basis.

Swaminathan (2006) describes that food availability is a function of both home production and imports. There is no time to relax on the food production front. The present global surplus of food grains is the result of inadequate consumption on the part of the poor, and should not be mistaken as a sign of over-production.

According to USAID, AED, WFP 2007, organizations that are spearheading issues of HIV/AIDS: food availability is derived from domestic agricultural output and net food imports at the national level. In the context of HIV, food availability tends to be impaired by production failures related to labor constraints, gender inequality in land tenure and loss of productive assets needed to sustain household food production. They further analyze constraints to food availability which includes: inappropriate agricultural knowledge, technologies, and practices; inappropriate economic policies, including pricing, marketing, tax and tariff policies; lack of foreign exchange; inadequate agricultural inputs; non-existent or ineffective private sector; population growth rates that offset increased production or imports; marketing and transportation systems which inhibit the cost-effective movement of food from source to need; inability to predict, assess and cope with emergency situations

which interrupt food supplies; natural resource, climatic, and (especially in Africa) disease constraints; donor disinterest or fatigue; and political choice on the part of the host government at any level.

### **2.6.2 Access to Resources to Acquire Food**

This means access by individuals to adequate resources (entitlements) to acquire appropriate foods for a nutritious diet. Entitlements are defined as the set of all those commodity bundles over which a person can establish command given the legal, political, economic and social arrangements of the community in which she lives (including traditional rights - e.g. access to common resources). An adequate supply of food at the national or international level does not in itself guarantee household level food security. Concerns about insufficient food access have resulted in a greater policy focus on incomes, expenditure, markets and prices in achieving food security objectives ((FAO 2008). WHO describes food access as having sufficient resources, both economic and physical, to obtain appropriate food for a nutritious diet. Constraints to individual food access include: economic growth that is inadequate in the aggregate, or insufficiently broad-based, in general, leading to a lack of job opportunities or lack of incentives to become a productive participant in the economy; negative impacts of national economic policies; inadequate training and/or job skills; lack of credit or other means to exchange assets or income streams; and food losses associated with ineffective and inefficient harvesting, storage, processing and handling; political decisions favoring one group over another (USAID 1996). According to USAID et al (2007), food access refers to the household's ability to get food in the market place or from other sources (transfers, gifts, etc.). Food access depends largely on household purchasing power, which varies in relation to market integration, price policies and temporal market conditions. In the context of HIV, affected households and infected individuals may be too ill or overburdened to earn money to buy food, and they may have limited access to community networks, markets and trade associations because of stigmatization.

Swaminathan (2006) asserts that lack of purchasing power deprives a person from access to food even though food is available. Inadequate livelihood opportunities in rural areas are

responsible for household nutrition insecurity. For example, India today has over 30 million tonnes of wheat and rice in government godowns; yet poverty induced hunger affects over 200 million persons. It is endemic in south Asia and sub-Saharan Africa (Ramalingaswami al. 1997). Macro-economic policies, at the national and global level, should be conducive to fostering job-led economic growth based on micro-enterprises supported by micro-credit. Where poverty is pervasive, suitable measures to provide the needed entitlement to food should be introduced.

Wilma (2007), states that extreme poverty, defined as basic food needs not being met even when all resources are devoted to food, affects 34.8% of the rural population in Kenya and 7.6% of its urban population. Consequently of approximately 31 ½ million, 2.8 million Kenyans are persistently malnourished as a result of their inability to access food. The most significant cause of poverty in Kenya, indeed in Africa overall, is low and declining agricultural output. Other causes of poverty include bad governance, inaccessibility to productive assets (agricultural inputs), land ownership issues, lack of infrastructure (roads, rail system), gender imbalance, HIV/AIDS pandemic, unemployment and low wages, and an overall sense of insecurity. All of these “causes” relate back to and impact agriculture and Kenyan’s ability to produce food.

### **2.6.3 Food Utilization Requirements**

This is meeting nutritional requirements through adequate diet, clean water, sanitation, and health care, to reach a state of nutritional well-being for which all physiological needs are met. This brings out the importance of non-food inputs in food security. It is not enough that someone is getting what appears to be an adequate quantity of food if that person is unable to make use of the food because he or she is often falling sick. Utilization is commonly understood as the way the body makes the most of various nutrients in the food. Sufficient energy and nutrient intake by individuals is the result of good care and feeding practices, food preparation, and diversity of the diet and intra-household distribution of food. Combined with good biological utilization of food consumed, this determines the nutritional status of an individual (FAO 2006). USAID, AED, WFP 2007, argues that food utilization is

determined by food safety and quality, how much a person eats and how well a person converts food to energy, all of which affect proper biological use of food, nutritional status and growth. Adequate food utilization requires a diet providing sufficient energy and essential nutrients, potable water, adequate sanitation, access to health services and proper feeding practices and illness management. The organizations further describes constraints to food utilization as nutrient losses associated with food preparation; inadequate knowledge and practice of health techniques, including those related to nutrition, child care, and sanitation; and cultural practices that limit consumption of a nutritionally adequate diet by certain groups or family members. Furthermore lack of access to clean drinking water, poor environmental hygiene and poor health infrastructure, lead to poor assimilation of the food that is consumed. Nutrition security cannot be achieved without environmental hygiene, primary health care and clean drinking water security. Culinary habits also need careful evaluation as some methods of cooking may lead to the loss of vital nutrients (Swaminathan, 2006).

#### **2.6.4 Stability of Food Security Systems**

FAO (2008) describes food stability as adequate food at all times. People should not be at risk of losing access to food as a consequence of a shock (e.g. an economic or climatic crisis), or cyclically (e.g. during a particular period of the year – seasonal food insecurity). Even if your food intake is adequate today, you are still considered to be food insecure if you have inadequate access to food on a periodic basis, risking a deterioration of your nutritional status. Adverse weather conditions, political instability, or economic factors (unemployment, rising food prices) may have an impact on your food security status. FAO 2008 further describes says that to be food secure, a population, household or individual must have access to adequate food at all times.

The most important among the internal threats to sustainable food security is the damage to the ecological foundations essential for sustained agricultural advance, like land, water, forests and biodiversity. Second, in the areas of farm economics, resource flow to the agriculture sector is declining and indebtedness of small and marginal farm families is

rising. Input costs are increasing, while factor productivity is declining. Third, a technology fatigue has further aggravated farmers' problems, since the smaller the farm the greater is the need for sustained marketable surplus, in order to have cash income. Linkages between the laboratory and the field have weakened and extension services have often little to extend by way of location, time and farming system specific information and advice (Swaminathan, 2006).

In conclusion food security was formerly considered essentially in terms of production. It was assumed that adequate food production would ensure adequate availability of food in the market as well as in the household. In the seventies, it became clear that availability alone does not lead to food security. It is becoming evident that even if availability and access are satisfactory, the biological absorption of food in the body is related to the consumption of clean drinking water as well as to environmental hygiene. Finally even if physical and economic access to food is assured, ecological factors will determine the long-term sustainability of food security systems. We have to define food as physical, economic, social and ecological access to balanced diet and clean drinking water, so as to enable every child, woman and man to lead a healthy and productive life. The needs of each age group must be addressed (Swaminathan, 2002).

## **2.7 Orphans and Vulnerable Children Programs**

According to Donald, Tsheko, Mtero, Segwabe, Chibatamoto, Chandiwana, Nkomo, Tlou and Chitiyo (2006) focus on orphaned and vulnerable children (OVC) is important, but needs accurate definition. The loss of a parent through death or desertion is an important aspect of vulnerability. Additional factors leading to vulnerability included severe chronic illness of a parent or caregiver, poverty, hunger, lack of access to services, inadequate clothing or shelter, overcrowding, deficient caretakers, and factors specific to the child, including disability, direct experience of physical or sexual violence, or severe chronic illness. Therefore important questions raised in their research include the long-term

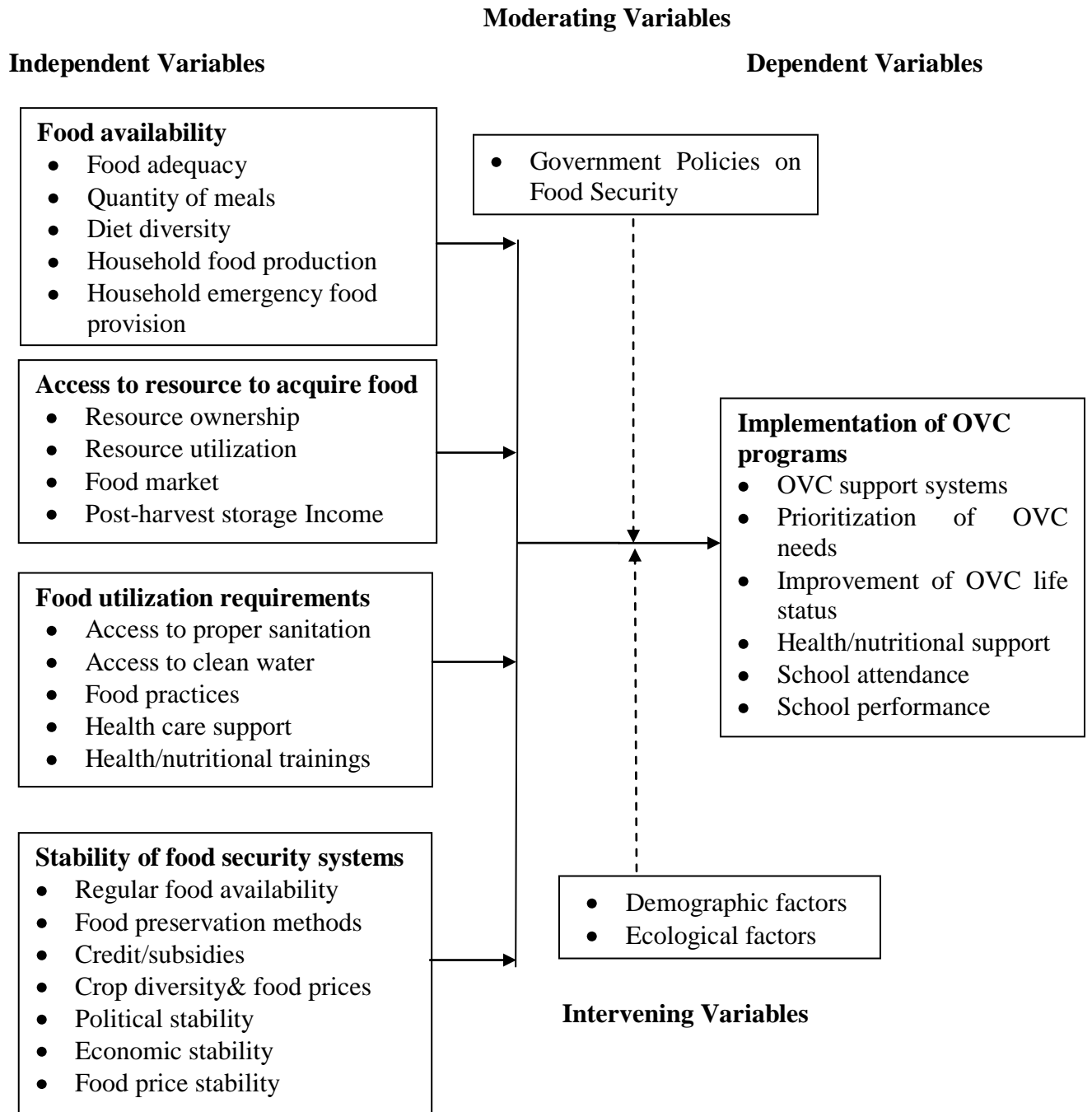
implications for the child and community, and the contribution of culture systems thus appropriate and adequate intervention measures are very key.

Since 1948, the universal declaration of human rights has become the inspiration for the national and international efforts to promote and protect human rights and fundamental freedom. But it is only in 1989 that the standards concerning children were brought together in a single legal instrument approved by the international community and spelling out in unequivocal manner the rights to which every child is entitled (Presidential Emergency Plan for Aids Relief –PEPFAR, 2008). Focus on the best interest of the child and his/her family is very important. Programs must implement effective measures to prevent gender inequity, mitigate further degradation of family structures and reduce social marginalization and stigmatization. United Nation Convention on the Rights of the Child (UNCRC): the most universally embraced human rights treaty in history states that in the universal declaration of human rights, the United Nations has proclaimed that childhood is entitled to special care and assistance. Therefore the challenge of orphans and vulnerable children is unique and long term, requiring careful planning and coordination especially in Buuri district.

United Nations General assembly on A world fit for children twenty seventh special session declared that millions of young lives have been saved, more children than ever are in school, more children are actively involved in decisions concerning their lives and important treaties have been concluded to protect children. However these achievements and gains have been uneven and many obstacles remain particularly in developing countries. A brighter future for all children has proved elusive and overall gains have fallen short of national obligations and international commitments. According to Katie (2009) community interventions for children who have been orphaned or rendered vulnerable take many forms, including educational assistance, home-based care, legal protection and psychosocial support. Despite a recent influx of funding for programs implementation where Buuri district is also a beneficiary, there exists little evidence to inform policymakers about whether their investments are improving the lives of vulnerable children and meeting key benchmarks including the Millennium Development Goals. Therefore from the aforementioned, this study seeks to understand; is there a relationship between household food security and the implementation

of orphans and vulnerable children programs and could this be a factor as to why the children development agenda as remained elusive?

## 2. 8 Conceptual Framework

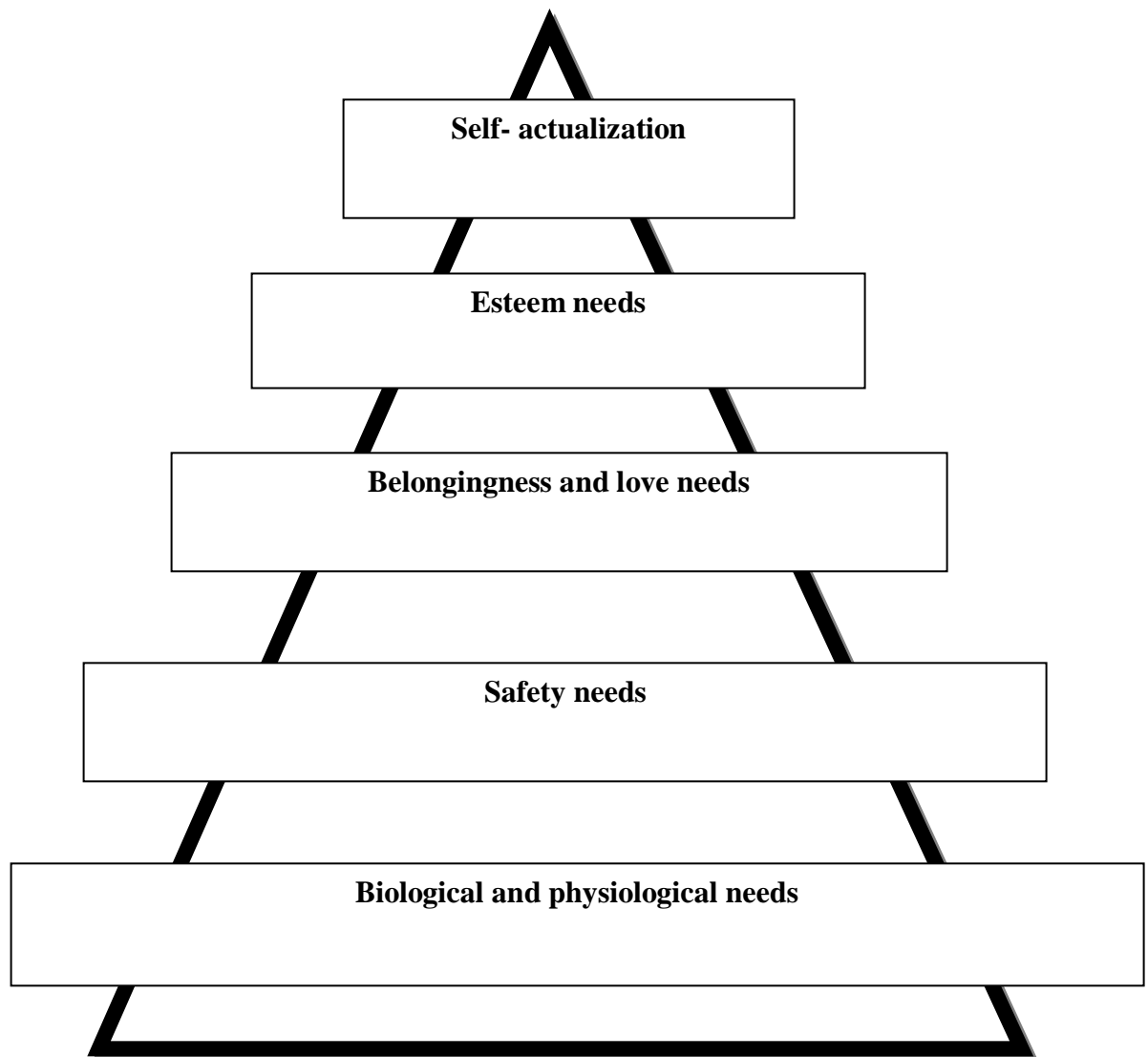


**Figure 1: Conceptual framework of the relationship between the study's independent variables and the dependent variable**

Independent Variables include; Food availability, access to resources to acquire food, food utilization requirements and stability of food security systems. The dependent variable is the implementation of Orphans and Vulnerable Children (OVC) programs. Food availability in the case of this study has been measured by exploring the adequacy of food provided in the household, quality and diversity of meals, household food production and emergency relief food provision. Access to resources to acquire food was measured by resource ownership, resource utilization, food market, post-harvest storage and household income. Food utilization requirements variable was measured by looking into the availability of access to proper sanitation, access to clean water, food practices which include taboos and beliefs created around food, health care support and health/nutritional trainings. Finally stability of food security systems was measured by finding out about availability of food all the time, food preservation methods and availability of credit/subsidies of farm inputs. The dependent variable was measured by verifying the NGOs working in the area under study, whether the OVC is supported by the said NGOs and whether it has improved his or her life status, out of all the support they receive, what they would consider most important and the support they have so far received. It was also measured through OVC school performance and attendance. The intervening variables of this study were; Demographic factors, and Ecological factors. The four dimensions of food security applied in this conceptual framework are as outlined by FAO (2008). It was successfully applied by Stamoulis (2003) and the study conclusion was that for food security objective to be realized, all the four dimensions must be applied simultaneously.

## 2.9 Theoretical Framework

The study is supported by Abraham Maslow's hierarchy of needs a theory of personality that has influenced a number of different fields that influences child development. His theory states that motivational needs operate in a hierarchical manner from mere psychological needs to complete development of oneself. This wide influence is due in part to the high level of practicality of Maslow's theory (Simons, Irwin and Drinnien, 1987). It is often depicted as a pyramid consisting of five levels shown below.



**Figure 2: Abraham Maslow's hierarchy of needs**

Maslow's Hierarchy of Needs states that we must satisfy each need in turn, starting with the first, which deals with the most obvious needs for survival itself and only when the lower order needs of physical and emotional well-being are satisfied are we concerned with the higher order needs of influence and personal development. Conversely, if the things that satisfy our lower order needs are not available then we are no longer concerned about the maintenance of our higher order needs.

For the most part, physiological needs are obvious – they are the literal requirements for human survival. If these requirements are not met, the human body simply cannot continue to function. Therefore, a OVC whose household lacks food, love, esteem, or safety would consider their greatest needs to be food.

Air, water, and food are metabolic requirements for survival in all animals, including humans. Clothing and shelter provide necessary protection from the elements.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter deals with the description of the research methods that were applied in this study. It addresses the research design applied, instrument used in data collection, sample size and sampling procedures, methods of data analysis and presentation.

#### **3.2 Research Design**

The study adapted a descriptive research design conducted using questionnaire where primary data was collected from sampled population describing a social issue existing in Buuri district. The data described various aspects of food security which include food availability, access to resources to acquire food, food utilization requirements, stability of food security systems and the overall effect of household food security in the implementation of OVC programs in Buuri district. Descriptive survey according to Mugenda and Mugenda (1999) is the process of collecting data in order to test hypothesis or to answer questions concerning the current status of the subject under study. Descriptive study also involves an examination of the state of affairs describing, analyzing and reporting conditions that exist or that existed (Kothari, 1993).

This research design enabled data analysis and presentation through descriptive statistics such as mean, mode, percentage, frequencies for quantitative data but for qualitative data detailed narrative forms was used to summarize information. The study used the Statistical Package for Social Sciences (SPSS) to analyze the data to make sense out of the findings

#### **3.3 Target population**

For this study, the target population was 3,276 OVC registered with the divisional education office of which all were at the primary level of education.

**Table 3. 1: Target population**

Location	Population
Rwarera	819
Ruiru	933
Naari	848
Kiirua	676
Total	3,276

### **3.4 Sampling Technique**

This study applied a stratified random sampling to sample number of Orphans and Vulnerable children that were used for the study and used locations as the strata. To compute the sample size of the Orphans and Vulnerable children, the researcher used the formula explained by Kumar (2011) as shown below;

$$N = N / 1 + N(e^2)$$

$$3276 / 1 + 3276(0.082) = 149$$

Where n = sample size

N = Target population

e = Acceptable error (8% for 92% confidence level)

$$n_h = (N_h / N) * n$$

Where:

$n_h$  = Sample of the stratum

$N_h$  = Population of the stratum

n = Total Sample size 149)

N = Total Population (3,276)

For example the sample size of Rwarera was;

$$(819/3,276) * 149 = 37$$

**Table 3. 2: Sample Frame**

<b>Location</b>	<b>POP</b>	<b>Sample Size</b>	<b>Percentage</b>
Rwarera	819	37	4.5%
Ruiru	933	42	4.5%
Naari	848	39	4.5%
Kiirua	676	31	4.5%
<b>Total</b>	<b>3,276</b>	<b>149</b>	<b>4.5</b>

### **3.5 Methods of Data Collection**

Questionnaire method was used to collect data from randomly sampled 149 OVC. A questionnaire consisting of a number of questions related to food availability, access to resources to acquire food, food utilization requirements, stability of food security systems and implementation of OVC programs indicators was administered. The questionnaire was hand delivered to sampled respondents who wrote down the reply in the space meant for the purpose and returned the questionnaire. This method is low cost and enabled researcher to obtain data in a more representation making the results more dependable and reliable. The method also reduced biasness of the interviewer and respondents had adequate time to give thought out answers. Secondary data was collected at the preliminary stages of research.

### **3.6 Validity of Instrument**

Validity is the accuracy and meaningfulness of inferences, which was based on the research results. It is the degree to which results obtained from the analysis actually represent the phenomenon under study; Mugenda and Mugenda, (1999). If an instrument is not reliable over time, it cannot be valid, as results can vary depending upon when it is administered. As such, the researcher sought assistance of the supervisor in order to help improve validity of

the instrument. Crosschecking data collected from the respondents with research assistant ensured instrument validity.

### **3.7 Reliability of the Instruments**

Mugenda 2008 states that, according to DeVellis (1991), reliability is the proportion of variance attributable to the measurements of a variable and estimates the consistency of such measurement over time where this means that it is a measure of the degree to which a research instrument would yield the same results or data after repeated trials. In this study the pretest method was used to establish reliability. Small sample of the respondents were given the same question twice and the results compared. The results on the two administrations of the instrument were the same meaning the instrument was reliable. This method is simple, clear-cut way to determine reliability, but it can be costly and impractical. Therefore only few representatives were chosen and the process was not much repeated.

### **3.8 Methods of Data Analysis**

Data analysis refers to examining what has been collected and making deductions and inferences. This involves uncovering underlying structures, extracting important variables, detecting any anomalies and testing any underlying assumptions (Kombo and Tromo, 2006). The raw data that was obtained from the field was analyzed and interpreted to make sense. The researcher scrutinized the raw data for completeness, accuracy and uniformity. The scrutinized data was then analyzed through editing, coding, classification and tabulation of the data as per the variables. Quantitative and qualitative, statistical approaches were applied to achieve the research objectives. Descriptive statistics such as measures of central tendency and percentages were used to reduce the large volume of the raw data thus making it easy to read and be used for further analysis. The data was organized within the framework work of the research objectives. Cross tabulation technique of data analysis was used to compare the dependent variable (Implementation of OVC programs) with the independent variables (Food availability, access to resources to acquire food, food utilization requirements and stability of food security systems) thus interpreting their relationship and

hence deriving the meaning of the data. Finally, the findings were presented in form of tables, frequencies and percentages so as to bring out the relative differences of values.

### **3.9 Ethical Consideration**

The researcher sought written permission from the Permanent Secretary of the Ministry of Education Elimu house and Ministry of Public Health and Sanitation to conduct the study soon after the proposal had been approved. The research protocol and consent form was approved by the University of the Nairobi. All the respondents were explained the aim of the study. Permission to include them in the study was sought and where necessary written consent obtained. The participants were informed that they are free to withdraw at any time without giving reasons. A decision not to participate was strictly respected. Strict confidentiality and privacy was ensured and maintained throughout the study.

### 3.10 Operationalization of Variables

**Table3. 3: Operationalization of Variables**

<b>Research Objective</b>	<b>Variables</b>	<b>Indicators</b>	<b>Measurements</b>	<b>Scale</b>	<b>Data collection methods</b>	<b>Data Analysis</b>
To establish how the level of food availability influences the implementation of orphans and vulnerable children programs in Buuri District.	<b><u>Independent variable.</u></b> Food availability	*Food adequacy *Quantity of meals *Diet diversity *Household food Production *Emergency relief food provision	*No. of meals per day *Enough food per plate *Balanced diet *Types of food eaten and the frequency. *Type of food produced *Availability of surplus food *Provision of relief food	Ordinal	Questionnaire	Descriptive analysis
To examine the extent to which the level of access to resources to acquire food influences the implementation of orphans and vulnerable children programs in Buuri district.	<b><u>Independent variable.</u></b> Food access	*Resource ownership *Resource utilization *Food market *Post-harvest storage *Household income	*Availability of land *Amount of food produced from the farm *Acquisition of food from the market *Management of surplus food *Amount of household income	Ordinal	Questionnaire	Descriptive analysis

<b>Research Objective</b>	<b>Variables</b>	<b>Indicators</b>	<b>Measurements</b>	<b>Scale</b>	<b>Data collection methods</b>	<b>Data Analysis</b>
To examine the extent to which food utilization requirements influence the implementation of orphans and vulnerable children programs in Buuri district.	<b><u>Independent variable.</u></b> Food utilization	*Access to proper sanitation *Access to clean water  *Food practices  *Health care support  *Health/nutritional training	*Availability of proper sanitation *Availability of clean water *Food practices like food taboos *Health care support *Trainings attended	Ordinal	Questionnaire	Descriptive analysis
To determine how stability of food security systems influences the implementation of orphans and vulnerable children programs in Buuri district.	<b><u>Independent variable.</u></b> Food stability	*Regular food availability *Food preservation method *Farm inputs credit/subsidies	*Household food availability. *Method of food preservation * Provision of farm inputs credit/subsidies	Ordinal	Questionnaire	Descriptive analysis
To examine the implementation of orphans and vulnerable children programs in Buuri district	<b><u>Dependent variable.</u></b> Implementation of orphans and vulnerable children programs	*OVC support systems *Improvement of OVC status *Prioritization of OVC needs * Provision of health/nutritional support *School attendance *School performance	*OVC support provision *Ranking of OVC interventions *Improvement of life status *Provision of health/nutritional support *School attendance *School performance	Ordinal	Questionnaire	Descriptive analysis

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND INTERPRETATION

#### 4.1 Introduction

This chapter discusses the interpretation and presentation of the findings. This chapter presents analysis of household food security in the success of orphans and vulnerable children programs in Buuri District. The chapter also provides the major findings and results of the study.

#### 4.2 Response Rate

The study targeted a sample size of 149 respondents from which 132 questionnaires were filled and returned making a response rate of 88.6%. This response rate was good and representative and conforms to Mugenda and Mugenda (1999) stipulation that a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent.

#### 4.3 Demographic Characteristics

The study sought to establish the background information of the respondents including respondents' gender, age and the children in their home.

##### 4.3.1 Gender

The study sought to establish the gender of the respondents. The findings are as presented in Table 4.1.

***Table 4. 1: Gender***

	<b>Frequency</b>	<b>Percentage</b>
Male	53	40.2
Female	79	59.8
<b>Total</b>	<b>132</b>	<b>100.0</b>

From the findings in Table 4.1, majority of the respondents (59.8%) were female while 40.2% were male. This shows that there was a slight imbalance in gender. This could be due

to the fact cultural setting of the area; girls seem to remain in schools longer while boys drop off to get engaged in *Khat* farming and enterprises.

#### 4.3.2 Age

The study further sought to establish the age of the respondents. The findings are as presented in Table 4.2.

**Table 4. 2: Age**

	Frequency	Percentage
Below 10 years	27	20.5
10 to 15 years	69	52.3
above 15 years	36	27.3
<b>Total</b>	<b>132</b>	<b>100.0</b>

According to the findings in Table 4.2, majority of the respondents (52.3%) were aged 10-15 years, 27.3% were above 15 years while 20.5% were below 10 years. This shows that majority of OVCs in primary schools are between 10-15 years old.

#### 4.3.3 Children in Respondents' Home

The study also sought to establish how many children are in the respondents' home. The findings are as shown in Table 4.3.

**Table 4. 3: Children in Respondents' Home**

	Frequency	Percentage
1 to 3	93	70.5
4 to 6	31	23.5
7 to 9	8	6.1
<b>Total</b>	<b>132</b>	<b>100.0</b>

From the findings in Table 4.3, 70.5% of the respondents had 1 to 3 children in their home, 23.5% had 4 to 6 children in their home while 6.1% had 7 to 9 children in their home. This

is an indication of the modern families which are having a range of 1 to 4 children per family.

#### **4.4 Food Availability**

The study sought to find out the number of meals the respondents' family members take in a day. The findings are as shown in Table 4.4.

***Table 4. 4: Number of meals the respondents' family members takes in a day***

	<b>Frequency</b>	<b>Percentage</b>
1	32	24.2
2	71	53.8
3	29	22.0
<b>Total</b>	<b>132</b>	<b>100.0</b>

According to the findings in Table 4.4, majority of the respondents' family (53.8%) takes two meals in a day, 24.2% takes 1 meal in a day while 22.0% take 3 meals in a day.

The study also sought to establish whether children in the household are satisfied by the amount of food they take at every meal in a day. The findings are as shown in Table 4.5.

***Table 4. 5: Whether children in the household are satisfied by the amount of food they take at every meal in a day***

	<b>Frequency</b>	<b>Percentage</b>
Really	58	43.9
Not Really	32	24.2
Not Sure	42	31.8
<b>Total</b>	<b>132</b>	<b>100.0</b>

According to findings, 43.9% of the respondents indicated that children in the household are really satisfied by the amount of food they take at every meal in a day, 31.8% indicated that they are not sure whether children in the household are satisfied by the amount of food they take at every meal in a day while 24.2% of the respondents indicated that children in the household are not really satisfied by the amount of food they take every meal in a day.

Further, the study sought to establish the main type of food that the respondents eat at home. The findings are as presented in Table 4.6.

***Table 4. 6: The main type of food that the respondents eat at home***

	<b>Frequency</b>	<b>Percentage</b>
Carbohydrate	65	49.2
Partial balanced	30	22.7
Full balanced	37	28.0
<b>Total</b>	<b>132</b>	<b>100.0</b>

From the findings, majority of the respondents (49.2%) indicated that the main type of food they eat at home is carbohydrate, 28.0% full balanced and 22.7% partially balanced.

The study also sought to find out how often the respondents repeat a type of food in a meal. The findings are as presented in Table 4.7.

***Table 4. 7: How often the respondents repeat a type of food in a meal***

	<b>Frequency</b>	<b>Percentage</b>
Frequent	94	71.2
Not frequent	38	28.8
<b>Total</b>	<b>132</b>	<b>100.0</b>

According to the findings, majority of the respondents (71.2%) indicated that they frequently repeat a type of food in a meal while 28.8% indicated that they don't frequently repeat a type of food in a meal.

The study further sought to find out the kind of food crops the respondents frequently farm in their land. From the findings the respondents indicated that they frequently farm beans, maize, cowpeas, potatoes and cassava.

The study further sought to find out that taking food that is not available from the farm where would the respondents easily source it from. The findings are as indicated in Table 4.8.

***Table 4. 8: Taking that food is not available from the farm where would the respondents easily source for it***

	<b>Frequency</b>	<b>Percentage</b>
From well-wishers	53	40.2
Relief from government, NGO	79	59.8
<b>Total</b>	<b>132</b>	<b>100.0</b>

According to the findings, 59.8% of the respondents indicated that taking that food not available from the farm they would easily source for it from relief from government, NGO while 40.2% indicated they would easily source it from well-wishers.

#### **4.5 Access to Resources to Acquire Food**

The study sought to find out whether the respondents have land they cultivate/practice farming. The findings are as indicated in Table 4.9.

***Table 4. 9: Whether the respondents have land they cultivate/practice farming***

	<b>Frequency</b>	<b>Percentage</b>
Yes	106	80.3
No	26	19.7
<b>Total</b>	<b>132</b>	<b>100.0</b>

From the findings, 80.3% of the respondents indicated that they have land that they cultivate/practice farming while 19.7% indicated that they did not have land they cultivate/practice farming. This is due to the fact that most families in the rural regions inherit family land, hence have land for cultivation.

The study also sought to establish whether the land used for farming is able to sustain availability of food in the household. The findings are as indicated in Table 4.10.

***Table 4. 10: Whether the land used for farming is able to sustain availability of food in the household***

	<b>Frequency</b>	<b>Percentage</b>
Yes	59	44.7
No	73	55.3
<b>Total</b>	<b>132</b>	<b>100.0</b>

According to the findings in Table 4.10, majority of the respondents (55.3%) indicated that the land used for farming is not able to sustain availability of food in the household while 44.7% indicated that the land used for farming is able to sustain availability of food in the household.

All the respondents indicated that they all at one time buy food from the market.

On the kind of cash crop that the respondents farm in their land, the respondents indicated that they frequently farm coffee, cotton, sisal and pyrethrum.

The study also sought to establish whether after harvesting food from the farm which is enough the surplus is stored or sold. The findings are as presented in Table 4.11.

***Table 4. 11: Whether after harvesting food from the farm which is enough the surplus is stored or sold***

	<b>Frequency</b>	<b>Percentage</b>
Stored	117	88.6
Sold	15	11.4
<b>Total</b>	<b>132</b>	<b>100.0</b>

From the findings, majority of the respondents (88.6%) indicated that after harvesting surplus food from the farm it is stored while 11.4% of the respondents indicated that after harvesting surplus food from the farm it is sold.

The study further sought to establish what the respondents' household monthly income is. The findings are as presented in Table 4.12.

***Table 4. 12: Respondents' household monthly income***

	<b>Frequency</b>	<b>Percentage</b>
Less than Ksh. 10,000	112	84.8
Ksh. 10,000-20,000	17	12.9
Above Ksh. 20,000	3	2.3
<b>Total</b>	<b>132</b>	<b>100.0</b>

According to the findings, 84.8% of the respondents indicated that their household monthly income is less than 10000, 12.9% indicated that their household monthly income is 10000-20000 while 2.3% indicated that household monthly income is above 20000. Thus this is an indication that majority of the respondents' households are low income earners.

#### **4.6Food Utilization Requirements**

The study sought to find out whether the respondents have access to well-maintained toilets/latrines at your household. All the respondents indicated that they have access to well-maintained toilets/latrines at your household.

The study also sought to establish whether the respondents have clean drinking water in their home compound e.g. running from a tap. The findings are as shown in Table 4.13.

***Table 4.13: Whether the respondents have access to clean drinking water in their home stead***

	<b>Frequency</b>	<b>Percentage</b>
Yes	34	25.8
No	98	74.2
<b>Total</b>	<b>132</b>	<b>100.0</b>

According to the findings, 74.2% of the respondents indicated that they do not have clean drinking water in their home stead e.g. running from a tap while 25.8% of the respondents indicated that they have clean drinking water in their home compound e.g. running from a tap. This is due to the low development in the region as well as the dry climate which has made access to clean tapped water as well as the water tables quite low.

The study also sought to establish from the respondents which is the main source of water for their domestic use. The findings are as presented in Table 4.14.

***Table 4. 14: The main source of water for their domestic use***

	<b>Frequency</b>	<b>Percentage</b>
Piped water	43	32.6
Water from a well/river/pond	89	67.4
<b>Total</b>	<b>132</b>	<b>100.0</b>

From the findings, 67.4% of the respondents indicated that the main source of water in their homestead is from a well/river/pond while 32.6% indicated its piped water.

The study also sought to establish whether the family of the respondents believes in taboos that limit certain types of food available in this region. All the respondents indicated that their families do not believe in taboos that limit certain types of food available in this region. The respondents also indicated that there is a health facility like government hospital, dispensary.

The study also sought to establish how far is the nearest health facility (Hospital/dispensary) away from the respondent's home. The findings are as shown in Table 4.15.

**Table 4.15: Distance of the nearest health facility (Hospital/dispensary) from the respondent's home.**

	Frequency	Percentage
Less than 2km	24	18.2
2km – 5km	33	25.0
Above 5km	75	56.8
<b>Total</b>	<b>132</b>	<b>100.0</b>

From the findings, majority of the respondents (56.8%) indicated that the nearest health facility (hospital dispensary) is above 5 Km away from their home, 25.0% 2Km-5Km away from their home while 18.2% indicate less than 2 Km away from their home.

The study also sought to establish whether any member of the respondents' family had undergone any food nutrition training/seminar. The findings are as indicated in Table 4.16.

**Table 4.16: Whether any member of the respondents' family had undergone any food nutrition training/seminar**

	Frequency	Percentage
Yes	63	47.7
No	69	52.3
<b>Total</b>	<b>132</b>	<b>100.0</b>

From the findings in Table 4.16, majority of the respondents (52.3%) indicated that a member of their family had undergone a food nutrition training/seminar while 47.7 indicated that a member of their family had not undergone a food nutrition training/seminar. This difference is very low, which is a positive indication of attendance to nutrition training and seminars.

The study further sought to find out who had organized the seminar/training. The findings are as indicated in Table 4.17.

**Table 4. 17: Organizer of the seminar/training**

	Frequency	Percentage
Area administrator	28	21.2
Ministry of Health	24	18.1
NGO group	80	60.7
<b>Total</b>	<b>132</b>	<b>100.0</b>

According to the findings in Table 4.17, 60.7% of the respondents indicated that the NGO group had organized the seminar/training, 18.1% indicated that the seminar was organized by area administrator while 18.1% indicated that it was organized by the ministry of health.

The study also sought to find out how often a sick member of the respondents family especially children go to hospital. The findings are as presented in Table 4.18.

**Table 4. 18: How often does a sick member of the respondent's family especially children go to hospital**

	Frequency	Percentage
Frequent	23	17.4
Not frequent	70	53.0
Rarely	39	29.6
<b>Total</b>	<b>132</b>	<b>100.0</b>

According to the findings in Table 4.18 majority of the respondents (53.0%) indicated that their family members when sick especially children do not frequently go to hospital, 29.6% indicated their family members when sick especially children rarely go to hospital while 17.4% of their family members while sick especially children frequently go to the hospital

#### **4.7Stability of Food Security Systems**

The study sought to find out whether there is enough food available at the respondents' home all the time. The findings are as shown in Table 4.19.

***Table 4.19: Whether there is enough food available at the respondents' home all the time***

	<b>Frequency</b>	<b>Percentage</b>
Yes	13	9.8
No	119	90.2
<b>Total</b>	<b>132</b>	<b>100.0</b>

According to the findings in Table 4.19, majority of the respondents 90.2% indicated that there is not enough food available at their home all the time while 9.8% of the respondents indicated that there is enough food available at their home all the time.

The study further sought to establish which method of preservation is used to store food in the stores. The findings are as presented in Table 4.20.

***Table 4.20: Method of preservation used to store food in the stores***

	<b>Frequency</b>	<b>Percentage</b>
Traditional method	27	20.5
Use of preservatives	105	79.5
<b>Total</b>	<b>132</b>	<b>100.0</b>

From the findings, 79.5% of the respondent indicated that they use preservatives to store food in the stores while 20.5% indicated that they use traditional methods.

The study further sought to establish whether over the last five years the respondents' had a case of people suffering due to food poisoning in their area (that is over 5km square). The findings are as presented in Table 4.21.

**Table 4.21: Whether over the last five years the respondents' had a case of people suffering due to food poisoning in their area (that is over 5km square)**

	Frequency	Percentage
Yes	61	46.2
No	54	40.9
Don't Know	17	12.9
<b>Total</b>	<b>132</b>	<b>100.0</b>

According to the findings, majority of the respondents (46.2%) indicated that over the last five years they had a case of people suffering due to food poisoning in their area (that is over 5km square), 40.9% they indicated no while 12.9% indicated they did not know.

The study further sought to find out whether the people in the respondents' area were provided with seeds to grow/farm inputs during planting season. The findings are as shown in Table 4.22.

**Table 4. 22: Whether the people in the respondents' area were provided with seed to grow/farm inputs during planting season**

	Frequency	Percentage
By the government	19	14.4
By NGO's	17	12.9
None	96	72.7
<b>Total</b>	<b>132</b>	<b>100.0</b>

The findings in Table 4.22 indicate that majority of the respondents (72.7%) indicated that the people in their area were not provided with seed to grow/farm input during planting season, 14.4% indicated that the people in their area were provided with seed to grow/farm input during planting season by the government while 12.9% indicated that the people in their area were provided with seed to grow/farm input during planting season by NGO's.

#### 4.7 Implementation of Orphans and Vulnerable Children Programs

The study sought to find out how many organizations/institutions the respondents know that run orphans and vulnerable children programs in the area. The respondents indicated that they know of five organizations that run orphans and vulnerable children programs in the area. All the respondents further indicated that they were supported by organizations which include Food for the hungry International (FHI), Tumaini shepherd, Compassion International Kenya (CIK), Lewa down conservancy and Ripples International (RI).

The study further sought to establish the ranking of the interventions the organization/institutions provided to the respondent in order of organization/ institutions frequency/priority. The findings are as shown in table 4.23

***Table 4.23 ranking of the interventions the organization/ institutions provided to the respondent in order of frequency or organization/ institutions priority.***

	Rank
Health support	3
Education	4
Food and nutrition	5
Shelter and care	6
Protection and legal services support	7
Psychosocial support	1
Household economic strengthening support	2

According to the findings the respondents ranking of the interventions the organizations/institution provide to them in order of frequency or the organizations/institution priority psychological support was ranked as number one, household economic strengthening support as number two, health support as number three, education as number four, food and nutrition as number five, shelter and care as number six and finally as number seven protection and legal services support.

The study further sought to establish the respondents' ranking of the interventions the organizations or institutions provide to them in order of their priority or if they were to be supported what would be their priority. The findings are as shown in Table 4.24

***Table 4. 24: Respondents ranking of the interventions the organizations or institution provide to them in order of their priority or if they were to be supported what would be your priority***

	<b>Rank</b>
Health support	3
Education	1
Food and nutrition	2
Shelter and care	4
Protection and legal services support	5
Psychosocial support	7
Household economic strengthening support	6

According to the findings the respondents ranking of the interventions the organizations or institution provide to them in order of their priority or if they were to be supported what would be their priority education was ranked as number one, food and nutrition as number two, health support as number three, shelter and care as number four, protection and legal services support as number five, household economic strengthening support as number six and finally psychological support as number seven.

The study further sought to establish whether the programs have been successful in improving their life status. The findings are has shown in table 4.25

**Table 4.25** *whether the respondent think the said programs have been successful in improving their welfare.*

	Frequency	Percentage
Very much	23	17.4
Somehow	56	42.4
Not at all	53	40.2
<b>Total</b>	<b>132</b>	<b>100.0</b>

According to the findings, majority of the respondents (42.4%) indicated that the said programs have somehow been successful in improving their life welfare, 40.2% indicated that the said programs have not at all been successful in improving their welfare while 17.4% indicate that the said programs have been very much successful in improving their welfare.

Further the study sought to find out which food and nutrition support the respondents had received. The findings are as indicated in Table 4.26.

**Table 4. 26:** *Food and nutrition support the respondents had received*

	Frequency	Percentage
Nutrition education	25	18.9
Livestock e.g. Rabbit, goat and chicken	87	65.9
Food relief and donation	20	15.2
<b>Total</b>	<b>132</b>	<b>100.0</b>

From the findings, majority of the respondents (65.9%) indicated that they had received livestock e.g. rabbit, goat chicken to provide animal protein, 18.9% nutrition education while 15.2% indicated food relief and donation.

The study further sought to establish the school performance of the respondents. The findings are as shown in Table 4.27.

***Table 4. 27: School performance***

	<b>Frequency</b>	<b>Percentage</b>
Position 1-10	45	34.1
Position 10-20	54	40.9
Position 20-30	33	25.0
<b>Total</b>	<b>132</b>	<b>100.0</b>

From the findings, 34.1% of the respondents indicated their school performance was position 1-10, 40.9% indicated that their school performance was position 10-20 while 25.0% indicated that their school performance was position 20-30.

The study further sought to establish the number of days the respondents had missed school this year. The findings are as shown in Table 4.28.

***Table 4. 28: The number of days the respondents had missed school this year***

	<b>Frequency</b>	<b>Percentage</b>
None	14	10.6
1 - 5 days	26	19.7
5- 10 days	59	44.7
10 - 15 days	24	18.2
above 15 days	9	6.8
<b>Total</b>	<b>132</b>	<b>100.0</b>

According to the findings, 44.7% of the respondents had missed school for 5-10 days this year, 19.7% for 1-5 days, 18.2% for 10-15 days, 10.6% had not missed while 6.8% had missed school for above 15days.

Further, the study sought to find out the major reason that made the respondent absent from school. The findings are as presented in Table 4.29.

***Table 4. 29: Major reason that made the respondent absent from school***

	<b>Frequency</b>	<b>Percentage</b>
No good reason	7	5.3
Went to work on farm or with live stock to earn for food	22	16.7
Was unwell	48	36.4
Was sent away because of school levies or other school materials	55	41.7
<b>Total</b>	<b>132</b>	<b>100.0</b>

From the findings, 41.7% of the respondents indicated that the major reason that made them absent from school is because they were sent away because of school levies or other school materials, 36.4% indicated they were unwell, 16.7% went to work on farm or with livestock to earn for food while 5.3% had no good reason. The respondents also indicated that the organizations that support them follow up on their school performance and attendance.

## **CHAPTER FIVE**

### **SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter presented the discussion of key data findings, conclusion drawn from the findings highlighted and recommendation made there-to. The conclusions and recommendations drawn were focused on addressing the objective of the study.

#### **5.2 Summary of Findings**

The study sought to establish the extent to which orphans and vulnerable children in Buuri District households are food secure and how this has an overriding effect in the implementation of OVC of programs being carried out by development agents to impact on the growth and development of the children. The variables applied are has in the conceptual framework and were successfully applied by Stamoulis et al (2003) where the study concluded that food security objective to be realized, all the four dimensions must be applied simultaneously.

##### **5.2.1 Food Availability**

The study established that majority of the orphans and vulnerable children in Buuri District families (53.8%) take two meals in a day. This finding contradicts the results obtained by Tayebwa and Bashasha (2005) in their study, who found out that only 1.6% of population, took two meals a day while 95.5% of them had three meals a day. The study also established that (43.9%) children in the household are really satisfied by the amount of food they take at every meal in a day. The study also established that the main type of food the orphans and vulnerable children in Buuri District eat at home is carbohydrate and they frequently repeat a type of food in a meal. This observation is in line with the claim made by Wilma (2007) who highlighted that in the rural Africa families access selected types of meals, which leads to basic food nutrients not being met. The study also established that the households of orphans and vulnerable children in Buuri District frequently farm beans, maize, cowpeas, potatoes and cassava. 59.8% of the orphans and vulnerable children in Buuri District

families indicated that taking that food is not available from the farm they would easily source for it from relief from government.

### **5.2.2 Access to Resources to Acquire Food**

The study deduced that orphans and vulnerable children in Buuri District have land they cultivate/practice farming and the land used for farming is not able to sustain availability of food in the household. On the kind of cash crop that the orphans and vulnerable children in Buuri District farm in their land, they indicated that they frequently farm coffee, cotton, sisal and pyrethrum. Further the study found out that when the food harvested from the farm is enough, the surplus it is mainly stored. However, Swaminathan (2006) argued that the presence of surplus food stuff, which is mainly stored does not indicate plenty but under consumption of foodstuff by the poor. The study further established that orphans and vulnerable children in Buuri District household monthly income is less than Ksh.10, 000.

### **5.2.3 Food Utilization Requirements**

The study established that orphans and vulnerable children in Buuri District have access to well-maintained toilets/latrines at their household. 74.2% of the orphans and vulnerable children in Buuri District indicated that they have no access to clean drinking water in their home stead e.g. running from a tap and the main source of water for their domestic use is water from a well/river/pond. These findings are in line with the arguments of Iram and Butt (2004) who pointed out that lack of clean water and sanitation in the rural areas was one of the threats to food security. The study also found out that orphans and vulnerable children in Buuri District families do not believe in taboos that limit certain types of food available in this region. The study further deduced that there is a health facility like government hospital/ dispensary that is above 5 Km away from the majority of orphans and vulnerable children homes. The study also established that a member of the orphans and vulnerable children household had undergone a food nutrition training/seminar in Buuri District which was mainly organized a NGO group. The study also deduced that a sick family member of orphans and vulnerable children in Buuri District especially children do not frequently go to hospital.

#### **5.2.4 Stability of Food Security Systems**

The study deduced that there is not enough food available at orphans and vulnerable children in Buuri District home all the time. The study also found out that orphans and vulnerable children in Buuri District use preservatives to store food in the stores. According to FAO (2006) combined food safety and storage contribute s to the nutrition status of OVC. Further the study found out that over the last five years orphans and vulnerable children in Buuri District had a case of people suffering due to food poisoning in their area (that is over 5km square). Further the households are not provided with seed to grow or farm inputs during planting season.

#### **5.2.5 Implementation of Orphans and Vulnerable Children Programs**

The study deduced that the respondents know of five organizations that run orphans and vulnerable children programs in the area. According to the study respondents ranked interventions provided by the organizations/ institution according to the organizations/ institution frequency/priority as follows psychological support was ranked as number one, household economic strengthening support as number two, health support as number three, education as number four, food and nutrition as number five, shelter and care as number six and finally as number seven protection and legal services support. Whereas the study deduced that these interventions according to respondents' priority were education was ranked as number one, food and nutrition as number two, health support as number three, shelter and care as number four, protection and legal services support as number five, household economic strengthening support as number six and finally psychological support as number seven. Further the study deduced that 42.4% of Orphans and vulnerable children in Buuri district think that the program has somehow improved their welfare and out of food and nutrition support, 65.9 received life stock e.g. Rabbit goat and chicken. The study established that 40.9% of orphans and vulnerable children in Buuri district school performance was position 10-20 and that 44.7% of orphans and vulnerable children missed school on 5-10 days this year and further the study indicated that 41.7% of those who missed school were sent away because of school levies or other materials. The study also established the organization follow on orphans and vulnerable children school performance.

### **5.3 Discussion of the findings**

#### **5.3.1 Food Availability**

The study established that majority of the orphans and vulnerable children in Buuri District families (53.8%) take two meals in a day. The study also established that (43.9%) were satisfied with the meals provided to the members. The study also established that that the main type of food the orphans and vulnerable children in Buuri District eat at home is carbohydrate and they frequently repeat a type of food in a meal. 59.8% of the orphans and vulnerable children in Buuri District families indicated that taking that food is not available from the farm they would easily source for it from relief from government. These findings are in line with KIHBS (2005/2006) who explains that among other initiatives, the government has perennially been providing food relief to the residents for the last couple of years. This has inevitably led to a cycle of poverty that has led to adverse effect on the people in the district, orphans and vulnerable children included.

#### **5.3.2 Access to Resources to Acquire Food**

The study deduced that orphans and vulnerable children in Buuri District have land they cultivate/practice farming and the land used for farming is not able to sustain availability of food in the household. The study also established that orphans and vulnerable children in Buuri District frequently farm beans, maize, cowpeas, potatoes and cassava. On the kind of cash crop that the orphans and vulnerable children in Buuri District farm in their land, they indicated that they frequently farm coffee, cotton, sisal and pyrethrum. Further the study found out that after harvesting enough food from the farm the surplus food is stored. The study further established that orphans and vulnerable children in Buuri District household monthly income is less than Ksh.10000. The findings correlate with Nyariki et al (2002), who posit that ensuring food and nutrition security is a critical challenge especially in sub-Saharan Africa and that often the information on the level of food insecurity is either scanty or unavailable.

### **5.3.3 Food Utilization Requirements**

The study established that orphans and vulnerable children in Buuri District have access to well-maintained toilets/latrines at their household. 74.2% of the orphans and vulnerable children in Buuri District indicated that they do not have access to clean drinking water in their home stead e.g. running from a tap and the main source of water in their homestead is water from well/river/pond. These findings are in line with the arguments of Iram and Butt (2004) who pointed out that lack of clean water and sanitation in the rural areas was one of the threats to food security. The study also found out that orphans and vulnerable children in Buuri District families do not believe in taboos that limit certain types of food available in this region. The study further deduced that there is a health facility like government hospital, dispensary and the nearest health facility (hospital dispensary) is above 5 Km away from their home. The study also established that a member of the orphans and vulnerable children family had undergone a food nutrition training/seminar in Buuri District which was organized by a NGO group. The study also deduced that a sick family members of orphans and vulnerable children in Buuri District especially children do not frequently go to hospital. These findings concur with the Meru District strategic plans (2005-2010) which reveals that the region has slightly over 15 health facilities that are spread all over the district. This is an indicator to the problem of accessibility of health facilities since the average distance to the nearest health facility is 7kms. Besides, there is only 1 doctor for every 33,259 (1:33,259). This therefore, implies that most of the health facilities in the district are manned by other cadres of healthy workers. The distance that residents have to go to get medical attention can be another reason why orphans and vulnerable children do not frequently go to hospital.

### **5.3.4 Stability of Food Security Systems**

The study deduced that there is not enough food available at orphans and vulnerable children in Buuri District home all the time. The study also found out that orphans and vulnerable children in Buuri District use preservatives to store food in the stores. Further the study found out that over the last five years orphans and vulnerable children in Buuri District had a case of people suffering due to food poisoning in their area (that is over 5km square). The people in their area were not provided with seed to grow or farm inputs during

planting season. These findings are in line with Claudia and Elizabeth (2010) who argue that persons who are living in poverty, female heads of household, single parents, people living with many siblings, landless people, migrants, immigrants, and those living in certain geographical regions constitute populations at risk and most vulnerable to food insecurity. A study by Daniel et al (2010) concluded that food insecure children had moderately higher levels of emotional problems relative to food secure children. Another study by Ashiabi (2005) revealed that food insecurity had negative significant effect on child health, emotional well-being to school engagement.

### **5.3.5 Implementation of Orphans and Vulnerable Children Programs**

The study deduced that the respondents know of five organizations that run orphans and vulnerable children programs in the area. According to the study respondents ranked interventions provided by the organizations/ institution according to the organizations/ institution frequency/priority as follows psychological support was ranked as number one, household economic strengthening support as number two, health support as number three, education as number four, food and nutrition as number five, shelter and care as number six and finally as number seven protection and legal services support. Whereas the study deduced that these interventions according to respondents' priority were education was ranked as number one, food and nutrition as number two, health support as number three, shelter and care as number four, protection and legal services support as number five, household economic strengthening support as number six and finally psychological support as number seven. Further the study deduced that 42.4% of Orphans and vulnerable children in Buuri district think that the program has somehow improved their welfare and out of food and nutrition support, 65.9 received life stock e.g. Rabbit goat and chicken. The study established that 40.9% of orphans and vulnerable children in Buuri district school performance was position 10-20 and that 44.7% of orphans and vulnerable children missed school on 5-10 days this year and further the study indicated that 41.7% of those who missed school were sent away because of school levies or other materials. The study also established the organization follow on orphans and vulnerable children school performance. These findings are echoed (Mugenda, 2008), where it is stated the growing number of

orphans and vulnerable children is a grave concern that a holistic intervention focused on finding a long lasting solution should be sought which seems to have eluded development experts, governments and donors where he further explains that by the close of 20<sup>th</sup> century it had become apparently clear that poverty was raving some parts of the world at an alarming rate and that this problem is further compounded by the HIV/AIDS pandemic, gender inequalities, social and political upheavals in the 21<sup>st</sup> century.

To focus on the transgression of the inter-generation progression of poverty (Mugenda, 2008), household food security is key in ensuring that children's lives are broadening in perspectives and are gaining new experiences, that will make them become better leaders of tomorrow and make this world a better place for many generations to come.

## **5.4 Conclusions**

### **5.4.1 Food Availability**

From the findings, the study concludes that orphans and vulnerable children in Buuri District are satisfied with the meals they take in a day and the main type of food they take at home is carbohydrate.

### **5.4.2 Access to Resources to Acquire Food**

The study also concludes that orphans and vulnerable children in Buuri District have land they cultivate/practice farming which is not able to sustain availability of food in the household.

### **5.4.3 Food Utilization Requirements**

The study further concludes that orphans and vulnerable children in Buuri District have access to well-maintained toilets/latrines at their household. The study also concludes that the orphans and vulnerable children in Buuri District indicated that they do not access to clean drinking water in their home compound e.g. running from a tap and the main source of water in their homestead is piped water and when a sick member of their family is sick especially children they don't frequently go to hospital.

#### **5.4.4 Stability of Food Security Systems**

The study concludes that there is not enough food available at orphans and vulnerable children in Buuri District household all the time. The study also concludes that orphans and vulnerable children in Buuri District use preservatives to store food in the stores. The study concludes that people in their area were not provided with seed to grow or farm input during planting season.

#### **5.4.5. Implementation of Orphans and Vulnerable Children Programs**

Finally the study concludes that there are five organization/institutions working in the area and their priority of intervention is different from that of orphans and vulnerable children in Buuri district and that the OVC somehow think the organizations have been successful in improving their welfare.

### **5.5 Recommendations**

Based on the research findings and conclusions the study recommends that:

1. The government of Kenya should ensure that more hospitals are built in Buuri District and fully equipped to serve the residents effectively and address the issue of water provision
2. The study also recommends that NGO's and the government should team up to provide food and nutrition to the orphans and vulnerable children in Buuri District that are faced with food insecurity to ensure their proper growth and development and also an effective measure of addressing their other needs.
3. The study further recommends that the government should provide the orphans and vulnerable children with seeds to plant during the planting season. This is from the fact that the study found out that the people in the area were not provided with seeds which can lead to them using seeds that are not certified hence leading to little or no harvest.
4. The study finally recommends that orphans and vulnerable children in Buuri District should ensure that they are cautious while using preservatives to store farm produce.

This is because they can risk been victims of food poisoning due to use if non-certified preservatives. They should explore traditional methods of preservation in cases where they are not sure of the preservatives to use.

### **5.6 Suggestion for Further Studies**

Another study should be done to investigate the challenges influencing the implementation of orphans and vulnerable children programs in Buuri District. A similar study should also be done on other districts to find out whether they will have similar findings. Further studies should be done on the influence of household food security on academic performance of orphans and vulnerable children in other regions in the country.

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## **APPENDICES**

### **Appendix I: Letter Of Transmittal Of Data Collection Instruments**

**Margaret Makena Kiambi**

**P.O Box 2894 - 60200,**

**Meru- Kenya.**

**Dear Sir /Madam,**

**RE: Letter To The respondents**

I am currently a student at The University of Nairobi pursuing a Masters degree in Project Planning and Management to meet the requirements of the programme I am undertaking a study on **INFLUENCE OF HOUSEHOLD FOOD SECURITY IN THE IMPLEMENTATION OF ORPHANS AND VULNERABLE CHILDREN PROGRAMS IN BUURI DISTRICT OF MERU COUNTY, KENYA.**

Kindly provide data which I require for this study through the provided study instruments.

The data you provide will be used for research purpose only and your identity will be held confidential.

**Thank you.**

**Yours Faithfully,**

**Margaret Makena Kiambi**

**L50/78203/2009**

## **APPENDIX II:**

### **QUESTIONNAIRE**

This questionnaire is to collect data for purely academic purposes. You are kindly requested to answer the questions as sincerely as possible. The information you will give will be used for research purposes and your identity will be treated with confidentiality.

Fill the questionnaire by putting a tick  $\checkmark$  in the appropriate box or by writing your response in the provided spaces

Record number	
Date of the interview	

#### **SECTION A: DEMOGRAPHIC INFORMATION**

##### **1. Location**

Location	District	
	Division	
	Location	

##### **1. What is your gender?**

Male [ ] Female [ ]

##### **2. What is your Age?**

Below 10 years [ ] 10-15 [ ] above 15 years [ ]

##### **3. How many children are in your home?**

1-3 [ ] 4-6 [ ] 7-9 [ ] More than 9 [ ]

## SECTION B : OBJECTIVES

### i) Food Availability

1. How many meals do you or your family members take in a day?

1 [ ]      2 [ ]      3 [ ]

2. Are children in the household satisfied by the amount of food they take every meal in a day?

Really [ ]

Not really [ ]

Not sure [ ]

3. What is the main type of food that you eat at your home

Carbohydrate [ ]

Protein [ ]

Vitamins [ ]

Partial balanced [ ]

Full balanced [ ]

4. How often do you repeat a type of food in a meal?

Frequent [ ]

Not frequent [ ]

Rarely [ ]

5. What kind of food crops do you frequently farm in your land

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

6. Taking that food is not available from the farm where would you easily source for it?

From well-wishers [ ]

Relief from government, NGO [ ]

Others (specify) \_\_\_\_\_

**ii) Access to Resources to Acquire Food**

7. Do you have land where you cultivate/practice farming  
Yes [ ] No [ ]
8. Is land used for farming able to sustain availability of food in the household?  
Yes [ ] No [ ]
9. Do you at any given time buy food from the market  
Yes [ ] No [ ]
10. What kind of cash crop do you frequently farm in your land  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
11. After harvesting food from the farm which is enough the surplus is  
Stored [ ] Sold [ ]
12. Approximately what is your household monthly income  
Less than Ksh.10, 000 [ ] Ksh.10, 000 – 20,000 [ ] Above Ksh.20, 000 [ ]

**iii) Food Utilization Requirements**

13. Do you have access to well-maintained toilets/latrines at your household?  
Yes [ ] No [ ]
14. In your home stead do you have access to clean drinking water?  
e.g. running from a tap.  
Yes [ ] No [ ]
15. What is the main source of water for your domestic use?  
I. Piped water [ ] II. Water from a well/river/pond [ ]
16. My family beliefs in taboos that limit certain types of food available in this region?  
Yes [ ] No [ ] Don't Know [ ]
17. Is there any health facility like government hospital, dispensary?  
Yes [ ] No [ ]
18. How far in the nearest health facility (Hospital dispensary) away from your home?  
Less than 2km [ ] 2km – 5km [ ] Above 5km [ ]

19. Has any member of your family undergone any food nutrition training/seminar?

Yes ☐ No ☐

20. Who organized for the seminar/training?

Area administration ☐ Ministry of health ☐ NGO group ☐

21. How often does a sick member of your family especially children go to hospital?

Frequent ☐ Not frequent ☐ Rarely ☐

#### **iv) Stability of Food Security Systems**

22. Is there enough food available at your home all the time?

Yes ☐ No ☐

23. At some point of the year food consumed in the household is gotten from the stores. Which method of preservation is used to store food?

Traditional method ☐ Use of preservatives ☐ Use of ultra-modern method ☐

24. Over the last five years have you had a case of people suffering due to food poisoning in your area (that is over 5km square)?

Yes ☐ No ☐ don't know ☐

25. Are people in your area provided with seeds to grow or farm inputs during planting season

By the government ☐ By NGO's ☐ None ☐

#### **v) Implementation of Orphans and Vulnerable Children programs**

26. How many organizations/institutions do you know that run Orphans and Vulnerable Children programs in this area?

\_\_\_\_\_

27. Are you sponsored/supported by any of the organization or institution

Yes ☐ No ☐

If yes, which one \_\_\_\_\_

28. Rank the interventions provided to you by the organization/institutions in order of frequency or organization/institution priority

Health support	[ ]
Education	[ ]
Food and nutrition	[ ]
Shelter and care	[ ]
Protection and legal services support	[ ]
Psychosocial support	[ ]

29. Rank the interventions the organizations or institution provide to you in order of your priority or if you were to be supported what would be your priority

Health support	[ ]
Education	[ ]
Food and nutrition	[ ]
Shelter and care	[ ]
Protection and legal services support	[ ]
Psychosocial support	[ ]
Household economic strengthening support	[ ]

30. Do you think these programs have been successful in improving your welfare?

Very much [ ]

Somehow [ ]

Not at all [ ]

31. Have you received any food and nutrition support?

Yes [ ]

No [ ]

32. If yes which of the following have you received?

Nutrition education	[ ]
Kitchen garden to provide vegetables	[ ]
Livestock e.g. Rabbit, goat and chicken	[ ]
Food relief and donation	[ ]
Therapeutic or supplementary food	[ ]
Farm inputs	[ ]

33. How is your school performance?

Position 1-10 [ ] 10- 20 [ ] 20- 30[ ] below 30[ ]

34. How many days have you missed school this year

None [ ] 1 - 5 days [ ] 5- 10 days [ ] 10 - 15 days [ ] above 15 days [ ]

35. What is the major reason that made you be absent from school

No good reason [ ]

Went to work on farm or with life stock to earn for food [ ]

Was unwell [ ]

Was sent away because of school levies or other school materials [ ]

There was no food at home for me to eat after school [ ]

My parent asked me to stay at home to help with home chores [ ]

36. Does the organization that supports you follow up on your school performance and attendance?

Yes [ ] No [ ]