ASSESSMENT OF FACTORS INFLUENCING CHILD-FEEDING PRACTICES AMONG FIRST-TIME MOTHERS IN WEKHOMO LOCATION, LUANDA SUB-COUNTY, KENYA

BY

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DECLARATION

I declare that this Thesis is my original work and has not been previously presented for a Masters' degree in Maseno University or in any other university.

No part of this work should be published without the prior knowledge or consent of the author or that of Maseno University.

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DEDICATION

To my parents; Mr. /Mrs. John and Jemimah Mbwaya, to Evance and Lerone Seko whose encouragement saw me all throughout my studies and above all to God for His favor, love and blessings.

ABSTRACT

Improper child-feeding practices directly affect the nutritional status of under-fives and ultimately impact on their survival. Improving child-feeding practices of under- fives is critical to their overall health and developmental milestones. In 2001, the World Health Organization (WHO) recommended exclusive breastfeeding for 180 days a change from the previous proposal to introduce complementary foods at four to six months. Luanda Sub-County experiences massive population explosion and pressure on the resources like land, infrastructure and agriculture. Despite the favorable climate for crop production activities undertaken in rural areas where the majority live, agricultural productivity in the county is low and declining and 57% of the population and households live below poverty food line. This study undertook a community-based cross-sectional design that sought to assess the economic, social and cultural factors that influence child-feeding practices of first-time mothers of children under five years of age, residing in Ebuhando, Ebusundi and Iboona Sub-locations in Wekhomo Location, Luanda Sub-County. Snowball sampling was used and structured questionnaires administered to 422 respondents. Proportions were determined using chi-square analysis. The independent variables; economic, social and cultural factors, were regressed against exclusive breastfeeding and complementary feeding, the dependent variables. Chi-square analysis revealed that the economic factors that were significantly associated with exclusive breastfeeding practices of first-time mothers included; the primary source of food (P= 0.003), sustainability of the primary source of food (P=0.049), household food security (P= 0.013) and type of complementary feeds given (P= 0.014). Regression analysis of economic factors demonstrated that household food security has a considerable influence on child-feeding practices where first-time mothers who practice farming were six times more likely to observe the exclusive breastfeeding period (OR 6.115, 95% CI, 2.165-17.268; P=0.001) while those who purchase food were three times more likely to adhere to the exclusive breastfeeding period (OR 3.172, 95%CI, 1.175-8.562; P=0.023). First-time mothers who practice farming (OR 4.079, 95%CI, 0.979-16.995; P=0.054) and those who purchase food from the market (OR 4.266, 95%CI, 1.125-16.184; P=0.033) were four times more likely to adhere to the recommended complementary feeding period. Chi-square and regression analysis on social variables did not reveal any significant influence on child-feeding practices of first-time mothers. Regression analysis of cultural factors showed that food taboos influence feeding practices since those who do not have any taboos are three times more likely to observe the recommended complementary feeding period (OR 3.558, 95%CI 0.958-13.216; P=0.058). The analysis also revealed that first-time mothers who received child-feeding information from the clinic were seventeen times more likely to adhere to the recommended complementary feeding period (OR 17.506, 95%CI 1.011-303.166; P=0.049) where as those who received information from social gatherings were less likely to observe the recommended weaning period (OR 0.034, 95%CI 0.003-0.428; P=0.009). This study recommends alternative economic activities, social support through engagement of grandmothers and fathers and support of cultural roles and realities by healthcare providers.

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ACRONYMS

EDDP: Emuhaya District Development Plan

FAO: Food and Agriculture Organization

GOK: Government of Kenya

KDHS: Kenya Demographic and Health Survey

PAHO: Pan American Health Organization

UNICEF: United Nations Children Fund

USAID: United States Agency for International Development

WHO: World Health Organization

OPERATIONAL DEFINITION OF TERMS

Child-feeding practices: Behaviors related to infant and young child-feeding on an ongoing basis.

Exclusive Breastfeeding: The first six months that an infant receives only breast milk from his or her mother or a wet nurse, or expressed breast milk, and no other liquids or solids, not even water, with the exception of oral rehydration solution, drops or syrups consisting of vitamins, minerals supplements or medicines.

Complementary feeding: The process starting when breast milk is no longer sufficient to meet the nutritional requirements of infants, and therefore other foods and liquids are needed, along with breast milk. The target range for complementary feeding is generally taken to be 6 to 23 months of age, even though breastfeeding may continue beyond two years.

First-time mother: A woman who has given birth for the first time.

Food taboo: A prohibition against consuming certain foods.

Food availability: Sufficient food supplied to households through domestic production, purchase and aid.

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CHAPTER ONE: INTRODUCTION

1.1. Background Information

Childhood under-nutrition is a prevalent public health issue throughout the developing world whose determinants include poor availability of food and the specific factors differ depending on geographic, social, and cultural setting (Laura *et al.*, 1999). World Health Organization (WHO) and United Nations Children's Fund (UNICEF) jointly developed the Global Strategy for Infant and Young Child-feeding to revitalize world attention to the impact that feeding practices have on the nutritional status, growth and development, health, and thus the very survival of infants and young children (WHO/UNICEF, 2003). Inappropriate feeding practices and their consequences are major obstacles to sustainable socioeconomic development and poverty reduction.

Malnutrition, a result of poor child-feeding practices, has been responsible, directly or indirectly, for 60% of the 10.9 million deaths annually among children under five worldwide. Well over two-thirds of these deaths, which are often associated with inappropriate feeding practices, occur during the first year of life. Not more than 35% of infants worldwide are exclusively breastfed during the first four months of life; complementary feeding frequently begins too early or too late, and foods are often nutritionally inadequate and unsafe. Malnourished children who survive are more frequently sick and suffer the life-long consequences of impaired development (WHO/UNICEF, 2004).

In the 15 years since the adoption of the original Innocenti Declaration in 1990, remarkable progress has been made in improving infant and young child-feeding practices worldwide. Nevertheless, inappropriate feeding practices remain the greatest threat to child health and survival globally. Improved breastfeeding alone could save the lives of more than 3,500 children every day, more than any other preventive intervention (WHO/UNICEF, 2003). A study by Ryan *et al* examined factors that influence a mother's infant feeding practices. Maternal age, education, income, marital status, ethnicity and the way the mother herself was fed are correlated with breastfeeding initiation and duration (Ryan *et al.,* 1991). Although demographic factors are strong predictors, complex psychosocial variables such as knowledge, attitudes and beliefs are more important and modifiable determinants of infant feeding practices (Losch *et al.*, 1995).

In Kenya, poor breastfeeding and complementary feeding practices, coupled with high rates of childhood diseases, result in high rates of malnutrition and mortality during the first two years of life (UNICEF, 2008). Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants; it is also an integral part of the reproductive process with important both positive and negative implications for the health of mothers. As a global public health recommendation, infants should be exclusively breastfed for the first six months of life to achieve optimal growth, development and health. Thereafter, to meet their evolving nutritional requirements, infants should receive nutritionally adequate and safe complementary foods while breastfeeding continues for up to two years of age or beyond (WHO/UNICEF, 2004). The Exclusive Breast Feeding (EBF) rate in the developing world stands at 39% while in Eastern and Southern Africa it stands at 52%, the rate in West and Central Africa (20%) remains among the lowest in the world (UNICEF, 2007). In Kenya, the EBF rate is 32% with 24% of children under two months receiving complementary foods and liquids. The median duration of exclusive breastfeeding is estimated at less than one month (KDHS, 2010).

Results of the 2008/09 Kenya Demographic and Health Survey revealed persistently high levels of malnutrition, with stunting peaking at 46% among children in the second year of life in Kenya (KDHS, 2010). In VihigaCounty, 45.8% of the total population of children under the age of five is either underweight, stunted or have wasting condition. Of this population, 14.8% are underweight, 28.4% stunting and 2.6% wasting. While some gains have been made in the past five years, 2014 survey data show that still about 26% of Kenyan children are stunted, while 8% are severely stunted. Stunting is highest (36%) in children age 18-23 months and lowest (10%) in children age less than 6 months. Although interventions promoting optimal breastfeeding have proved successful, feeding young children from six months of age has had less programmatic focus (KDHS, 2014).

During the important transition period to a weaning diet, 16% of infants are not fed appropriately with both breast milk and other foods (UNICEF, 2009) because about 30% of households in Kenya are food insecure as defined as per capita access to calories (FAO, 2009). Many more households lack access to diverse diets year round hence there is need to ensure quality and continuity of food access, in addition to quantity, for all household members (World Bank, 2008). Several types of interventions can be used to improve nutrient intake adequacy in infant

and young child (IYC) diets, including fortified foods, home fortification, nutrition education and behavior change communication (BCC) in addition to agricultural and market-based strategies. However, the appropriate selection of interventions depends on the social, cultural, physical and economic context of the population (Hotz *et al*., 2015). Family support is as important to young child-feeding as an individual mother's caregiving knowledge alone. Many behavior change approaches focus on improving knowledge gaps of mothers and pay little attention to ecological and social factors that may negatively affect a mother's infant feeding behaviors (McInnes *et al*., 2013). Household members, including fathers and grandmothers, exert social influences; sometimes negative because of cultural norms on a mother's adoption of optimal infant feeding practices (Mukuria, 1999).

Mothers, fathers and other caregivers lack adequate access to objective, consistent and complete information about appropriate feeding practices, free from commercial influence. Mothers should have access to skilled support to help them initiate and sustain appropriate feeding practices, and to prevent difficulties and overcome them when they occur (WHO/UNICEF, 2004). Most care givers especially young and first time mothers in Luanda Sub-County lack sufficient information on what to do when faced with child care issues (i.e. a crying child). Advice is sought from community members who are perceived to be more experienced in care giving such as grandmothers of the child (mother or mother-in-law) and peers. More often than not, the advice given is early introduction of foods and drinks. The fact that some care givers fall for these kinds of misinformed interventions demonstrates their desperation and lack of credible information on how to deal with child care challenges (Nelson, 2015).

A study reports that family members work to maintain cultural norms and practices, resisting adoption of new practices (Mukuria, 1999). Other evidence has suggested that engaging grandmothers in group discussions, songs, and stories and engaging men in education activities can significantly improve breastfeeding and nutrition practices (Aubel *et al*., 2004). Moreover, a series of assessments and surveys on infant and young child-feeding in Kenya strongly suggest that success in improving these practices depends on effectively engaging key influencers, including fathers and grandmothers (WHO and UNICEF., 2007). A study from western Kenya describing how infant feeding occurs within a family context criticized program approaches that

treat women as individual actors, when women see themselves as enmeshed in social relationships that affect how they care for their children (Whyte and Kariuki, 1991).

Cultural food habits and infant feeding practices have been identified as major causes of childhood malnutrition. For instance, from cultural point of view, among some major ethnic groups, the concept of healthy child is taken to mean 'fat baby'. In view of this, food items that are believed will increase the size and weight of the baby such as cassava, maize and yam flour are considered good. Because of traditional cultural food practices, legumes and oil seeds such as beans, groundnuts and melon seeds are sparingly consumed. Nursing mothers in most of the countries in the Sub-Saharan Africa region have not been making use of existing local food sources as complementary feeds not because of poverty but traditional beliefs and cultural food practices (Peter and Ebenezer, 2006).

Up till now, there has not been any significant improvement in reducing occult malnutrition in Sub-Saharan African Region. There are numerous nutritious foodstuffs, yet infants, preschool children, pregnant and lactating mothers are suffering in the midst of plenty (Hinrichsen, 1997). What remained unclear is what health experts, health educators, nutritionists and scientists have failed to nip on the bud to arrest poor child growth and maternal malnutrition. In addition, it remained unclear whether cultural food practices are deeply embedded in Sub-Saharan African region. Beliefs and practices regarding what and how to eat (e.g. food taboos), how to manage pregnancy and delivery, how to feed children or how to treat illness are shaped by a society's cultural and religious belief system and the body of traditional knowledge embedded herein (Elena, 2014).

Vihiga County, one of the poorest and densely populated in Kenya with an average household land size of less than 0.4 hectares is perpetually food deficit (GOK, 2004). This has been attributed to limited land, high poverty levels, limited off-farm income, and non-adoption of recommended farm technologies. Maize is the staple food of the residents in Vihiga County thus its insufficiency is synonymous to food unavailability (Nyangweso *et al.,* 2007). In a green economy context, food availability is closely linked to the availability and use of natural, human and economic resources, especially scarcity of natural resources (FAO, 2003). The fertile land in Luanda Sub-County coupled with abundant rains has influenced the dense settlement that is witnessed even in the rocky areas and the flat swampy parts. In terms of land use, 98.7% of the

land is under farming, mostly subsistence, while 1.3% is under housing. The main land use types include livestock, crop farming, tree planting, fish farming and settlements. Other land use activities are soil mining for brick making and pot making as well as house construction. Sand and stone harvesting are other activities for which land is put to use. The increase in settlement areas reduces available arable land for livelihood activities. Most of these activities are undertaken in rural areas where the majority live (GOK, 2013).

Vihiga County has a high population growth of youths (70%) who have neither trained, completed school or dropped out of school due to unemployment have resulted to violent crimes in the area such as murder, assault, rape, prostitution, theft, burglary, armed gangsters, banditry, trade in illicit drugs like bhang (GOK, 2002). This infringes on the productive population of the Sub-county. Proportion of parcels whose owners have title deeds is 28.3% while the rest is still under the ownership of grandparents. Women ownership of land titles is also low due to cultural barriers. This has made it very difficult for those who would like to access credit from financial institutions for investment due to lack of collateral. Most people are left to invest their little funds, which, in most cases, are in form of grants and donations that cannot meet their development aspirations. This is even made worse by the high poverty situation (GOK, 2013).

Food unavailability is therefore an issue affecting Luanda County due to high population, dependency on subsistence farming, improper farming methods, poor seed quality and mono-cropping, leading to lack of access to diverse diets for all household members. These factors result to poor nutrition that compromises the health standard among other infrastructural challenges (EDDP, 2009). High disease burden and economic insecurity are a threat to the fight against poverty, which is the major cause of early marriages, high school dropouts, limited employment opportunities and poor implementation of pro-poor projects (EDDP, 2009). These factors impinge infant and young child-feeding practices which include timely initiation of feeding solid/semisolid foods from the age of 6 months and increasing the amount and variety of foods and frequency of feeding as the child gets older, while maintaining frequent breastfeeding (PAHO/WHO, 2003; WHO, 2005).

Despite this plethora of knowledge, Luanda Sub-County lacks full stakeholder ownership and participation in implementation of previous planned projects aimed to improve the well-being of the growing population. Furthermore, the social, economic and cultural factors affecting feeding

practices among first time mothers of children less than five years in Wekhomo location, Luanda Sub-County, Kenya remains unknown. As such, the current study assessed the social, economic and cultural factors affecting child-feeding practices of first-time mothers residing in Ebuhando, Ebusundi and Iboona Sub-locations in Wekhomo Location, Luanda Sub-County.

1.2. Statement of the Problem

Child-feeding is critical in the first year of life and a key determinant of child survival and development. Maternal age, education, income, marital status, ethnicity and the way the mother herself was fed are correlated with breastfeeding initiation and duration (Ryan *et al.,* 1991). Although demographic factors are strong predictors, complex psychosocial variables such as knowledge, attitudes and beliefs are more important and modifiable determinants of child-feeding practices (Losch *et al.,* 1995). The appropriate selection of child-feeding practices depends on the social, cultural, physical and economic context of the population (Hotz *et al.,* 2015).

Luanda Sub-County experiences massive population explosion and pressure on the meager resources like land, water, health, education, infrastructure, agriculture and some micro-finance enterprises in the region. Despite the favorable climate for crop production activities undertaken in rural areas where the majority live, agricultural productivity in the county is low and declining, 57% of the population and households live below poverty food line. This means first-time mothers have more difficulty with parenting because of their own developmental needs that may conflict with their infant and challenges faced in their quest to access basic needs. Therefore the health status of children under the age of five years is compromised owing to the projected population growth as a result of information and knowledge gap on family planning and feeding practices among first-time mothers in Luanda as stated in the 2008-2012 District plan.The current study assessed the social, economic and cultural factors affecting child-feeding practices of first-time mothers residing in Ebuhando, Ebusundi and Iboona Sub-locations in Wekhomo Location, Luanda Sub-County.

1.3. Objectives

1.3.1. General Objective

To assess the social, economic and cultural factors influencing feeding practices among first time mothers of children less than five years in Wekhomo location, Luanda Sub-County, Kenya.

1.3.2 Specific Objectives

1. To determine the economic factors affecting feeding practices of first time mothers in Wekhomo location, Luanda Sub-County, Kenya
2. To identify the cultural factors that influence feeding practices of first time mothers in Wekhomo location, Luanda Sub-County, Kenya.
3. To establish the social factors affecting feeding practices of first time mothers in Wekhomo location, Luanda Sub-County, Kenya.

1.3.3 Research Questions

1. What are the economic factors affecting feeding practices of first time mothers in Wekhomo location, Luanda Sub-County, Kenya?
2. What are the cultural factors influencing feeding practices of first time mothers in Wekhomo location, Luanda Sub-County, Kenya?
3. What are the social factors affecting feeding practices of first time mothers in Wekhomo location, Luanda Sub-County, Kenya?

1.4 Significance of the Study

The findings from this study may enable future first-time mothers to have accurate information on economic, social and cultural effects on child-feeding in Luanda Sub-County and the County at large, as well as enlighten them to seek significant support to overcome barriers, receive proper counseling and ongoing social support. This study may inform adoption of strategies by relevant stakeholders to enhance first-time mothers' ability and autonomy to make sound decisions concerning their children's feeding and emphasis on the necessity of involvement and support of family members.

CHAPTER TWO: LITERATURE REVIEW

2.1. Introduction

The appropriate selection of child-feeding practices depends on the social, cultural, physical and economic context of the population (Hotz *et al.*, 2015). Lack of attention to these factors may contribute to malnutrition, which impairs growth in children (Maundeni and Nnyepi, 2011). The key care practices that could impact on child nutrition include care of pregnant and lactating mothers, breast feeding and feeding young children, care of children during illness, psychosocial care of children, food preparation and storage, and hygiene (Arimond and Ruel, 2002). However, these practices are to a large extent, dependent or modified by availability of resources to the mother for its implementation and these resources include knowledge and beliefs about child rearing, the health and nutritional status of the mother, control of resources and/or autonomy for child care (these include decision making role and employment of mothers), workload and time constraints for providing child care and social support which includes availability of alternate caregivers, sharing of workload, father's role in child care and community support (Ramji, 2009).

2.2. Economic Factors Affecting Child-Feeding Practices

Economic concerns about child-feeding include food availability which limits access, the feeding mode which is rooted in poverty, timing of introduction of complementary feeds, lack of advocacy and few complementary feeding programs (Dewey, 2003). Household food availability has direct implications for child nutritional status due to lack of food in the household or indirect effects due to less equitable intra-household food allocation (Maundeni and Nnyepi, 2011). Food intake and nutritional status of households is largely affected by poor access to food (WHO and UNICEF., 2007). Food anxiety is associated with reduced intakes of important nutrients, behavioral and psychological dysfunction as well as poor health in children (Cook *et al.*, 2004).

Maize is the staple food of the residents in Vihiga County thus its insufficiency is synonymous to food unavailability(Nyangweso*et al.*, 2007). Agricultural productivity in the county is low and declining. This can be seen in maize production where the average production of maize is four

bags per acre as compared to its potential of fifteen bags per acre. Declining soil fertility and low-adoption of new farming technologies are some of the contributing factors for the low agricultural productivity in the county. This is compounded by a number of other factors such as the declining land sizes, inadequate affordable credit and unaffordable inputs to farmers, poor access to agricultural and extension services and soil erosion. The situation is complicated further by climate change. The rainy seasons have changed while temperatures have risen making the region unsuitable for crop and livestock production. As a consequence, farmers are unable to meet the annual food requirements forcing the county to rely on neighboring counties to meet the deficit(GOK, 2013).

Most poor rural households depend on remittances from urban centers, and rely on foods purchased from the markets. Most of these families spend over 80% of their incomes on food (Banerjee and Duflo, 2008). Food availability is changing across markets such that poor people who engage in markets face challenges accessing basic food that complicate food diversity and variety. Acreage under food crops in Vihiga County is very small and most of what is harvested is consumed within households and finished in a period of about a month on the average. Some farmers sell their harvest to meet other competing demands of the households' resources (Walingo, 2006). Families now buy small quantities of food, paying higher per-unit prices (Khor, 2008), amidst shrinking income streams. Foods purchased are monotonous and in small quantities that fail to meet the recommended dietary allowances for foods and nutrients (Walingo, 2006).Vihiga's population relies heavily on purchased food and no households produce enough to be self-sufficient in grains throughout the whole year, with most buying a substantial portion of their overall diets(Hotz *et al.,* 2015).

Poverty is a gender issue; women constitute 70% of the world's 1.3 billion absolute poor. They earn only 10% of the world's income, own one percent of the world's property, but they work two-thirds of the world's working hours (Holla-Bhar, 2006).Women have been increasingly driven to participate in wage sector out of economic necessity, although they have in many cases been confined in the informal sector or to low wage jobs with no benefit and have implications for women's burdens and child care (Solomon, 2010). Most people in the rural areas of Vihiga County are self-employed and engaged in small scale businesses operating kiosks selling grocery, foodstuffs, small hotels and *'bodaboda'* services and undertaking small scale farming

(GOK, 2013). Meeting minimum standards of dietary quality is a challenge in many poor nations especially in areas where household food availability is poor, children may not receive complementary foods at the right age (often either too early or too late), are not fed frequently enough during the day, or the quality of the food may be inadequate (Dewey and Adu-Afarwuah, 2008). Food habits in childhood probably will continue in adulthood. So, unhealthy diet in childhood can lead to hazards in the whole life span (Kelishadi *et al.*, 2008). The parent's influence in early childhood has been recognized as most important role, because they make foods, perform feeding and act as a model for their children (Wardle and Cooke, 2005).

Breastfeeding is an unequalled way of providing ideal food for the healthy growth and development of infants (WHO/UNICEF, 2003). Breastfeeding is widely believed to be the cheapest and most beneficial method of feeding for the health and well-being of most infants because it decreases the incidence and/or severity of diarrhea and lower respiratory infection (Dewey *et al.,* 1995). The possible health benefits for mothers as well include a reduction in hip fractures after menopause, less postpartum bleeding, reduced risk of ovarian cancer and premenopausal breast cancer (Newcomb *et al.,* 1994). Breastfeeding may provide significant economic benefits in terms of defraying or reducing both direct (hospital bills) and indirect (time and wages lost attending to an ill child) economic costs (Jon, 2001). The young mothers' breastfeeding attitude for practice relies upon the level confidence, intension, and knowledge in which it automatically resulted upon the initiation and duration (Mossman *et al.,* 2008).

Despite the available literature in this area, the economic factors affecting the feeding practices among first time mothers of children less than five years in Wekhomo location, Luanda Sub-County, Kenya remain unknown. As such, the current study sought to establish the economic factors affecting feeding practices among first time mothers of children less than five years in Wekhomo location, Luanda Sub-County, Kenya.

2.3. Cultural Factors Influencing Child-Feeding Practices

Cultural factors influence individuals directly and very likely change the course of conduct that an individual may be compelled to take. Infant and young child-feeding is embedded within traditional relationships in which both relatives and breadwinners have influence and even authority over options and modes of infant feeding causing women to become vulnerable to

pressure from in-laws to follow traditional practices that are often against health workers' medical advice (Greene *et al.,* 2006). The cultural influences on acceptable infant feeding practices are varied and complex, thus they vary greatly from one society to another and as a result of some of these practices, a large number of children especially in the developing world never experience proper feeding routines (Solomon, 2010). Community members view elders as "information providers," a role related to their responsibility for perpetuating indigenous values and practices. Development programs assume that the best way to introduce new information and change into a cultural setting is to focus on the younger members of society with the view that the youth will teach their elders (Aubel, 2006).

Beliefs like the first milk is not good or there is no secretion of milk in first three days result in practices like discarding colostrum and promoting prelacteal feeds, such practices increase the risk of infections and deprive the valuable benefit of colostrum feeding to the vulnerable neonates (Gartner *et al.*, 2005). Culture may significantly influence the feeding experience since it may determine not only the choice of infant feeding but also associated behaviors, the length of feeding method (later weaning versus earlier weaning for working mothers), and exposure to feeding environments outside the home (Liu and Stein, 2005). Of all the causative factors that precipitate high morbidity and mortality rates among infants, preschool children, pregnant and nursing mothers, cultural food practices are the underlying problem. Cultural food practices rather than the frequently mentioned poverty and ignorance should be recognized as vital etiology of malnutrition (Elena, 2014).

Beliefs and practices regarding what and how to eat (e.g. food taboos), how to manage pregnancy and delivery, how to feed children or how to treat illness are shaped by a society's cultural and religious belief system and the body of traditional knowledge embedded herein (Elena, 2014).There are few traditional beliefs about food restrictions, which might otherwise reduce what is offered to children from within the available range in Vihiga County. Some caregivers are uneasy about giving eggs to children under the age of one for fear that it will delay speech, but this idea seems to be losing credibility(Hotz *et al.,* 2015). Women in the County are the main breadwinners when men are away and in times of shortages and are responsible for ensuring the entire family is satisfied before they eat. They are also the main cultivators of staple food crops (e.g. vegetables, bananas, maize, beans and potatoes). They are not allowed to eat

certain foods (e.g. gizzard). They are the most affected during food shortages together with the children and during breast feeding, they do not eat fish (Mathewson, 2000).

Despite this literature, the cultural factors affecting feeding practices among first time mothers of children less than five years in Wekhomo location, Luanda Sub-County, Kenya remain unknown. As such, the current study sought to identify cultural factors affecting feeding practices among first time mothers of children less than five years in Wekhomo location, Luanda Sub-County, Kenya.

2.4. Social Factors Affecting Child-Feeding Practices

Social support is a multidimensional construct that involves receipt by mothers and provision by grandmothers and fathers or other family members (Mukuria *et al*., 2016). The typical family in Africa traditionally consist of two spouses and their offspring where mothers have the primary responsibility for not only reproducing historically, but also for raising children and their roles include minding the home, performing various domestic tasks (including household chores), and more importantly, providing direct childcare. On the other hand, fathering is essentially defined by the father's economic contribution (breadwinning) to the upkeep of the family, although fathers are equally expected to be involved in the socialization and related processes in the lives of their children, the involvement of the father in this regard remains rather blurred, particularly when they are physically absent in the children's lives (Maundeni and Nnyepi, 2011). Lack of partner support for women in the area of infant and young child nutrition is common and includes the impact of men as individuals, as social gatekeepers, and as powerful family members who enforce cultural practices, often to the detriment of women's reproductive health (Greene *et al.*, 2006).

One of the earlier studies of Kenya's food regime saw the husband as an important part of care, especially with respect to overall nutrition status in the family. For example, some cultures insist on a husband eating meals at home (at least eating the evening meal). The advantage of a man eating meals at home are that he notices what the family is eating or not eating; and the wife is encouraged to take care of what is served for meals and that way the quality of food eaten in a family can be improved (Nyanyintono, 1981).

In virtually all societies, the managers of indigenous knowledge systems that deal with the development, care and well-being of women and children are senior women, or grandmothers. In that function, grandmothers are expected to advise and supervise the younger generations. However, most development programs neither acknowledge their influence nor explicitly involve them in efforts to strengthen existing family and community survival strategies (Aubel, 2006). Family support to the mother, in the form of help with childcare and household work, emotional support, and informational support, is an important resource in facilitating improved childcare by mothers. In Africa, older women or grandmothers traditionally have substantial influence on decisions related to maternal and child health at the household level (Mukuria, 1998). However, maternal and child health programs invariably focus on women of reproductive age and rarely involve their culturally designated advisors who are senior women or grandmothers (Aubel, 2009). While certain revealed biases against grandmothers for example, they are a bad influence on children and families, illiterate and therefore unintelligent, or too old to learn and change and some of their practices are harmful, overall, grandmothers' experience, motivation, and commitment to caring for women and children are positive (Aubel *et al.*, 2004). It is noteworthy that currently there are few initiatives in the country that systematically engage grandmothers and men in efforts to improve infant and young child-feeding and maternal dietary practices, most community programs seeking to improve the well-being of women and children target young mothers and their children (USAID, 2011).

The national maternal, infant, and young child-feeding strategy in Kenya notes a gap in locally tailored interventions targeting promotion of appropriate complementary feeding and maternal nutrition practices (Whyte and Kariuki, 1991). Community health and nutrition programs have historically targeted mothers with young children. However, a number of studies have shown that household members are important social influencers of mothers' infant feeding practices, including offering advice, providing food, and feeding children (Owino *et al*., 2008). Although research has shown that peer support interventions are effective in promoting breastfeeding (Britton *et al.,* 2007), evidence on the importance of social support interventions on complementary feeding practices is more limited (Aubel, 2012). Both the formative research and process evaluation findings confirmed that grandmothers play a leading role in making household decisions about maternal nutrition, pregnancy, delivery, newborn care, and complementary feeding. Fathers also play a key supportive role, providing financial and

logistical resources for health care, and resources needed to ensure greater dietary diversity (Thuita *et al.,* 2015). A study conducted in Vihiga indicated that increasing positive social support by key influencers such as fathers and grandmothers of infants improved some, but not all, of the targeted feeding practices of mothers. The effect of increasing social support is influenced by the quality of the social support (material or physical actions) not just the quantity (number of social support actions) provided to mothers (Mukuria *et al*., 2016).

Aprevious study (Ngimwa*et al*., 1997) notes that information needs of rural people are varied due to demographic, social, cultural and economic factors, among others. Odini (2002) adds that information needs of rural women in Kenya relates mainly to their level of poverty and further notes that access and use of adequate and quality information such as family planning can empower rural women to alleviate poverty. The majority of women in Vihiga County use relatives such as parents as their first source of health information followed by government health centers, and government hospitals. This is because these are the nearest sources of information known to them and also not costly. This implies that knowledge of these information sources has influence on their information seeking behavior and improves access and use of health information among the women (Odini, 2013). Odini's study found out that in Vihiga, women's health information needs are not adequately satisfied by the existing information sources such as friends, relatives, health centers, and neighbors. Women therefore tend to miss some information coming from external and conventional sources and get health information which may not be suitable for their daily access and use in health and child care.

Early marriage and consequent early childbearing, accompanied by lack of adequate nutrition has adverse effects on women's health therefore exclusive breastfeeding is particularly difficult when women have the double burden of paid work as well as being expected to do the majority of the domestic work; The work women do in feeding their children by producing breast milk is not recognised, although it has great economic benefit for the family and the wider community (Holla-Bhar, 2006).Lack of health/nutrition literacy is embedded in the social structure and interconnected with problems that include the lack of information about food choices, the lack of understanding nutritional information and its application to individual circumstances, limited or difficult access to healthful foods, and a range of constraints such as low levels of education and high levels of poverty that decrease opportunities for healthful eating and living (Nduati *et al.,*

2008). More must be done to further understanding of nutrition literacy specific interventions in non-primary care settings in order to achieve better health outcomes which include engaging male partners in breastfeeding promotion and education, as well as providing fathers with knowledge and skills for optimal breastfeeding practices, that positively impact exclusive breastfeeding rates (Susin and Giugliani, 2008).

The maternal role is identified as a complex social and cognitive process that is learned, reciprocal, and interactive (Mercer, 1981). Lack of knowledge related to infant nutrition, feeding, and development can influence mothers' actual skills and abilities related to infant feeding where inappropriate infant feeding practices, such as overfeeding of formula and non-milk liquids and the early initiation of solid foods, are often the result of mothers' lack of knowledge and skills related to infant feeding practices (Sharon, 2008). Furthermore, maternal attitudes related to food and weight can have considerable influence on mothers' infant feeding practices where mothers who are less aware of infant nutritional requirements have been found to be more likely to introduce solid foods earlier than recommended and to over feed their children (Winkelstein, 1984).

Mothers feeding practices are learned from family members and others within their community, and they are unaware their feeding practices may be potentially harmful to their children (Underwood *et al.*, 1997). Maternal decisions related to the timing of food introduction and food choices appear to be related to convenience and the mother's personal preference for foods, rather than choosing foods that are appropriate for the child (Baughcum *et al.*, 2001). Adolescent mothers are noted to be more likely than older mothers to be challenged and stressed by the demands, responsibilities, and problem solving that are required to care for their child (Secco, 2002) Family support has therefore been shown to have a significant influence on the decision to breastfeed and the timing of introduction of solid foods (Bentley *et al.*, 1999). As suchage, marital status and education have a considerable influence on maternal feeding practices. Despite this knowledge in the area, the social factors affecting feeding practices among first time mothers of children less than five years in Wekhomo location, Luanda Sub-County, Kenya remain unknown. As such, the current study sought to identify the social factors affecting feeding practices among first time mothers of children less than five years in Wekhomo location, Luanda Sub-County, Kenya.

2.5. Theoretical Framework of the study

2.5.1. Pierre Bourdieu's Theory of Social Action

The main concern of Bourdieu's conception of social action and practice is the interrelationship between society and societal development. He assumes that social action is practice and is more than social action that is seen as an isolated event. Human action occurs on the natural and social world, and there is the transformative nature of action and the priority of action over thought (Bourdieu, 1990). Practice is an activity by which human individuals produce and reproduce society in its cultural, social, and economic dimensions. It has a mediary role between individual human action and societal development. The individuals' action by practice becomes part of societal development. To make it more explicit, by practice people produce, and reproduce their culture, social structure, and economic wealth. This production and reproduction process is also related with overall organization of economic production and reproduction (Bourdieu, 1990).

Bourdieu understood culture to be everything which is intuitively understood, self-evident and unspoken, and which it is difficult to objectify.

The economic practice mediates between individual and collective interest of groups resulting to a certain level of satisfaction or dissatisfaction and the renewal of the social organization of production and reproduction of society's economic wealth thus, same living conditions and same position in society lead to the same habits. Bourdieu shows that most of our daily lives are accomplished in a practical, unreflective fashion. This theory aids our understanding of why breastfeeding rates remain low in many groups and why many interventions aimed to improve child-feeding practices have achieved minimal results.

2.6 Conceptual framework

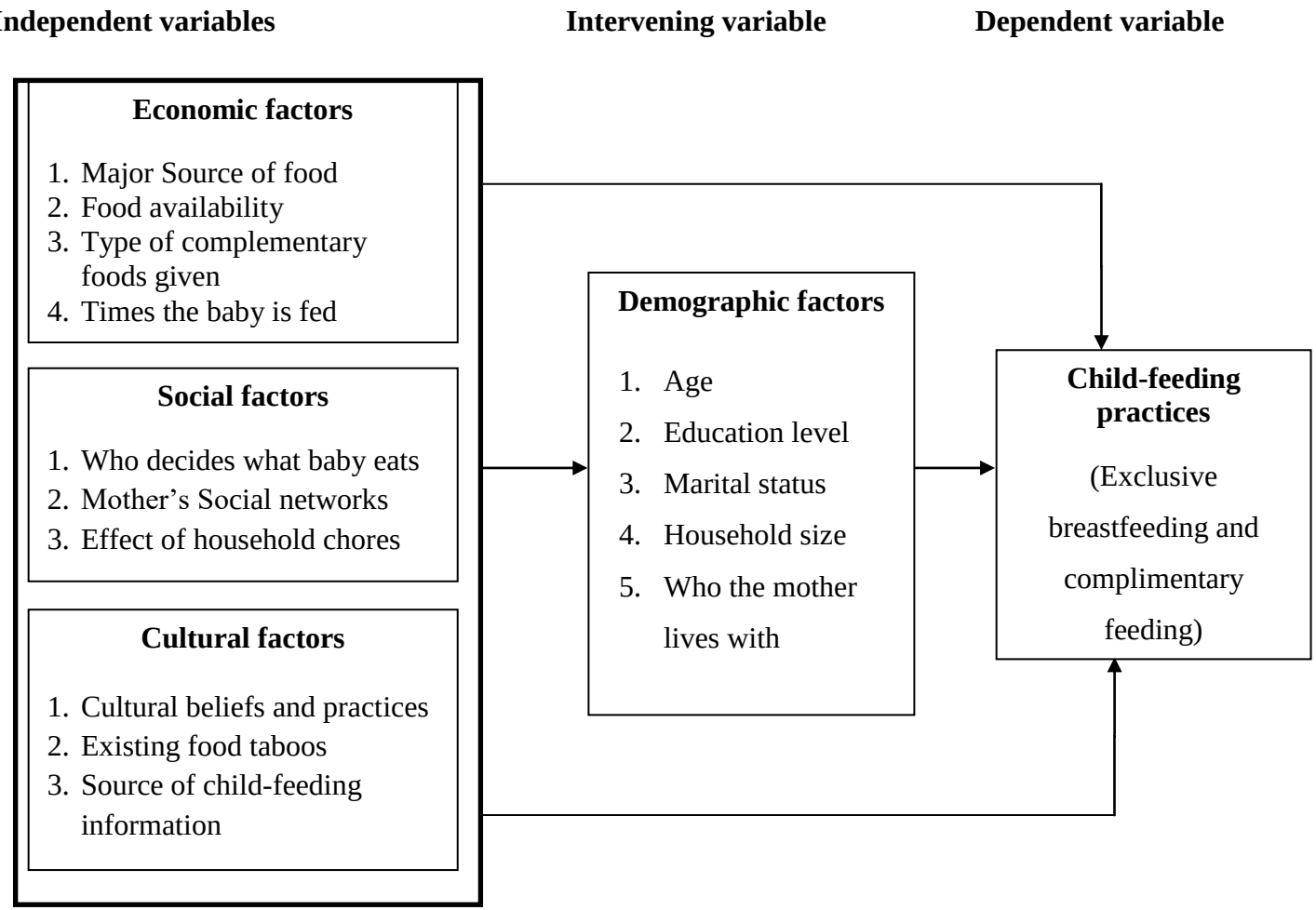

Figure 2.1: Conceptual framework. Factors influencing child feeding practices

Own Source

CHAPTER THREE: METHODOLOGY

3.1. Study Site

In 2013, the Old Emuhaya Sub-County was split to create two Sub Counties: Luanda and Emuhaya. The study was carried out in three sub locations in Luanda Sub-County, namely Ebuhando, Iboona and Ebusundi. The Sub-County boarders Emuhaya Sub-County to the East, Vihiga and Sabatia to the North, Gem to the West and Kisumu West Sub-County to the South. Luanda is inhabited by "Abanyole" a sub tribe of the larger group of the "Luhya" tribe and has a population of 95,923 according to the 2009 population census survey covering an approximate area of 85 Sq. Kilometers. A larger proportion of the Sub-County can be classified as arable. The major economic activities constitute mainly crop production and livestock rearing on small land holdings. Crops grown include maize, beans, sorghum, ground nuts, bananas, sweet potatoes, local vegetables and soya beans. With livestock rearing, majority of residents keep local breeds of cattle and poultry. The Sub-County has also great potential for farming and irrigation. Some of the residents are also involved in fish farming activities and small business activities. Luanda Sub-County experiences massive population explosion and pressure on the meager resources like land, water, health, education, infrastructure, agriculture and some micro-finance enterprises in the region. Despite the favorable climate for crop production activitieswhich are undertaken in rural areas, where the majority live, agricultural productivity in the county is low and declining. Vihiga's population relies heavily on purchased food because no households produce enough to be self-sufficient in grains throughout the whole year, with most buying a substantial portion of their overall diets. The population of reproductive female is projected to increase leading to high population growth due to low contraceptive acceptance rate of 9%. The population of children less than five years is also projected to increase from 32,092 children to 33,778 children by 2017 an indicator of an increased number of child bearing leading to high dependency level of the population (Map-Appendix I).

3.2. Study Population

The study involved first-time mothers of children under five years of age, residing in Ebuhando, Ebusundi and Iboona Sub-locations in Wekhomo Location, Luanda Sub-County, Kenya.

3.2.1. Inclusion Criteria

The study included and sought consent (Appendix III and IV) of first-time mothers of 18 years and above with children under five years who reside in Ebuhando, Ebusundi and Iboona Sub-Locations in Wekhomo Location.

3.2.2. Exclusion Criteria

First-mothers below 18 years, those with children over five years or with multiple children and all first-time mothers who do not reside in the three sub locations of Wekhomo location were excluded from the study

3.3. Research Design

A cross-sectional survey was carried out during the study period.

3.4. Sample Size Determination

The sample size for this study was determined using Fisher's formula (Fisher *et al.,* 1991).

$n = Z^2 P (1-P) / d^2$ Where:
n = desired sample size (where population is greater than 10,000)

P = the proportion of female of reproductive age (37,524), in this case 50% was used as recommended by Fisher where there is no estimate available of the proportion in the target population assumed to have the characteristics of interest.

Z = the standard normal deviation at 95% confidence interval (1.96)
d^2 = degree of precision set at 0.05

$$n = (1.96)^2 (0.5) (0.5) (0.05)^2 = 384$$

A sample population of 10% was added as non-responders. Therefore, the total sampled population was 422.

3.5. Sampling Procedure

Snowball sampling was used to identify and select participants for individual interviews. With the help of the research assistant, a Community Health Volunteer in the area, the first respondent was identified from the latest birth records in Ebuhando Sub-Location at Maseno Mission Hospital who referred us to the next respondent. Consent to participate in the study was sought and at the end of the interview, each first time mother was asked to refer the researcher to another one she knows in the area.

3.6. Data Collection Tools and Procedure

A semi-structured questionnaire (Appendix II) was used in data collection. The choice of questionnaire as tool was due to ease to administer, relative low cost and its versatility to collect both quantitative and qualitative data. Individual interviews were conducted by the researcher and the assistant who read the questions out loud to the respondents and noted down their responses. Data was collected from one hundred and forty one first time mothers sampled from Ebuhando and Ebusindi, respectively, and one hundred and forty sampled from Iboona totaling to four hundred and twenty two.

3.7. Pretesting of Tools

The data collection tools were pre-tested among a portion of first time mothers residing in Wekhomo location. These datasets generated from pre-testing were not included in the final analyses. Cognitive interview as a pretesting method was used to assess the ability of the questionnaire to collect the desired data. Respondents were asked to think aloud as they decided what the question meant and formulated their response. Reliability of the instrument was assessed by use of test retest technique. In this method the questionnaire was administered to the same respondents twice. A time lapse of one to two weeks between the first and second test was used to test and retest. Scores from this test were computed using correlation and coefficient reliability. A value of 0.86 was obtained from the computed value that was greater than 0.80 as required for the instrument to yield reliable data.

3.8. Measurement of Variables

The independent variables of the study were Social factors, Economic factors and Cultural factors. The demographic characteristics of first-time mother were used as intervening variables. The dependent variables were exclusive breastfeeding and complementary feeding practices of the first-time mothers

3.9. Data Analysis

The filled questionnaires were checked for completeness and then data were keyed into Microsoft excel 2010 and exported to SPSS software (version 20) for analysis. Descriptive statistics were computed using SPSS, which constituted frequencies, proportions and standard deviations with minimum and maximum values. The Chi- square test was used to establish the association between categorical variables and dependent variables. Multivariate regression analyses were computed and further associations made between exclusive breastfeeding and complementary feeding (dependent variables) and economic, social and cultural factors (independent variables). The statistical level of significance was set at $p \leq 0.05$.

3.10. Ethical Considerations

Scientific approval to conduct this research was sought from Maseno University School of Graduate Studies (Appendix V). Ethical approval was sought from Maseno University Ethics Review Committee (Appendix VI). Permission was also sought from relevant authorities in Wekhomo location (Appendix VII). First-time mothers were taken through the informed consent process prior to being enrolled in the study. All information including study benefits was presented in a language of choice to facilitate easier understanding. Participation was on voluntary basis and the right to withdraw from the study was respected. Confidentially was maintained throughout the study.

CHAPTER FOUR: RESULTS

4.1. Demographic Characteristics

A total of 422 first time mothers were interviewed. 208 (49.3%) were between 15-25 years and 214(50.7%) were aged between 26-35 years. Majority 271 (64.2%) were married, 138 (32.7%) were single and those who were widows were 6 (1.4%) and divorced were 7(1.7%). 190 (45%), had attained secondary education level, 107 (25.4%) attained primary education level and 125 (29.6%) achieved tertiary education. A total of 164 (38.9%) of the first-time mothers were self-employed, 59 (14%) were farmers, 101 (23.9%) were casual laborers and 98 (23.2%) were employed. Most households that were visited had a household size of 1-3 members 212 (50.2%), 150 (35.5%) had a household size of four to six members whereas 60 (14.2%) were in a household of more than six members. A total of 253(60%) lived with their husbands, 77 (18.2%) lived alone whereas 92 (21.8%) lived with their parents or relatives. Chi-square analyses between exclusive breastfeeding and time of introduction of complementary feeds against the demographic factors was performed and there was no significant association (Table 4.1).

Table 4.1: Demographic Characteristics of First-Time Mothers

Demographic factors	**N %**	***Exclusive Breastfeeding P<0.05***	**Complementary Feeding *P*<0.05**	**Demographic factors**	**N%**	***Exclusive Breastfeeding P<0.05***	**Complementary Feeding *P*<0.05**
Age of mother		0.072	0.652	**Who the mother Lives with**		0.103	0.142
15-25	208(49.3%)			Husband	253(60.0%)		
26-35	214(50.7%)			Alone	77(18.2%)		
				Parents/relatives	92(21.8%)		
Marital status		0.226	0.451	**Employment status**		0.608	0.287
Married	271(64.2%)			Self employed	164(38.9%)		
Single	138(32.7%)			Farmer	59(14.0%)		
Widow	6(1.4%)			Casual	101(23.9%)		
Divorced	7(1.7%)			Employed	98(23.2%)		
Education level		0.536	0.724	**Household size**		0.721	0.248
Primary	107(25.4%)			1-3	212(50.2%)		
Secondary	190(45.0%)			4-6	150(35.5%)		
Tertiary	125(29.6%)			>6	60(14.2%)		

Legend: N%- Number and proportion, *p*– statistical significance determined by chi-square tests.

4.2. Economic Factors Affecting Child-Feeding Practices

Economic factors were analyzed and results revealed that the major source of food for the first time mothers was purchased from the market 253 (60%) while 144 (34.1%) get food from farming. Majority of the respondents said that the food can only sustain them for a period of 2 months 236 (55.9%), and only 75 (17.8%) have food all year round. Food insecurity was mainly attributed by first time mothers to the lack of land 155 (36.7%), low food production 119 (28.2%), lack of labor 96 (22.7%) and the changing weather conditions in the location 52 (12.3%).

Exclusive breastfeeding was practiced by 338 (80.1%) of the first time mothers. The benefits of exclusive breast feeding were understood to be good for child health and growth by 317 (75.1%), 93 (22%) said that it is for immunity and bonding with the mother while 12 (2.8%) said that it is for family planning. Complementary feeds were introduced by 32(7.6%) within the first and third month while 390 (92.4%) introduced feeds at the sixth month. The types of complementary foods given were porridge 185 (43.8%), milk 103 (24.4%) and mashed foods 134 (31.8%). Majority of the first-time mothers fed their children 4-5 times a day 236 (55.9%) and only 34 (8.1%) feed less than 3 times a day.

Chi-square analyses between exclusive breastfeeding and time of introduction of complementary feeds against the economic factors was performed. Results revealed that the primary source of food (P=0.003), food sustainability (P=0.049), food insecurity (P=0.013) and types of complementary feeds given (P=0.014) had significant influence on exclusive breastfeeding among first-time mothers (Table 4.2).

Logistic regression analyses demonstrated that first-time mothers who practice farming were six times more likely to practice exclusive breastfeeding (OR=6.115), 95% CI, 2.165-17.268; P=0.001) while those who purchase food were three times more likely to practice exclusive breastfeeding (OR=3.172, 95% CI, 1.175-8.562; P=0.023) compared to those who depend on handouts who were less likely to breastfeed exclusively (OR=0.303, 95% CI, 0.139-0.661; P=0.003). First-time mothers who practice farming (OR=4.079, 95% CI, 0.979-16.995; P=0.054) and those who purchase food from the market (OR=4.266, 95% CI, 1.125-16.184; P=0.033) were four times more likely to adhere to the recommended complementary feeding period,

compared to those who depend on handouts were less likely to observe the complementary feeding period (OR=0.359, 95%CI, 0.122-1.060; *P*=0.064). Results also showed that first-time mothers who give milk as a complementary feed are less likely to practice exclusive breastfeeding (OR=0.371, 95%CI; 0.191-0.721, *P*=0.003).

Table 4.2: Economic Factors Affecting Child-Feeding Practices

Characteristics		Exclusive Breastfeeding			Complementary Feeding		
Economic Factors	**n (%)**	***P*<0.05[a]**	**OR(95% C.I)**	***P*<0.05[b]**	***P*<0.05[a]**	**OR(95%CI)**	***P*<0.05[b]**
Source of food		0.003*			0.087		
Farming	144 (34.1)		6.115(2.165-17.268)	0.001*		4.079(0.979-16.995)	0.054*
Market purchase	253 (60)		3.172(1.175-8.562)	0.023*		4.266(1.125-16.184)	0.033*
Handouts	25 (5.9)		1.00 (Ref category)			1.00 (Ref category)	
Handouts	25 (5.9)		0.303(0.139-0.661)	0.003*		0.359(0.122-1.060)	0.064
Farming + Market purchase	397 (105.9)		1.00 Ref category			1.00 (Ref category)	
Food sustainability		0.049*			0.274		
1-2 Months	236 (55.9)		3.957(0.176-89.173)	0.387		1.345(0.587-9.005)	0.901
3-6 Months	109 (25.8)		1.739(0.072-42.181)	0.734		0.334(0.815-1.365)	0.834
1 year	75 (17.8)		1.00 (Ref category)			1.00 (Ref category)	
1 year	75 (17.8)		0.532(0.126-2.249)	0.391		1.174(0.567-5.730)	0.546
1-2+3-6 months	345 (82.2)		1.00 (Ref category)			1.00 (Ref category)	
Alternative source of food		0.952			1.000		
Market	405 (96)		1.221(0.569-7.543)	0.599		0.607(0.431-3.549)	0.479
Neighbors	5 (1.2)		0.407(0.665-9.812)	0.249		1.356(0.034-2.004)	1.000
well wishers	12 (2.8)		1.00 (Ref category)			1.00 (Ref category)	
Well wishers	12 (2.8)		0.985(0.556-6.719)	0.453		1.180(0.374-3.636)	0.949
Market + neighbors	410 (97.2)		1.00 (Ref category)			1.00 (Ref category)	
Food insecurity		0.013*			0.364		
Low food production	119 (28.2)		1.258(0.471-3.364)	0.647		0.386(0.079-1.874)	0.237
Lack of land	155 (36.7)		0.587(0.239-1.440)	0.244		0.849(0.176-4.107)	0.839
Lack of labor	96 (22.7)		2.100(0.867-5.085)	0.175		0.461(0.096-2.203)	0.332
Poor weather conditions	52 (12.3)		1.00 (Ref category)			1.00 (Ref category)	

Characteristics		Exclusive Breastfeeding			Complementary Feeding		
Economic Factors	**n (%)**	***P*<0.05[a]**	**OR(95% C.I)**	***P*<0.05[b]**	***P*<0.05[a]**	**OR(95%CI)**	***P*<0.05[b]**
Poor weather conditions	52 (12.3)		0.908(0.423-1.951)	0.806		1.721(0.462-6.413)	0.419
Low food production + Lack of labor + lack of land	274 (87.7)		1.00 (Ref category)			1.00 (Ref category)	
Benefits of exclusive breastfeeding		0.997			0.194		
child health/growth	317 (75.1)		0.459(0.958-1.333)	0.219		7.903(0.566-110.400)	0.124
Child immunity/ bonding	93 (22)		1.432(0.675-7.812)	0.471		4.843(0.324-72.418)	0.253
Family planning	12 (2.8)		1.00 (Ref category)			1.00 (Ref category)	
Family planning	12 (2.8)		0.549(0.040-1.345)	0.340		0.879(0.108-7.125)	0.904
child health/growth + Child immunity/ bonding	410 (97.2)		1.00 (Ref category)			1.00 (Ref category)	
Types of complementary food		0.014*			0.399		
Porridge	185 (43.8)		0.562(0.302-1.406)	0.069		1.038(0.424-2.539)	0.935
Milk	103 (24.4)		0.371(0.191-0.721)	0.003*		0.602(0.240-1.513)	0.281
Mashed foods	134 (31.8)		1.00 (Ref category)			1.00 (Ref category)	
Mashed foods	134 (31.8)		0.470(0.264-0.522)	0.061		0.425(0.987-1.703)	0.899
Porridge + milk	288 (68.2)		1.00 (Ref category)			1.00 (Ref category)	
Times baby is fed		0.181			0.946		
Less than three times	34 (8.1)		1.653(0.416-6.571)	0.475		0.456(0.453-3.543)	0.998
Four to five times	236 (55.9)		0.633(0.332-1.208)	0.165		1.162(0.480-2.810)	0.739
More than five times	152 (36)		1.00 (Ref category)			1.00 (Ref category)	
More than five times	152 (36)		1.237(0.726-2.108)	0.433		1.019(0.465-2.234)	0.963
Less than three times + Four to five times	270 (64)		1.00 (Ref category)			1.00 (Ref category)	

Legend: N%- number and proportion of first-time mothers, OR- Odds Ratio, 95% C.I- Confidence interval set at 95%, * - statistically significant, [a] statistical significance determined by chi-square tests, [b] statistical significance determined by logistic regression tests, Ref category- Reference category.

4.3. Social Factors Affecting Child-Feeding Practices

Results revealed that majority of first-time mothers acknowledged that it is the mother's responsibility to decide what food the baby eats in Wekhomo location 373 (88.4%). It is also the mother's responsibility to take care of the baby as attested by 369 (87.4%) first-time mothers (Table 4.3). They recognized the roles of the husband in taking care of the child as mainly to provide basic needs 281 (66.6%), provide money 76 (18%) and play/bond with baby 65 (15.4%). The grandmother's (mother/mother in-law) roles were identified as to care and love the child while the child's mother is away 213 (50.5%), advice the mother on child care 157 (37.2%) and provides emotional support 52 (12.3%).

The social networks of first time mothers included friends/peers 166 (39.3%), older mothers 47 (11.1%), women groups 89 (21.1%) and health providers 120 (28.4%). These social networks were not sufficient in solving issues and passing information about child-feeding to 139 (32.9%) first-time mothers. It was noted by 222 (52.6%) first-time mothers that household chores affect child-feeding because it takes a lot of time and affect the child-feeding pattern while 200 (47.4%) said it makes them pay less attention to the child.

Chi-square analyses between exclusive breastfeeding and time of introduction of complementary feeds against the social factors was performed. However, the analysis revealed that these social variables (who decide what the baby eats, who is responsible for taking care of the baby, the role of the husband and mother-in-law, social networks and their sufficiency in providing child-feeding information and the effect of household chores) had no significant influence on child-feeding practices of first-time mothers. The social factors were further regressed against the outcome variables; exclusive breastfeeding and complementary feeding and results did not show any significant association.

Table 4.3: Social Factors Affecting Child-Feeding Practices

Characteristic		**Exclusive Breastfeeding**			**Complementary Feeding**		
Social factors	**n (%)**	***p*<0.05[a]**	**OR(95%CI)**	***P*<0.05[b]**	***P*<0.05[a]**	**OR(95%CI)**	***P*<0.05[b]**
Who decides what baby eats		0.568			0.325		
Mother	373 (88.4)		0.491(0.093-2.581)	0.401		1.439(0.154-13.460)	0.750
Father	23 (5.5)		0.790(0.106-5.872)	0.818		0.467(0.047-4.629)	0.515
Grandmother	26 (6.2)		1.00 (Ref category)			1.00 (Ref category)	
Grandmother	26 (6.2)		3.507(0.807-15.246)	0.094		0.911(0.201-4.120)	0.903
Mother+ Father	396 (93.9)		1.00 (Ref category)			1.00 (Ref category)	
Who is responsible for baby care		0.174			0.999		
Mother	369 (87.4)		0.149(0.020-1.119)	0.064		1.015(0.228-4.517)	0.985
Father	27 (6.4)		0.176(0.019-1.624)	0.125		1.042(0.136-7.998)	0.969
Grandmother	26 (6.2)		1.00 (Ref category)			1.00 (Ref category)	
Grandmother	26 (6.2)		0.157(0.029-1.435)	0.351		1.056(0.043-3.487)	0.992
Mother +father	396 (93.8)		1.00 (Ref category)			1.00 (Ref category)	
Role of husband		0.409			0.944		
Provide basic needs	281 (66.6)		0.673(0.315-1.438)	0.307		1.100(0.399-3.029)	0.854
Provide money	76 (18)		0.551(0.228-1.329)	0.184		0.920(0.261-3.249)	0.897

Characteristic		Exclusive Breastfeeding			Complementary Feeding		
Social factors	**n (%)**	***p*<0.05[a]**	**OR(95%CI)**	***P*<0.05[b]**	***P*<0.05[a]**	**OR(95%CI)**	***P*<0.05[b]**
Play with the child	65 (16.4)		1.00 (Ref category)			1.00 (Ref category)	
Play with the child	65 (16.4)		1.551(0.746-3.224)	0.240		0.735(0.293-1.932)	0.555
provide basic needs + money	357 (84.6)		1.00 (Ref category)			1.00 (Ref category)	
Role of mother-in-law		0.334			0.755		
Advice the mother	157 (37.2)		0.706(0.404-1.236)	0.223		1.282(0.511-3.220)	0.596
provide emotional support	52 (12.3)		1.199(0.510-2.822)	0.677		1.545(0.416-5.732)	0.516
care for and love the baby	213 (50.5)		1.00 (Ref category)			1.00 (Ref category)	
care for and love the baby	213 (50.5)		1.262(0.772-2.060)	0.353		0.708(0.333-1.505)	0.370
Advice + emotional support	209 (49.5)		1.00 (Ref category)			1.00 (Ref category)	
Social networks		0.736			0.652		
Friends/peers	166 (39.3)		0.853(0.447-1.628)	0.629		1.455(0.549-3.854)	0.451
Older mothers	47 (11.1)		0.708(0.291-1.722)	0.447		1.626(0.824-2.385)	0.997
Women groups	89 (21.1)		0.685(0.337-1.393)	0.297		0.763(0.270-2.155)	0.609
Health providers	120 (28.4)		1.00 (Ref category)			1.00 (Ref category)	
Health providers	120 (28.4)		1.286(0.731-2.260)	0.383		0.867(0.393-1.912)	0.723

Characteristic		Exclusive Breastfeeding			Complementary Feeding		
Social factors	**n (%)**	***p*<0.05[a]**	**OR(95%CI)**	***P*<0.05[b]**	***P*<0.05[a]**	**OR(95%CI)**	***P*<0.05[b]**
Friends + mothers + women	302 (71.6)		1.00 (Ref category)			1.00 (Ref category)	
Are the social networks sufficient		0.862			0.606		
Yes	283 (67.1)		0.903(0.527-1.546)	0.710		0.615(0.241-1.573)	0.311
No	139 (32.7)		1.00 (Ref category)			1.00 (Ref category)	
No	139 (32.7)		1.107(0.648-1.889)	0.711		1.587(0.649-3.877)	0.311
Yes	283 (67.1)		1.00 (Ref category)				
Effect of household chores		0.307			0.714		
Yes	222 (52.6)		1.289(0.785-2.117)	0.316		1.107(0.510-2.403)	0.797
No	200 (47.4)		1.00 (Ref category)			1.00 (Ref category)	
No	200 (47.4)		0.809(0.497-1.317)	0.394		0.700(0.336-1.459)	0.314
Yes	222 (52.6)		1.00 (Ref category)			1.00 (Ref category)	

Legend: N%- number and proportion of first-time mothers, OR- Odds Ratio, 95% C.I- Confidence interval set at 95%, Ref category- Reference category, [a] statistical significance determined by chi-square tests, [b] statistical significance determined by logistic regression tests.

4.4. Cultural Factors Affecting Child-Feeding Practices

The study sought to find out the cultural practices that influence child-feeding in the study area. First-time mothers believe that some foods should not be given to the baby 102 (24.2%), 39 (9.2%) believe in early weaning, 17 (4%) believe that a sick mother should not breastfeed, 62 (14.7%) did not have any cultural beliefs and practices and 202 (47.9%) did not know of any cultural belief or practice. About taboos related to food given to child, 102 (24.2%) were not aware of any existing food taboos.

The culturally unacceptable food for children were listed as eggs because they impair speaking and cause allergies, gizzards and chicken legs as they delay child development milestones, fatty foods because they cause heart problems. Information about child-feeding is sought from the clinic by 354 (83.9%) of first-time mothers in the study. Other sources of information include the grandmothers (mother/mother-in-law), their partners, the media and social gatherings. A total of 394 (93.4%) agreed that a training program on child-feeding would be beneficial for first time mothers. The training would enhance first-time mothers' knowledge on breastfeeding, improve child health and help them to understand their role as care givers.

Chi-square analyses between exclusive breastfeeding and time of introduction of complementary feeds against the cultural factors was performed. The analysis revealed that these cultural factors (cultural beliefs, food taboos, culturally unacceptable foods, source of child-feeding information, training for first-time mothers on child-feeding and why train them) had no significant influence on child-feeding practices among first-time mothers.

Logistic regression model revealed that first-time mothers who do not conform to the existing food taboos were three times more likely to observe the recommended complementary feeding period (OR=3.558, 95% CI 0.958-13.216; *P*=0.058) unlike those who did not know of the existing food taboos (OR=0.500, 95% CI 0.216-1.156; *P*=0.105). The analysis also revealed that first-time mothers who received child-feeding information from the clinic were seventeen times more likely to adhere to the recommended complementary feeding period (OR=17.506, 95% CI 1.011-303.166; *P*=0.049) where as those who received information from social gatherings were less likely to observe the recommended weaning period (OR=0.034, 95% CI 0.003-0.428; *P*=0.009) (Table 4.4).

Table 4.4: Cultural Factors Affecting Child-Feeding Practices

Characteristic		Exclusive Breastfeeding			Complementary Feeding		
Cultural factors	**n (%)**	**P<0.05[a]**	**OR(95%CI)**	**P<0.05[b]**	**P<0.05[a]**	**OR(95%CI)**	**P<0.05[b]**
cultural beliefs		0.463			0.721		
Not giving some foods	102 (24.2)		1.095(0.523-2.293)	0.809		2.596(0.695-9.692)	0.156
Early weaning	39 (9.2)		0.541(0.216-1.358)	0.191		1.087(0.249-4.741)	0.911
sick mother should not breast feed	17 (4)		0.638(0.189-2.159)	0.470		1.223(0.135-11.038)	0.858
None	62 (14.7)		0.649(0.317-1.328)	0.237		1.025(0.340-3.093)	0.965
Don't know	202 (47.9)		1.00 (Ref category)			1.00 (Ref category)	
Don't know	202 (47.9)		1.283(0.769-2.140)	0.341		0.597(0.271-1.316)	0.201
Early weaning+ none+ denying some food+ sick mum not to breastfeed	220 (52.1)		1.00 (Ref category)			1.00 (Ref category)	
Food taboos		0.915			0.118		
Yes	208 (49.3)		0.989(0.506-1.930)	0.973		1.967(0.775-4.990)	0.154
No	112 (26.5)		0.849(0.370-1.947)	0.699		3.558(0.958-13.216)	0.058*
Don't know	102 (24.2)		1.00 (Ref category)			1.00 (Ref category)	
Don't know	102 (24.2)		1.069(0.593-1.927)	0.825		0.500(0.216-1.156)	0.105
Yes + No	320 (75.8)		1.00 (Ref category)			1.00 (Ref category)	
Culturally unacceptable foods		0.579			0.708		
Eggs	166 (39.3)		1.327(0.648-2.717)	0.439		0.480(0.172-1.339)	0.161
Gizzards	19 (4.5)		1.496(0.360-6.208)	0.579		0.817(0.083-8.063)	0.863
Fatty foods	22 (5.2)		3.490(0.744-16.374)	0.113		0.065(0.113-3.224)	0.556
None	40 (9.5)		1.089(0.454-2.614)	0.848		0.805(0.201-3.224)	0.760
Don't know	175 (41.5)		1.00 (Ref category)			1.00 (Ref category)	
Don't know	175 (41.5)		0.739(0.438-1.248)	0.258		1.492(0.627-3.257)	0.396
Eggs+ gizzards+ fat+ none	247 (58.5)		1.00 (Ref category)			1.00 (Ref category)	
Source of information		0.822			0.409		
Clinic	354 (83.9)		0.419(0.038-4.667)	0.479		17.506(1.011-303.166)	0.049*
Mother-in-law	24 (5.7)		0.628(0.043-9.212)	0.734		1.421(0.344-8.554)	0.398

Partner	17 (4)	0.342(0.026-4.537)	0.416	19.416(0.627-601.236)	0.090
			0.383	2.235(0.851-8.652)	0.078
Media	21 (5)	0.309(0.022-4.325)			
Social gatherings	6 (1.4)	1.00 (Ref category)		1.00 (Ref category)	
Social gatherings	6 (1.4)	2.111(0.210-21.218)	0.526	0.034(0.003-0.428)	0.009*
clinic + mother-in-law + partner + media	416 (98.6)	1.00 (Ref category)		1.00 (Ref category)	
Training for first-time mothers		0.115		0.101	
Yes	394 (93.4)	1.845(0.631-5.399)	0.263	0.081(0.004-1.892)	0.118
No	28 (6.6)	1.00 (Ref category)		1.00 (Ref category)	
No	28 (6.6)	0.446(0.180-1.107)	0.082	0.276(0.664-129.491)	0.098
Yes	394 (93.4)	1.00 (Ref category)		1.00 (Ref category)	
Why train first-time mothers		0.538		0.606	
Enhanced breastfeeding knowledge	214 (50.7)	1.408(0.692-2.863)	0.345	0.547(0.147-2.026)	0.366
Improve child health	137 (32.5)	0.089(0.502-2.364)	0.829	0.495(0.122-2.014)	0.326
Know their roles	71 (16.8)	1.00 (Ref category)		1.00 (Ref category)	
Know their roles	71 (16.8)	0.980(0.513-1.871)	0.951	1.846(0.540-6.307)	0.328
Knowledge+ child health		1.00 (Ref category)		1.00 (Ref category)	

Legend: N%- number and proportion of first-time mothers, OR- Odds Ratio, 95% C.I- Confidence interval set at 95%, Ref category- Reference category, [a] statistical significance determined by chi-square tests, [b] statistical significance determined by logistic regression tests.

CHAPTER FIVE: DISCUSSION

This chapter presents the discussion of the study findings as captured from the analysis of the study objectives. The current study demonstrates that amongst the economic factors, the primary source of food, household food sustainability, household food security and the type of complementary feeds given to children under five were associated with exclusive breast feeding. Regression analysis revealed that food taboos and source of child-feeding information were the cultural factors associated with complementary feeding.

5.1. Demographic Factors of First-time Mothers

The demographic factors considered in this study were mother's age, marital status, education level, employment status and household size. Age and experience confer both responsibility and authority thus family members' roles are determined, to a great extent, by gender, age, and experience (Dewey and Adu-Afarwuah, 2008). This means that close to a half of first-time mothers in this study were less knowledgeable and experienced in childcare and feeding however, they gain experience as they grow older and bear more children. Nigerian sociologist Paulina Makinwa-Adebusoye argues that in patriarchal and hierarchical households, the most common household structures in Africa, most women cannot exert much, if any, control over their own lives. It appears that within this context, men and senior women make decisions that dictate what younger women can and cannot do (Makinwa-Adebusoye 2001).

Marital status has been shown to have a bearing on child nutritional status. Marital status of mothers affects the household power to make decisions, which have consequences on child nutritional status. In this study majority of first-time mothers were married thus have high power to make decisions hence low chances of food anxiety compared to the single mothers. This confirms results obtained in Kenya, where married couples were likely to be food secure than single mother households (Sharon, 2008). A study in Ethiopia by (Greene *et al.*, 2006) also observed that women's nutritional status was associated with their marital status. Compared to married women, unmarried women in this study have a high likelihood of experiencing poor nutritional status. It therefore follows that if the mother's nutritional status is poor so will be the child's.

According to the KDHS 2008-09 report, the mother's level of education generally has an inverse relationship with level of child growth. Children of mothers with at least some secondary education have low level of poor growth and development. This indicates that first-time mothers in this study who had attained secondary education were capable of taking good care of their children compared to the children of first-time mothers who attained primary education having very high chances of suffering malnutrition.

Employment may guarantee household income, which improves households' ability to acquire food. First-time mothers in this study were employed, involved in casual work while others were self-employed an indicator that 86% of first-time mothers were earning an income hence were able to access food. However, employment alone cannot guarantee better nutrition indicators for children. For mothers, being employed often reduces the time allocated to child care (Maundeni and Nnyepi, 2011). This is particularly a concern when income earned cannot secure suitable alternative childcare for young children.

Household size is significant in determining household food anxiety. This study found out that households with less than three members had minimal chances of being food anxious unlike larger households with four to six members that were more likely to have larger score of food uncertainty. Results from a number of studies in Malawi (Pankomera *et al.*, 2009), Ethiopia (Bogale and Shimelis, 2009) and Tanzania (Mmari *et al.*, 2010) suggest that an increase in household members may mean an increase in the number of dependents, resulting in reduced per capita consumption, and hence the risk of food uncertainty. This is also consistent with observations from another study in Botswana by Central Statistics Office which reported higher poverty incidence among larger household sizes (Central Statistics Office., 2009).

5.2. Economic Factors Affecting Child-Feeding Practices

The global public health recommendation for exclusive breastfeeding is six months and 6-24 months for complementary feeding, even though breastfeeding may continue for two years (WHO/UNICEF, 2004). This study revealed that household's major source of food and how long this source sustains the family determines the ability of first-time mothers to observe the recommended periods for exclusive breastfeeding and complementary feeding. The WHO (2005) recognizes that to assess child nutrition, nutritional status indicators (height for age,

weight for height and weight for age) provide different information about growth and body composition. This study therefore agrees with the fact that access to and sufficient food in the household ensures that vulnerable young children will be adequately nourished because it is during these very early years of life that care and feeding practices can determine who survives and who thrives (Arimond and Ruel, 2002).

Child survival, nutrition, health and development all depend on household food availability. A household is food secure when it has access to sufficient food to meet the nutritional needs of all members at all times. However, when households are periodically uncertain about the adequacy of their food supply, or have had to eat foods of insufficient quality or quantity then such households is food insecure. Households in this study reported experiencing some anxiety about their food security as a result of lack of land, low food production and lack of labor which are indicators of poverty that contribute to malnutrition. Vihiga County Integrated Development Plan 2013-2017 notes that agricultural productivity in the county is low and declining. This is compounded by a number of factors such as the declining land sizes, inadequate affordable credit and unaffordable inputs to farmers, poor access to agricultural and extension services and soil erosion. The situation is complicated further by climate change. The rainy seasons have changed while temperatures have risen making the region unsuitable for crop and livestock production. As a consequence, farmers are unable to meet the annual food requirements forcing the county to rely on neighboring counties to meet the deficit. This therefore shows that first-time mothers in this study area are at a high risk of being food anxious a factor that predisposes their children to malnutrition.

The immediate determinants of malnutrition in children are inadequate dietary intake and illness. UNICEF 1999 indicated that these determinants are influenced by several other factors such as household food uncertainty, health care, child environment and economic resources. Dewey and Adu-Afarwuah (2008) allude that food uncertainty has direct and indirect effects on exclusive breastfeeding and child-feeding hence meeting minimum standards of dietary quality is a challenge in many poor nations especially in areas where household food availability is poor, a common phenomenon in Sub-Saharan Africa. A study conducted in Botswana by (Maundeni and Nnyepi, 2011) on the nutrition economic situation of children in most vulnerable regions revealed that they spend a high percentage of their income on basic food items compared to more

affluent households hence even the slightest shocks can aggravate their situation and predispose them to food anxiety and undermine the nutritional status of children. Acreage under food crops in Vihiga County is very small and most of what is harvested is consumed within households and finished in a period of about a month on the average. Some farmers sell their harvest to meet other competing demands of the households' resources (Walingo, 2006). Families are forced to buy small quantities of food, paying higher per-unit prices (Khor, 2008), amidst shrinking income streams. Household foods purchases are monotonous and in small quantities that fail to meet the recommended dietary allowances for foods and nutrients (Walingo, 2006). The population inVihiga County relies heavily on purchased food because no households produce enough to be self-sufficient in grains throughout the whole year, with most buying a substantial portion of their overall diets(Hotz *et al.,* 2015).

Dewey *et al* (1999) emphasizes that expert consultation concluded that the potential benefits of exclusive breastfeeding outweigh any potential risks. KDHS 2008-09 report states that breast milk provides substantial amounts of certain micronutrients that protect child health and promote growth. The first breast milk contains colostrum which is highly nutritious and has antibodies that protect the newborn from diseases a fact that more than a half of the first-time mothers in this study were aware of. They also recognized that breastfeeding fosters bonding between mother and child. Breast feeding is therefore a very economical way of child-feeding in the early years compared to complementary feeding which is surrounded with a number of complexities including but not limited to access, nutritional quality, amount, variety, frequency, hygiene, mode of preparation and storage. Weimer (2001**)** asserts that breastfeeding may provide significant economic benefits in terms of defraying or reducing both direct (hospital bills) and indirect (time and wages lost attending to an ill child) economic costs.

5.3. Social Factors Affecting Child-feeding Practices

The maternal role is recognized as a complex social and cognitive process that is learned, shared, and interactive according to Mercer (1981), therefore, lack of knowledge related to infant nutrition, feeding, and development can influence mothers' actual skills and abilities related to infant feeding and care according to Nduati*et al* 2008. Care and nurturing of children, which is as deeply rooted as any human behavior, has been intimately studied by anthropologists and others (Arimond and Ruel, 2002). This study revealed that mother, father and grandmother (mother-in-

law) have roles to play in childcare that vary considerably. Majority of first-time mothers noted that the mothers are solely charged with childcare amongst other household chores that they perform. Mathewson, (2000) notes that women in Vihiga County are the main breadwinners when men are away and in times of shortages, they are responsible for ensuring the entire family is satisfied before they eat. They are also the main cultivators of staple food crops (e.g. vegetables, bananas, maize, beans and potatoes) yet the most affected during food shortages together with the children.

Although maternal/caregiver decisions ultimately determine how an infant and young child is fed, these decisions do not occur in isolation but rather reflect the immediate and overall environment in which they are made and carried out. Majority of first-time mothers in this study revealed that the role of the father is to provide basic needs for the family.In a Niger study, it was found that the role of the father after birth is generally limited to providing food for infants and new mothers, and paying for prescriptions (Obikeze, 1997). Maundeni and Nnyepi (2011), states that fathering is essentially defined by the father's economic contribution (breadwinning) to the upkeep of the family. Even though fathers are equally expected to be involved in the socialization and related processes in the lives of their children, the involvement of the father remains rather blurred particularly when they are physically absent in the lives of their children. In this study, very few first-time mothers acknowledged the role of fathers to include play and assist in taking care of the child meaning that fathers are not actively involved in child care. In domains in which men are not extensively involved (for example, child-feeding), they do not accumulate significant knowledge, and therefore, are not viewed either by themselves or by other household members as authoritative advisors (Aubel *et al.*, 2004).

First-time mothers in this study elucidated that grandmothers also have a role to play in making child-feeding decisions. In African, Asian, Latin American and Pacific societies, older women or grandmothers, traditionally have considerable influence on decisions related to maternal and child health at household level (Baughcum *et al.*, 2001). Grandmothers are therefore central in decision-making on issues related to food preparation and feeding young children, health care, family livelihood, advisory support and spiritual nurturing. In rural Tanzania, a woman on a traditional maternity leave of three months is under the direction of her mother-in-law(De Paoli *et al.*, 2004). In Nigerian Igbo culture, indigenous postpartum care, or *omugwo*, presents a unique

opportunity for younger mothers to learn from senior women. The *omugwo*rite has profound cultural significance, not only for new mothers and newborns, but also for the families of both parents, and especially for the mothers-in-law. Participation of grandmothers in *omugwo*provides older women with a new and highly-valued role within the family and society. This contributes to their self-esteem, reputation, and general well-being (Obikeze, 1997).

The national maternal, infant, and young child-feeding strategy in Kenya notes a gap in locally tailored interventions targeting promotion of appropriate complementary feeding and maternal nutrition practices (Whyte and Kariuki, 1991). Community health and nutrition programs have historically targeted mothers with young children even though a number of studies have shown that household members are important social influencers of mothers' child-feeding practices, including offering advice, providing food, and feeding children (Owino *et al.,* 2008). Despite grandmothers' experience, motivation, and commitment to caring for women and children, certain revealed biases against grandmothers include, they are a bad influence on children and families, illiterate and therefore unintelligent, or too old to learn and change and some of their practices are harmful (Aubel *et al.*, 2004).

Relative to international public health standards regarding maternal and child health and nutrition, some of the advice from grandmothers to women and young children is beneficial, while other support is not for example, giving water and other prelacteal feeds to infants in the first days and weeks of life (Aubel *et al.,* 2004). A study conducted in Vihiga indicated that increasing positive social support by key influencers such as fathers and grandmothers of infants improved some, but not all, of the targeted feeding practices of mothers. The effect of increasing social support is influenced by the quality of the social support (material or physical actions) not just the quantity (number of social support actions) provided to mothers (Mukuria et al., 2016).

5.4. Cultural Factors Affecting Child-feeding Practices

Cultural values and attitudes regulate the childrearing values, developmental expectations and emotional orientations of caretakers, and their child-rearing scripts for achieving valued developmental outcomes, in addition to the physical and social settings of everyday life (Solomon, 2010). Children all over the world are born into a specific culture and according to the socio-constructivist approach to cognitive development, culture shapes their thinking and

personality. Therefore, culture plays a pivotal role in child development. This study found that child-feeding practices were influenced by cultural beliefs and practices and sources of child-feeding information. In a previous study, it was found that infant and young child-feeding practices were influenced by household factors, social networks, and modern and traditional health institutions (Nduati *et al.*, 2008).

Greene *et al* 2006, affirms that cultural beliefs and practices influence individuals directly and change the course of conduct that an individual is compelled to take considering that infant and young child-feeding is embedded within traditional relationships in which both relatives and breadwinners have influence and even authority over options and modes of infant feeding. Culturally unacceptable foods in this study were eggs, gizzards and fatty foods. This study revealed cultural beliefs and practices associated with child-feeding in Wekhomo to include early weaning, sick mothers are not to breastfeed and not feeding some foods to children. However, majority of first-time mothers were not aware of any cultural beliefs or practices associated with child-feeding in their society and this could be attributed to factors not limited to age, exposure, technology and intermarriage. Elena, (2014) affirms that cultural food practices rather than the frequently mentioned poverty and ignorance should be recognized as vital etiology of malnutrition because of all the causative factors that precipitate high morbidity and mortality rates among infants, preschool children, pregnant and nursing mothers, cultural food practices are the underlying problem.

Mothers need to have access to skilled support and informationto help them initiate and sustain appropriate feeding practices, and to prevent difficulties and overcome them when they occur(WHO/UNICEF, 2004). Odini (2013) notes that information needs of rural women in Kenya relates mainly to their level of poverty and are varied due to demographic, social, cultural and economic factors, among others. The majority of women in Vihiga County use relatives such as parents as their first source of health information followed by government health centers, and government hospitals. This is because these are the nearest sources of information known to them and also not costly. This implies that knowledge of these information sources has influence on their information seeking behavior and improves access and use of health information among the women (Odini, 2013). Odini's study found out that in Vihiga, women's health information needs are not adequately satisfied by the existing information sources such as friends, relatives,

health centers, and neighbors. Women therefore tend to miss some information coming from external and conventional sources and get health information which may not be suitable for their daily access and use in health and child care.

This study found that the main source of information for first-time mothers on child-feeding were clinics. This is a positive indicator that mothers' have opted to seek mother and child health services in health centers where they receive professional advice on child-feeding and care. Other sources of information included mother-in-law, partner, media and social gatherings. Limited support from fathers was reported yet they are considered cultural gate keepers. Only 4% that were supported by their partners have a higher chance of making sound decisions that promote both mother and child health. A study in Niger, observed that limited involvement of fathers in child care aggravates malnutrition in children (Medecins, 2008) and alsoin Nicaragua, studies of both rural and urban contexts showed that men's involvement in newborn care is very limited (Ministry of Health, 2005). According to Nigerian sociologist Paulina Makinwa-Adebusoye, age and experience confer both responsibility and authority so most women cannot exert much control over their own lives therefore men and senior women make decisions that dictate what younger women can and cannot do (Makinwa-Adebusoye 2001).

CHAPTER SIX: SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

6.1. Summary of Findings

In summary, the current study demonstrates that amongst the economic factors, the primary source of food, household food sustainability, household food security and the type of complementary feeds given to children under five were associated with exclusive breast feeding. Regression analysis revealed that food taboos and source of child-feeding information were the cultural factors associated with complementary feeding.

6.2. Conclusion

1. The economic factors affecting child-feeding practices of first-time mothers of children less than five years in Luanda Sub-County, Kenya were farming and market purchase as households' major source of food.
2. The social factors did not affect child-feeding practices of first-time mothers of children less than five years in Luanda Sub-County.
3. The cultural factors affecting child-feeding practices of first-time mothers of children less than five years in Luanda Sub-County were clinics as a source of child-feeding information and nonexistence of food taboos.

6.3. Recommendations from the Study

1. First-time mothers should consider alternative economic activities to supplement agricultural produce as a source of food since agricultural productivity is low and declining in the area.
2. Social support of first-time mothers through engaging grandmothers and fathers in public health programs is of growing interest to enhance the health and development of young children.
3. Health-sector staff and community health workers should have positive attitudes toward local cultural roles and realities to support appropriate child care and feeding practices through interventions that build on and strengthen the capacity of different household

actors to assume their culturally designated roles that promote good child-feeding practices.

6.4 Recommendations for Future Studies

1. The social factors affecting childcare and feeding practices in Luanda Sub-County, Kenya.
2. The role of fathers and grandmothers in childcare and feeding practices in Luanda Sub-County, Kenya.
3. The influence of health sector staff and community health workers on child care and feeding practices in Luanda Sub-County, Kenya.

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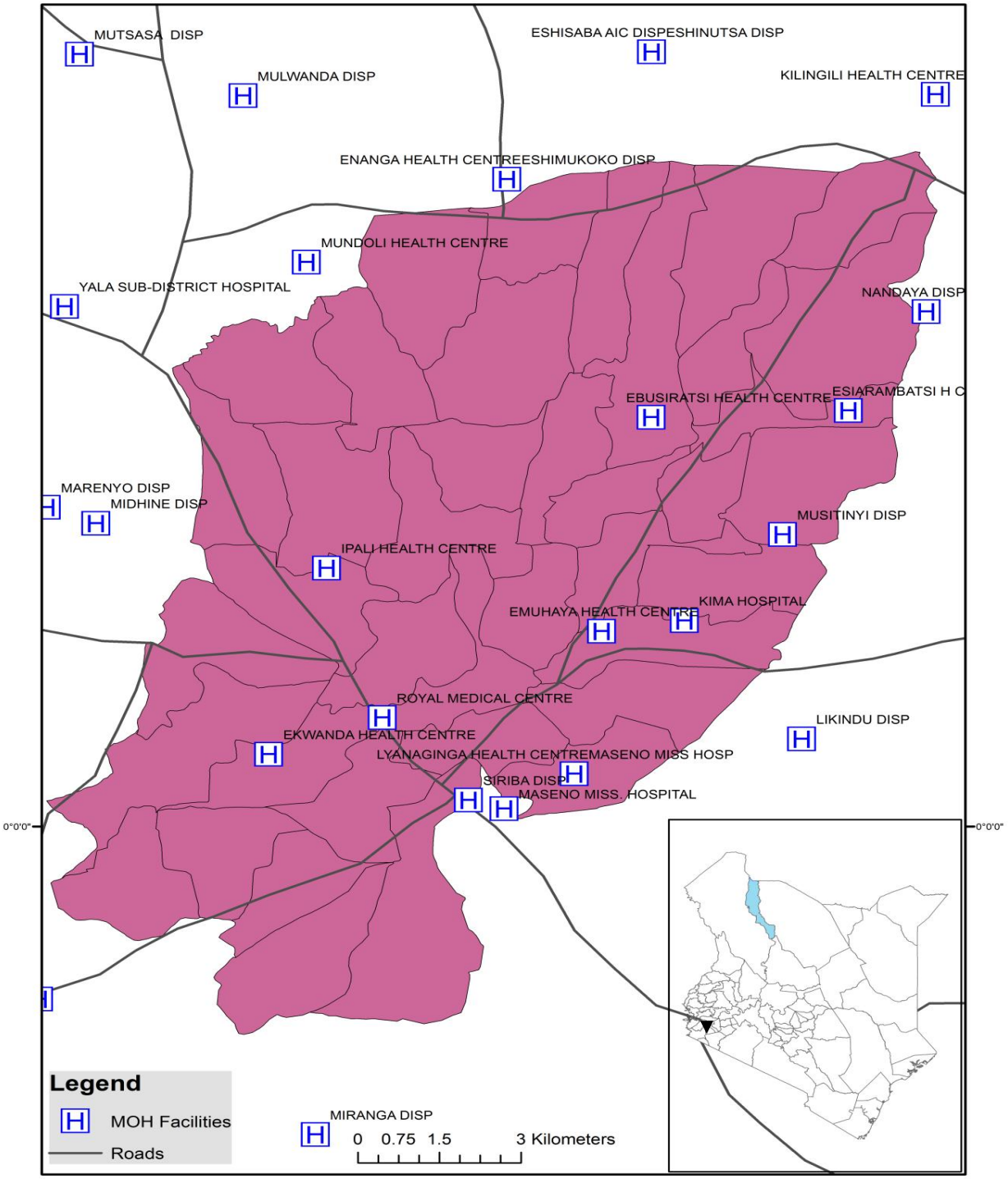
APPENDICES

Appendix I: Map of Luanda Sub-County



Appendix II: Consent form

Study investigators

Name	**Institutional Affiliation**
Alice Awinja	Maseno University
Professor Collins Ouma	Maseno University
Professor Monica Ayieko	Jaramogi Oginga Odinga University of Science & Technology

Research Purpose

The purpose of this study is to assess child-feeding practices of first-time mothers in Wekhomo Location, Luanda Sub-County.

Introduction

This study will reach 422 first-time mothers whose participation will be voluntary. You have been identified as a first-time mother who currently has a child under five years to take part in this study. Because you spend a lot of time caring for your child you can provide information that will enrich this study.

Study Procedure and Benefits

You will be visited in your home and required to spare thirty minutes to respond to a number of questions. There is no monetary benefit for taking part in this study however the information you give will benefit future first-time mothers by clearly bringing out the socio-economic and cultural challenges faced in child-feeding. The society as well will understand their roles in child-feeding and up-bringing.

Confidentiality

Confidentially of participants' information revealed during the research process will not be disclosed except for academic purposes. Your name and your child's name will not be mentioned anywhere in the thesis because no identifying information will be printed. If you agree to take part in this study, you can refrain from answering questions that you are not comfortable with.

If you have any questions about this study contact any of the numbers provided below:

Maseno University School of Graduate Studies; Tel- 057-35122 or 057-351008

Email- sgs@maseno.ac.ke

Maseno University Ethics Review Committee; Tel-

Email –

Name …… Signature …….. Date ……..

APPENDIX III: Fomu ya Idhiniya Mzazi

Jina Kituo

Alice Awinja Maseno University

Professor Collins Ouma Maseno University

Professor Monica Ayieko Jaramogi Oginga Odinga University of Science & Technology

Niaya Utafiti

Nia ya mradi huu ni kuangalia ni njia akina mama wa mara ya kwanza wanavyolisha watoto wao katika mkoa wa Wekhomo, Luanda Sub-County.

Mwanzo

Utafiti huu utashirikisha akina mama 422 ambao hawata lazimishwa kushiriki.Umechaguliwa kuwa katika mradi huu sababu unamtoto asiyezidi miaka mitano na maoni yako kuhusu huduma unayompa mwanao itaimarisha utafiti huu.

Taratibunafaidayautafiti

Utatembelewa nyumbani kwako na utahitajika kujibu maswali machache kwa dakika thelathini. Hakuna malipo kwa kushiriki katika utafiti huu ingawaje maoni yako yatafaidi akina mama wa vizazi vijavyo maanake utaonyesha vikwazo mnavyo kumbananavyo katika malezi ya watoto. Jamaa pia wataelewa majukumu yao katika ulezi.

Usiri

Usiri wa majadiliano katika utafiti huu utaimarishwa na kutumiwa kwashughuli ya masomo. Usiri wako na wa mototo wako utalindwa na majina yenu hayata chapishwa popote. Ukikubali kushiri katika utafiti huu, utaruhusiwa kutojibu maswali ambayo hauhisi huru kujibu.

Ukiwa na swali lolote kuhusu utafiti huu uliza:

Maseno University School of Graduate Studies; Simu- 057-35122 or 057-351008

Barua pepe - sgs@maseno.ac.ke

Maseno University Ethics Review Committee; Simu -

Barua pepe –

Jina …… Sahihi …….. Tarehe ……..

Appendix IV: Questionnaire for mothers

NO	Question	Response
SECTION A:Demographic information		
1.	Name	
2.	Age of mother	
3.	Age of child	
4.	Gender of child	Male Female
5.	Marital status	Married Single Widow Divorced
6.	Education level	Primary Secondary Tertiary
7.	Employment status	Self employed Farmer Casual Employed
8.	Who do you live with?	Husband Parents-in-law Alone Parents/relatives
9.	What is the size of your household	1-3 3-6 6 and above
SECTION B: ECONOMIC FACTORS		
10.	What is your major source of food?	Farming Market purchase Handouts
11.	How long does this source sustain you?	1-2 months 1-6months 1year
12.	Where do you get food after your major source runs outs?	Market Neighbors Well wishers
13.	Which of the following factors contribute to food insecurity in your house?	Low food production Lack of land Lack of labour Poor weather conditions
14.	Did you/do you plan to breastfeed exclusively?	No Yes
15.	Mention the benefits of exclusive breastfeeding that you know?	
19	When did you/do you plan to introduce complementary foods?	1-3 months 4-6 months

20.	What kind of complementary feeds do you give?	
21.	How do you prepare the food for the baby?	
22.	How many times do you feed your child in a day?	Less than 3 times 4-5 times More than 5 times
SECTION C: SOCIAL FACTORS		
23.	Who decides what food the baby eats?	Mother Father Grandmother
24.	Who is responsible for taking care of the baby?	Mother Father Grandmother
25.	What role does your husband play in caring for the baby?	
26.	What role does your mother-in-law play in caring for the baby?	
27.	What are your social networks?	Friends/peers Older mothers Women groups Health providers
28.	Are these networks sufficient in solving your issues and passing information about child-feeding?	
29.	Do household chores affect child-feeding?	Yes No
30.	If yes, how?	
SECTION D: CULTURAL FACTORS		
31.	What cultural beliefs and practices influence child-feeding in your community?	
32.	Are there taboos that are related to food that you give to your child?	No Yes Don't know
33.	If Yes, Explain	
34.	Which foods are not culturally acceptable for children and why?	
35.	Where do you get information about child-feeding from?	Clinic Mother-in-law Partner Media Social gatherings
36.	Do you think a training programme on child-feeding would be beneficial for first-time mothers in this community?	Yes No
37.	Why?	

Appendix V: School of Graduate Studies Approval

MASENO UNIVERSITY
SCHOOL OF GRADUATE STUDIES

Office of the Dean

Our Ref: PG/MPH/001/2011

Private Bag, MASENO, KENYA
Tel:(057)351 22/351008/351011
FAX: 254-057-351153/351221
Email: sgs@maseno.ac.ke

Date: 26th September, 2013

TO WHOM IT MAY CONCERN

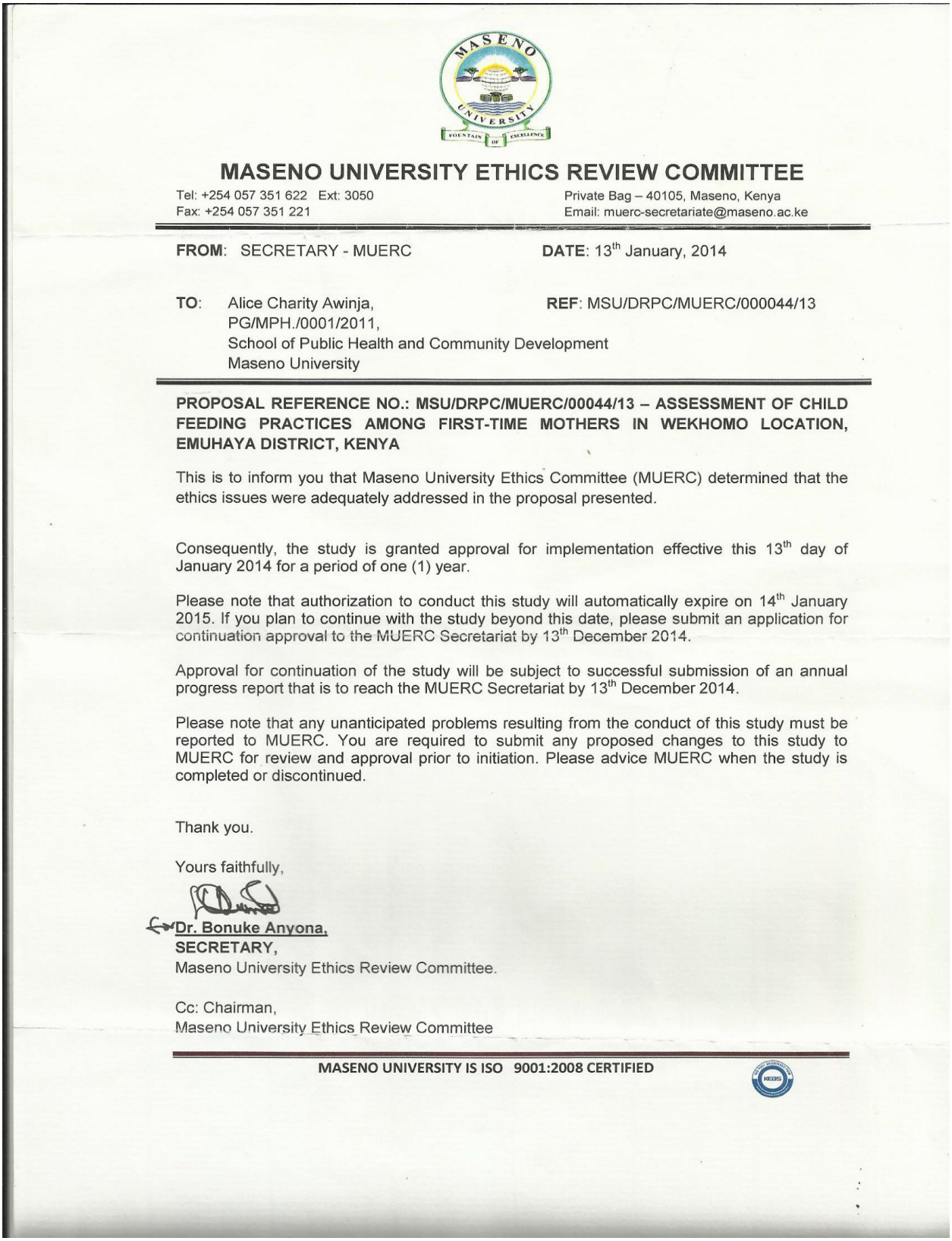
RE: PROPOSAL APPROVAL FOR ALICE C. AWINJA—PG/MPH/001/2011

The above named is registered in the Master of Public Health Programme of the School Public Health and Community Development, Maseno University. This is to confirm that her research proposal titled "Assessment of Child Feeding Practices among First-Time Mothers in Wekhomo Location, Emuhaya District, Kenya" has been approved for conduct of research subject to obtaining all other permissions/clearances that may be required beforehand.

MASENO UNIVERSITY DIRECTOR 27 SEP 2013 SCHOOL OF GRADUATE STUDIES

Dr. Pauline Andang'o
ASSOCIATE DEAN, SCHOOL OF GRADUATE STUDIES

APPENDIX VI: Ethics Review Commission Approval Letter



MASENO UNIVERSITY ETHICS REVIEW COMMITTEE

Tel: +254 057 351 622 Ext: 3050
Fax: +254 057 351 221

Private Bag – 40105, Maseno, Kenya
Email: muerc-secretariate@maseno.ac.ke

FROM: SECRETARY - MUERC

DATE: 13th January, 2014

TO: Alice Charity Awinja,
PG/MPH./0001/2011,
School of Public Health and Community Development
Maseno University

REF: MSU/DRPC/MUERC/000044/13

PROPOSAL REFERENCE NO.: MSU/DRPC/MUERC/00044/13 – ASSESSMENT OF CHILD FEEDING PRACTICES AMONG FIRST-TIME MOTHERS IN WEKHOMO LOCATION, EMUHAYA DISTRICT, KENYA

This is to inform you that Maseno University Ethics Committee (MUERC) determined that the ethics issues were adequately addressed in the proposal presented.

Consequently, the study is granted approval for implementation effective this 13th day of January 2014 for a period of one (1) year.

Please note that authorization to conduct this study will automatically expire on 14th January 2015. If you plan to continue with the study beyond this date, please submit an application for continuation approval to the MUERC Secretariat by 13th December 2014.

Approval for continuation of the study will be subject to successful submission of an annual progress report that is to reach the MUERC Secretariat by 13th December 2014.

Please note that any unanticipated problems resulting from the conduct of this study must be reported to MUERC. You are required to submit any proposed changes to this study to MUERC for review and approval prior to initiation. Please advice MUERC when the study is completed or discontinued.

Thank you.

Yours faithfully,

Dr. Bonuke Anyona,
SECRETARY,
Maseno University Ethics Review Committee.

Cc: Chairman,
Maseno University Ethics Review Committee

MASENO UNIVERSITY IS ISO 9001:2008 CERTIFIED

APPENDIX VII: Approval from the Location Authority

REPUBLIC OF KENYA

THE PRESIDENCY

MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

ASSISTANT CHIEF EMABUNGO SUBLOCATION

P.O BOX 74-5031

EMUHAYA

TEL. 0720494626

boazndai@gmail.com

4TH APRIL 2014

TO WHOM IT CONCERNS

Dear Sir/Madam,

RE: RESEARCH PROPOSAL

This is to certify that Alice Charity Awinja is a registered Master of Public Health student of the School of Public Health and Community Development in Maseno University.

This is to assist her conduct research in Waichomo Location in regard to the proposal entitled "Assessment of Child feeding practices among first time mothers"

Sir/Madam accord to her the necessary assistance she may require from your good office. Thank you in advance.

Yours faithfully

BOAZ WANGA

NB: Her Contact:

ALICE CHARITY AWINJA
P.O.Box 192.
MASENO.
Cell phone: 0725952552.