

**INFLUENCE OF LAND SUB-DIVISION ON HOUSEHOLD FOOD
SECURITY IN NYAMIRA NORTH SUB COUNTY, KENYA**

BY

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DECLARATION

DECLARATION BY THE CANDIDATE

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DEDICATION

I dedicate this thesis to my parents Mr. Abner Auya Mogaito and Mrs. Alice Nyanchoka Auya

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ABSTRACT

Land is a crucial resource that human beings depend on for survival. However, in the last three decades, farm sizes held by households in many parts of Kenya have diminished to less than an acre as a result of successive land sub-division leading to heightened households food insecurity. With all these unfolding, households that have traditionally relied on their farms for food will have to devise mechanisms to ensure their food security since without food life would be impossible. Thus, this study sought to investigate how land sub-division has influenced food security at the household level in Nyamira North Sub County. Specifically, the study sought to analyze the social meaning of land and how it influences land sub-division, assess the influence of land sub-division on household food survival strategies and analyze the influence of household food survival strategies on social life within households in Nyamira North Sub County. The study was anchored on the Social Construction Theory and Population Pressure Theory. The embedded variant of mixed methods research design was utilized. Stratified sampling technique was used to draw a sample of 379 respondents from a target population of 37965 households whilst purposive sampling procedure was adopted to draw participants for focus group discussions and key informant interview. The methods of data collection were questionnaire, focus group discussions and key informant interview. Descriptive statistics and thematic analysis were the methods of data analysis. The study established that living space, continuity of generation, collective identity and wellbeing, fulfillment of social norms and source of prestige are the common social meanings of land but they have minimal influence on land sub-division as opposed to need for independence and living, poverty and lack of government policy on land sub-division. The study established that households have adopted various food survival strategy including exclusive purchase of food from markets (31%), exclusive farming (7%), combined farming and purchasing of food from the market (57%) and farming on leased land to foster household food security (5%). The study also established that food survival strategies adopted by households have led to moral decay, change of gender roles in household food provision, breakdown of families, and weakening of extended family ties. The study concludes that land sub-division is greatly influenced by need for independence and living, poverty and lack of government policy on land sub-division rather than social meanings of land. The study also concludes that although land sizes have declined tremendously households have not ceased from producing food with supplement from the market implying that wherever there is change in a social system, people don't discard their traditional ways of life easily. Further, the study concludes that the household food survival strategies have resulted in unintended outcomes on social behaviors and social change in households including moral decay, change of gender roles in household food provision, breakdown of families, and weakening of extended family ties. The study recommends that there is a need for alternative livelihoods sources, especially businesses to help people eke out a living outside land to reduce the appetite for land, the national and county governments to cap the minimum sub-divisible land at an acre, and that local administration need to utilize community policing strategy to curb theft of food from farms so as to increase food production and consequently reduce the food purchased from market by households.

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LIST OF ACRONYMS AND ABBREVIATIONS

AEZs:	Agro-Ecological Zones
DAP:	Diammonium Phosphate
FAO:	Food and Agricultural Organization
FGDs:	Focus Groups Discussions
GoK:	Government of Kenya
NACOSTI:	National Council for Science and Technology
NLUP:	National Land Use Policy
NSP:	National Spatial Plan
PAG:	Pentecostal Assemblies of God
PMCA:	Peace and Mercy Church of Africa

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Land is a fundamental resource that ensures human survival. For rural dwellers in many developing countries, land is the main asset that support their livelihoods (Wickramaarachchi and Weerahewa, 2016; Molen, 2017). Having access to land is a crucial factor for survival and promotion of human welfare (Obonyo, Otieno, and Ang`awa, 2016; Ntirenganya, 2012). As a significant social capital, land provides people with not only food and income, but also raw materials such as tea, trees, coffee, pyrethrum, sugarcane etc for industries (Abdullah, et al, 2017; Ene-Obong, Onuoha, and Eme, 2017). For communities in the global south, land play some ultimate socio-cultural functions; it provides site for burial and other cultural functions, provides social status to men (custodian of land) especially when the land acreage is enormous and provides site for building homes (Kebaso, 2017; Olum, et al, 2017; Mbevi,2015; Dery, 2015). The utmost significance attached to land as a resource has seen many countries in the world embark on a land tenure system that underscore individual land ownership as opposed to communal land ownership. The individual land ownership is reinforced by land sub-division and inheritance (Museleku, Kimani, Mwangi and Syagga, 2018).

According to Limo (2016), land sub-division involves splitting up of a parcel of land into smaller and smaller pieces. The split-up pieces usually change ownership either through inheritance or purchase. Land sub-division is a central rural spatial issue that is attributed to inheritance laws, land scarcity and population pressure (Molen, 2017;

Van Hung, MacAulay and Marsh, 2007). Although land sub-division has historically characterized European society, it is now a common phenomenon in developing countries especially in Africa.

In various parts of the world, land sub-division is guided by either customary laws or land administration policies by the governmental authorities or municipalities (Molen, 2017). For instance, in Norway, land sub-division is done by municipality or Land Consolidation Court subject to fulfillment of some conditions: that the land to be subdivided is not used for agriculture and forestry and that the sub-division is justified on economic grounds (Leiv, 2011). In Denmark, land sub-division is authorized by municipalities in consultation with the Danish Chartered Surveyors. In Sweden, land sub-division decisions are made by the government administrators or courts (Leiv, 2011). Thus, sub-division of land in the three countries above cannot take place at whim of the landowner instead it follows laws set forth by government or municipalities and more importantly, the sub-division is guided by the economic aspects and public interests.

However, in Africa, land sub-division exercise is done differently. In African continent, there are neither economic considerations nor regulations from governments or municipalities governing land sub-division, instead the process is guided by customary laws characterized by patrilineal land succession and inheritance. The customary laws prescribe that parents sub-divide and allocate their adult sons land and this continues from one generation to another (Kiplimo and Ng'eno, 2016; Wickramaarachchi and Weerahewa, 2016). Although customary laws are critical in land sub-division and inheritance system, they are not gender sensitive;

they leave daughters out of land inheritance matrix because of embedded patriarchal norms.

Although there exist a Land Policy in Kenya that recognizes and respects individual land ownership, land sub-division is guided by customary laws. In Kenya, land sub-division and inheritance occur once sons attain “adulthood” age or marry because culture of communities in the country require that parents sub-divide and allocate their sons land for purposes of establishing homes and undertake farming or other livelihood ventures to support themselves and/or their families (Omosa, 1998). Land Policy in Kenya is contained in the Constitution of Kenya 2010, the Land Act 2012, the Land Registration Act 2012, the National Land Commission Act 2012 and the Environment and Land Court Act 2012. The Kenya’s land policy also acknowledges that land is not just a commodity of trade but also a principal source of livelihoods (Daily Nation, 2014).

Land sub-division has greatly contributed to diminishing farm sizes in the world. Available statistics shows that of the 525 million farms worldwide, 446 million have a size of less than 2 hectares (Molen, 2017). These farms are found in Asia (388 million, of which in China 193 million; India 100 million; Indonesia 17million) and Africa (33 million which is 80% of all farms at the continent). Latin America holds only about 4 million small farms. The statistics puts the average land sizes in Asia and Africa at 1.6 hectares. In Tanzania, for example, the average land size held by households is 2 hectares while in Rwanda is 0.5 hectares (Molen, 2017). The above data suggests that land sub-division and inheritance has led to drastic reduction of farm sizes in the world today. In Kenya, continued land sub-division among most Kenyan communities has resulted into decline of land acreage to less than one acres

(Molen, 2017). However, this was not the case in the past few decades. For instance, in the 1970s, the average land acreage among households was 10 acres (Jayne et al., 2014). With such small land sizes, people are still expected to eke out a living from such land and establish homes.

The interesting bit of land sub-division in most parts of Kenya is that the sub-division is rife even in the 21st century that is characterized by high literacy levels, advanced technology and relatively low adherence to traditional norms and values (Omboki, 2016; Ambwere, 2003). Thus, the successive land sub-division trend depicts that land has a hidden social meaning to people (Mbula, 2017). This is because it is uncommon for most Kenyan men to delink themselves from their ancestral land even after amassing wealth and property in Kenya's towns and cities.

Realizing the detrimental social and economic effects of continuous land sub-division in Kenya, the government and leaders have put spirited efforts to stop land sub-division, but little has been achieved. For instance, the Kenyan government drafted the Minimum and Maximum Land Holding Bill 2015 to guide land sub-division in the country, but due to vested political and economic interests, the Bill was shot down in parliament (Mbula, 2015). The Bill had capped minimum and maximum land acreage ownership in various Kenya towns, cities and rural areas. Specifically, the Minimum and Maximum Land Holding Bill 2015 had proposed that farmers in agricultural rich regions like North Rift would farm on land not more than 25 acres, land holdings in Nairobi, Kisumu and Mombasa, would be limited to between 0.1 hectares and two hectares whilst land ownership in counties and towns would be limited to between 0.2 hectares and two hectares (GoK, 2015). This implies that the Bill could effectively curb insignificant sub-division of arable land in the country but it was watered down

by the legislature. Hitherto, there are no laws prohibiting untenable land sub-division by the national government or Nyamira County government.

One structural issue in diminishing land acreage which is very critical is food production. Due to heightened land sub-division and resulting reduced farm sizes, food production has abridged leading to food insecurity in households. Studies by Wickramaarachchi and Weerahewa (2016), Mbula (2017), Mbula (2018), Kiplimo and Ng'eno (2016), Kipkemboi(2019)and Obonyo, Otieno, and Ang`awa, (2016) have established that land sub-division has significantly contributed to food insecurity not only in Kenya but also in other Sub Saharan nations. Households that have historically relied on their farms for food are currently experiencing hunger because of reduced farm production. However, the studies have not highlighted the food survival strategies households are utilizing to ensure their food security in the face of escalating land sub-division, diminishing land acreage and hunger.

With diminishing farm sizes due to successive land sub-division, there are difficulties in realizing optimal farm production and consequently, hunger among households. With all these unfolding, there must be change of strategies to ensure households' food security. As Omboki (2016) puts it, with decline in farm sizes a result of successive land sub-division, there must be change of strategies to ensure households food security. This is in line with Population Pressure theory by Mark Cohen (1977) which argues that when population increase and overstretch available resources, households become innovative to enhance their survival. It is within this background that this study sought to analyze how land sub-division has influenced household food security approaches in Nyamira North Sub County.

1.2 Statement of the Problem

Land is a precious resource that support livelihoods. People depend on land for farming, socio-cultural events and infrastructural development. However, in the last three decades, farm sizes held by households in Nyamira North Sub County have diminished to less than an acre as a result of successive land sub-divisions. The successive land sub-division signifies existence of underlying meaning(s) that households in the Sub County attach to land otherwise the practice would not have persisted the way it has. Consequently, diminishing land sizes have negatively affected household food security because house holds in the Sub County have traditionally relied on their farms for food. Since human beings depend, among others, on food for survival, households have to devise strategies to ensure their food security. Thus, this study sought to investigate how land sub-division has influenced household food security in Nyamira North Sub County. Specifically, the study aspired to answer the following questions: What is the social meaning of land and how does it influence land sub-division in Nyamira North Sub County? What is the influence of land sub-division on household food survival strategies in Nyamira North Sub County? How have household food survival strategies influenced social life in the household in Nyamira North Sub County? These are the fundamental questions that this study sought to answer.

1.3 Purpose of the Study

The purpose of this study was to investigate how land sub-division has influenced household food security in Nyamira North Sub County.

1.4 Specific Objectives of the Study

The study had the following objectives:

- i. To analyze the social meaning of land and how it influences land sub-division in Nyamira North Sub County;
- ii. To examine the influence of land sub-division on household food survival strategies in Nyamira North Sub County; and
- iii. To assess the influence of household food survival strategies on social life in the household in Nyamira North Sub County

1.5 Research Questions

The study was guided by the following research questions:

- i. What is the social meaning of land and how does it influence land sub-division in Nyamira North Sub County?
- ii. What is the influence of land sub-division on household food survival strategies in Nyamira North Sub County?
- iii. How have household food survival strategies influenced social life in the household in Nyamira North Sub County?

1.6 Justifications of the Study

Land sub-division and diminishing land acreage is a contemporary phenomenon characterizing most parts of Kenya. Households that were in possession of an average of ten acres three decades ago are now owning less an acre because of successive land sub-divisions. The dwindling land sizes has had a negative ramification on food production since available land can no longer sustain adequate food production to

meet the needs of households. Currently, hunger is a problem in many parts of Kenya that were previously known to be food secure especially Nyamira North Sub County (Mbula, 2018 and Kipkemboi, 2019). In this Sub County, land sub-division has greatly contributed to declining farm sizes at a high rate and consequently skyrocketing food insecurity (Mbula, 2017, Mbula, 2018 and Kipkemboi, 2019). The authors have recommended that to avert the undesirable situation and human suffering, urgent intervention is required. Such interventions may include policy formulation and research to guide land sub-division and to increase land productivity.

Therefore, findings of this study will have both theoretical and policy implications. Theoretically, the study will contribute to literature on land sub-division and households' food security approaches especially the food survival strategies utilized by households. On policy implications front, the findings will help the government and other policy making institutions to come up with appropriate policies to strengthen the households' food survival strategies to address the contemporary challenge of households' food insecurity in the Sub County and country at large. The findings will also guide policy formulation to alleviate human suffering associated with hunger and land sub-division not only in Nyamira North Sub County but also in other parts of Kenya.

Additionally, the study will unearth the social meaning (s) of land and how it influences land sub-division to help the government have an understanding of why land sub-division persists even though the land acreage in Kenya has drastically declined; probably the reason why the Kenyan parliament rejected the Maximum and Minimum Acreage Bill, 2015 that intended to set out land sub-division legal framework in the country.

The study findings are expected to add knowledge in the field of rural sociology with regard to the social meaning (s) of land and how it influences land sub-division, food survival strategies utilized by households to circumvent food insecurity resulting from severe land sub-division and reduced land acreage as well as addition of knowledge on how household food survival strategies have influenced social life in households. The findings will stimulate further research to fill gaps to be created by this study. This will ensure holistic approach to the understanding of the phenomena of land sub-division and household food insecurity for posterity of humanity and achievement of the Kenya's Big Four Agenda and Vision 2030 agenda number one (Food Security and Nutrition) which seeks to deliver hundred percent food security and nutrition to the Kenyan population by increasing large scale production of staple foods among other food access strategies, the United Nations Sustainable Development Goal number two (Zero Hunger) which aim to end all forms of hunger and malnutrition by 2030, and African Union's Agenda 2063 goal number three(Healthy and Well-nourished Citizens) which aim to ensure access to healthy food by African population by 2063.

1.7 Scope of the Study

The study was carried out in Nyamira North Sub County which is located in the western part of Kenya. The Sub County is situated in Nyamira County. The people of the Sub County are Abagusii community whose main economic activity is farming. The study was conducted between July 2019 and November 2019. The study area is historically known to be food secure but due to intensive land sub-division, households are reeling with food shortage occasioned by diminishing land sizes which has resulted in reduced household food production. It involved use of questionnaire,

focus group discussions and key informant interviews to investigate the social meaning of land and how it influences land sub-division, influence of land sub-division on household food survival strategies and to assess how household food survival strategies have influenced social life in household in Nyamira North Sub County. The study involved households in the Sub County.

1.8 Limitations of the Study

Although there were other issues associated with land sub-division that could be studied among them the political and economic meanings of land, this study concentrated on the investigation of social meaning of land and how it influences land sub-division, influence of land sub-division on household food survival strategies and the influence of household food survival strategies on social life in household in Nyamira North Sub County.

While in the field, the researcher experienced some challenges. Since land matters are sensitive, some respondents were not free enough to provide a lot of information. The researcher provided complete information on the purpose of the research and emphasized on anonymity particularly on the answers given. There was also a challenge of inaccessibility of most parts of the area of study because of poor roads and heavy rains during the data collection period. However, the researcher used four-wheel drive vehicles to transverse the region. The other limitation to this study was researcher's lack of knowledge on ward boundaries but village elders aided the researcher know ward demarcations.

1.9 Definition of Terms

Land: Land is a specific piece of earth, a property with clearly delineated boundaries, that has an owner. It is the solid surface of earth that is not permanently covered by water. In this study, land entails a piece of earth on which food is grown and homes are established.

Land Sub-division: Land sub-division refers to a situation where land is split into resultant small pieces. In this study, land sub-division is taken to mean splitting up of a parcel of land into smaller and smaller pieces for purposes of inheritance. The sub-division is attributed to customary laws that dictate that parents allocate their adult sons land to undertake farming and establishing homes.

Household: A household is a unit of all those persons who live together and have meals together or otherwise use their income together. Such persons live permanently in the same dwelling or address. In this study, a household entails a dwelling of family members functioning as a single entity, having its own land with delineated boundaries, living in the same dwelling and sharing meals.

Food Security: Food security is defined as a situation where all people, always, have physical and economic access to sufficient, safe and nutritious food to meet their dietary needs and food preferences for an active and healthy life. In this study, food security is taken to mean the physical access to sufficient food by households.

Food Security Approaches: In this study, food security approach essential the mechanisms put in place to ensure people or household have sufficient access to food. Such mechanisms may include purchase of food, farming, renting land for purposes of food production, reliance of relief food, use of social networks etc.

Land inheritance: In this study land inheritance has been defined as the generational acquiring of land from parents by sons as prescribed by African traditions and customary laws.

Social life: Social life refers to interpersonal relationships with people within their immediate surroundings or general public. In this study, social life has been taken to entail morality, household cohesion and social relations within larger family.

Social Meaning of land: In this study, social meaning of land entails social constructs that people make out of land that influences their social life. Such social constructs may include source of prestige, continuity of generation, fulfillment of social norms etc.

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This study was informed by all-inclusive review of literature related to land sub-division and household food security. The study undertook theoretical and empirical review. Theoretical review helped the study to come up with an in-depth understanding of the current body of knowledge on the research topic especially the “land as a resource” and “social meaning of land” sections. Empirical review helped in understanding what other related studies had done and revealed on the subject matter but in accordance with research objectives. The study aimed at investigating the social meaning of land and how it influences land sub-division, influence of land sub-division on household food survival strategies and to assess how household food survival strategies have influenced social life in household in Nyamira North Sub County.

This chapter covers the review of the relevant literature by considering an overview of land as a resource, social meaning of land and land sub-division, land sub-division and household food survival strategies, household food survival strategies and social life in households. The review of literature relevant to the study objectives informed the choice of theoretical framework and development of the conceptual framework that facilitated the study to address the research questions.

2.2 Overview of Land as a Resource

Land is one of the most significant natural resources that the entire earth system depends on, either directly or indirectly (Limo, 2016). According to Kimeu and Maneno (2017), land as a resource is associated with many sensitive issues based on its high value and necessity for livelihood. Kebaso (2017) contends that land is a finite, non-reproducible consumption resource held as a source of livelihood and a financial security transferred as wealth across generations. For rural dwellers in many developing countries, land is the main asset that supports their livelihoods (Wickramarachchi and Weerahewa, 2016). Having access to land is a crucial factor for survival and promotion of human welfare (Obonyo, Otieno, and Ang`awa, 2016; Ntirenganya, 2012). Thus, there is need to utilize land in the best possible way to ensure maximum benefits with minimal waste to ensure life continuity. Usually land change ownership through inheritance and purchase among other land access methods.

As a paramount social capital, land provides rural people with not only food and income but also produce raw materials such as tea, trees, coffee, pyrethrum, sugarcane and so on for industries (Abdullah, et al, 2017). For African communities, land play some socio-cultural functions; it provides site for burial and other cultural functions, provides social status to men, (custodian of land) especially when the land acreage is enormous and provides site for erecting homes (Olum, et al, 2017; Mbevi,2015; Dery, 2015).

Although land as a resource is critical in human survival, the current population growth trend, especially in Sub Saharan Africa is causing intense pressure on land leading to reduction of land acreage. Available statistics have shown that of the 525

million farms worldwide, 446 million have a size of less than 2 hectares (Molen, 2017). These farms are found in Asia (388 million, of which in China 193 million; India 100 million; Indonesia 17million) and Africa (33 million which is 80% of all farms at the continent). Latin America's holds only about 4 million small farms.

The above statistics puts the average land sizes in Asia and Africa at 1.6 hectares. In Tanzania, for example, the average land size held by households is 2 hectares while in Rwanda is 0.5 hectares (Molen, 2017). For Kenya, which has the world's fastest population growth rates, ranking 26 out of 231countries in 2015 in terms of population growth, available land has shrunk and this is associated with the high population growth. This shows how land as a critical resource is under pressure from ever-growing population.

The significance of land to rural livelihoods has seen many governments in the globe institute laws to guide land ownership, use and land transfer. Although land is guided by land laws formulated by governments across the world, in Africa, customary laws equally guide land issues. Customary laws guide land sub-divisions and inheritance. In land sub-division, customary laws prescribe that parents subdivide and allocate their adult sons land and this continues from one generation to another (Kiplimo and Ng'eno, 2016; Wickramarachchi and Weerahewa, 2016).

In Kenya for example, land sub-division and inheritance occur once sons attain "adulthood" age (above 18 years) or marry because culture of communities in the country require that parents sub divide and allocate their sons land for purposes of establishing homes and undertake farming to support themselves and/or their families (Omosa, 1998). Although customary laws are critical in land sub-division and inheritance system, they are not gender sensitive; they leave daughters out of the land

inheritance matrix because of embedded patriarchal norms. How unmarried women/daughters survive remains a mystery.

Land Policy in Kenya is contained in the Constitution of Kenya 2010, the Land Act 2012, the Land Registration Act 2012, the National Land Commission Act 2012 and the Environment and Land Court Act 2012. The Kenya's land policy also acknowledges that land is not just a commodity of trade but also a principal source of livelihoods (Daily Nation, 2014). This implies that land sub-division in Kenya is legal because it is a source of livelihood to ever increasing population although it can lead to insignificant farm sizes.

To guide land sub-divisions in the country, the Kenyan government drafted the Minimum and Maximum Land Holding Bill 2015 to guide land sub-division in the country, but due to vested political and economic interests, the Bill was shot down in parliament (Mbula, 2015). The Bill had capped minimum and maximum land acreage ownership in various Kenya towns, cities and rural areas. Specifically, the Minimum and Maximum Land Holding Bill 2015 had proposed that farmers in agricultural rich regions like North Rift would farm on land not more than 25 acres, land holdings in Nairobi, Kisumu and Mombasa, would be limited to between 0.1 hectares and two hectares whilst land ownership in counties and towns would be limited to between 0.2 hectares and two hectares (GoK, 2015). This implies that the Bill could have effectively curb insignificant sub-divisions of arable land in the country but it was watered down by the legislature. Nyamira County, where the study area is situated has no land sub-division policy.

2.3 Social Meaning of Land and Land Sub-division

Land is synonymous with rural livelihoods. In the developing world, land and rural people are inseparable in that the lives of the people revolve around land (Molen, 2017). To the rural communities, land may have economic, political and social meanings. However, this study is only concerned with social meaning(s) that households in Nyamira North Sub County make out of land. Although economic and political meanings of land are not part of this study, a brief review of the two is paramount to provide a wide spectrum of the meanings attached to land.

The economic meaning of land has been documented in various studies. According to Abdullah, et al (2017) land provides rural people with not only food and income but also help them produce raw materials for industries. Similarly, Kebaso (2017) argues that land is a finite, non-reproducible consumption resource held as a source of livelihood and a financial security transferred as wealth across generations. Wickramaarachchi and Weerahewa (2016) contend that in many developing countries, land is the main asset that support livelihoods of rural dwellers. Kimeu and Maneno (2017), have also argued that land as a resource is associated with many sensitive issues based on its high value and necessity for livelihood. It is clear from this literature that land has gigantic economic meaning, especially to rural folk.

On the political arena, according to Kebaso (2017), land has historically been used as a tool of dominance and power. That owners of large tracts of land accrued power and respect from land to the extent of influencing both local and national politics. The arguments by Kebaso (2017) is a clear testimony of how some individuals with large tracts of land, especially in the developing world, have ended up as political leaders

and the interesting bit is that such individual continue amassing more land once in power.

Doss (2010) has also undertaken a study on land and political power. Doss established that political positions in Uganda were given to the sons and daughters of the land. That a person's lineage was determined by the originality of a person to the community through ownership of the land and this was the basis of political entitlement. Thus, land has a political meaning that cannot be wished away in society. Households use land to trace the roots of political contenders to determine their suitability for such positions. This shows that land, especially ancestral land, is a factor in accessing political power and influence among the people of a given territory.

Available literature has documented how land has a social connotation to households including living space, collective identity and wellbeing, continuity of generation, fulfillment of social norms, spiritual meaning and source of social status. This study began by reviewing literature on living space as a social meaning that households derive from land.

Njunge (2020) noted that African culture has depicted land as an essential commodity defining peoples' living context. The author has argued that in the context of African culture, one is nothing without land because land provides people a place to build houses and help a man to secure future for his children. The author further notes that people who don't have land or not build houses are viewed as failures. Njunge (2020) has made significant contribution on how land in Africa is viewed as a living space and that success is measured on how a person has a place, he/she calls home. However, Njunge's work was not supported by empirical data since it was newspaper

article hence this study is well placed to investigate if living space as a social meaning that households attach to land is evident in Nyamira North Sub County.

Still on living space and land, Kimeu and Maneno (2017) observed that women in Kenya were excluded from land inheritance and rights. Kimeu and Maneno then concluded that everyone needs a place to call home, a place where people have their roots. Their sentiments show how land is central to people in the rural areas and how it is connected with living space, a fundamental social meaning of land. Like Njunge (2020), the work by Kimeu and Maneno (2017) did not take empirical approach because it was hypothetical conference work hence there was need for empirical study to bridge this gap.

Contributing to the debate on land and living space, Fobih (2004) noted that secure access to land was critical in providing African people a place to live. The author argued that to ensure privacy, people have their land usually demarcated with buildings and farms within the land boundary. Fobih (2004) further noted that access to land makes people have a strong sense of belonging and identity. Thus, land means a source of shelter and living space for humanity and therefore people have a strong attachment to their land. However, the work by Fobih (2004) focused on both farmers and urban poor in Africa and this did not bring out a clear picture on how land is viewed in the context of living space because rural and urban aspects of land were incorporated in arriving at the conclusion above. Thus, it was important for this study to take a rural approach to determine whether living space is a social meaning that residents of Nyamira North Sub County derive from land.

Nandiemo (2018) wrote on how a man murdered his brother in cold blood over land dispute in Rongo, Kenya. According to this write up, the brothers had a protracted

dispute over land belonging to their father which resulted to the man inflicting of deep cuts in his brother using machete. The article by Nandimo (2018) shows competition for land as living space. People are involved in land disputes because of competition for the “social meaning of living space”.

Literature has also shown that cultural fulfillment constitutes social meaning that people attach to land. Gilbert (2017) noted that land is central in cultural preservation in most rural communities. Gilbert argues that land rights assume special importance for indigenous people, without access to their land, indigenous cultures are in danger of extinction. That land is a source of cultural identity. Gilbert (2017) has put a mark in the debate on land and culture but the work entirely focused on the indigenous people and their land. However, the current study focused on the social meaning that households in the study area make out of land leading to insignificant land sub-divisions. Thus, this study focused on all residents of the study area whether indigenous or those who have bought land in the study area.

According to Kymlicka (1995), survival of community’s culture depends on protection of ancestral land. Ancestral land as reported by Kymlicka, is strongly linked to the culture of a community and it is only through protection of the land that culture can be preserved. Although Kymlicka (1995), has contributed to literature on culture and land, the work has focused on protection of land for prosperity of a community’s culture. However, the current study focused on how people of Nyamira North Sub County are making out meaning of land that has led to intensive land sub-division.

Mbevi (2015) reported that communities have historically used land to perform various cultural activities and rituals that are cornerstone to their survival. That rituals

associated with rain making and thanksgiving to God, in African societies, have been linked to land and are performed in certain places including mountains, valleys, forest, etc. This implies that land means cultural preservation for people in Africa. The rituals are performed with the help of ancestors of the land. The work by Mbevi (2015) is critical as cultural activities and land are concerned but some of the cultural activities reported (like rain making) may not apply in the current study area because the area receives abundant rains throughout the year hence need for this study.

Contributing to literature on land and fulfillment of social norms Dery (2015) observed that land means burial site for the dead in a community. Dery argues that historically, land where people have buried their forefathers is reserved and regarded sacred. Such essential landmarks (burial sites) provide people with their roots and identity. Moving out of such land is an abomination in some culture because that is where ancestors lie. Thus, land means continuity of a generation and life through burials. The work by Dery (2015) illustrates the reasons why it is difficult for people to move out their ancestral land. However, this work was undertaken in Ghana hence there was need for this study to establish whether the findings apply to Nyamira North Sub County, Kenya.

Collective identity and wellbeing have also been associated with social meanings that communities derive from land. Delville (2000) while studying formal laws and customary land rights in French-Speaking West African nations reported that land is related to the holder's identity which is paramount to belonging. Delville argued that ancestral land and rights for people to own such land is critical in promoting the identity and well-being of a community. Although the work by Delville (2000) adds to the literature on land and identity and belonging, the study focused on formal laws

and customary laws and their influence on land rights. But the current study focused on the social meaning that people derive out of land in Nyamira North Sub County Kenya.

Tafira's (2015) work on "Why Land Evokes Such Deep Emotions in Africa" illustrated how land in Africa is central to peoples' collective identity and well-being. Tafira reported that for Africans, land is everything and that taking away land from individuals is like robbing them of their person-hood, being and identity. The scholarly work by the Tafira (2015) points out why people are obsessed with ancestral land. However, the work was not supported by empirical data hence need for this study.

Barume (2010) reported that land was viewed by the people as indispensable to their collective identity and well-being. That land is indissolubly linked to the identity of the indigenous people and that land helps a community to preserve its language due to close knit relationship and close living. The work by Barume (2010) is critical to the literature on land and collective identity for African people. However, it fails to take into account the collective identity meaning of people who might have purchased land in away from their ancestral land. Thus, this study takes the indigenous and non-indigenous people into account and their social perceptions of land in Nyamira North Sub County.

Gilbert (2017) also reported that territories and land for indigenous people are the basis not only for economic livelihood but also are the source of social identity. That people derive their collective wellbeing from ancestral land and that, this is a source of a sense of belonging to people in a particular community. However, Gilbert's work didn't take into account the influence of land on social identity of both indigenous and

non-indigenous people to establish whether it applies to both populations. This study was therefore critical to establish how land has had a collective identity meaning to people (indigenous and non-indigenous) in Nyamira North Sub County.

Available literature has also linked land to spiritual matters of communities. According to Barume (2010), land to African people has a spiritual meaning. Those indigenous communities have a distinctive and profound spiritual and material relationship with their lands. In the pre-industrial African societies, Barume claims, people relied on land to give thanks to God. In some communities, people climbed mountains within their land to pray if a calamity befell their communities. The worship land was highly valued, respected and reticent as sacred. Further, some communities would organize for prayers in such holy places before planting and harvesting for blessings and thanksgiving. The work on land and spirituality by Barume (2010) best fits communities in their early stages (pre-industrial communities). With people embracing Western religion, it is not possible that people still worship mountains hence the need for this study to unearth whether there is a link between land and spirituality among households in Nyamira North Sub County.

Literature has also linked land to social status in some rural communities. Contributing to this debate, Njunge (2020) revealed that land is a source of social status. That men derive respect and high social status by owning large tracts of land. Njunge contends that for men land is an ego thing. She adds that men have been made to think that if they have no land, they are not men enough, which is sufficient motivation to go as far as killing to own a piece of land or keep that in their possession. Although Njunge (2020) has made remarkable contribution to the literature on land and men's social status, the work has not taken into account men

with limited land resulting from continuous land sub-division and inheritance. Are men still deriving social status from such small land? This question was answered by this study.

According to Tafira (2015), land determines social status and class of a person. Tafira contends that traditionally land was of great value in West Europe to the extent of defining the social status and class position of individuals. The work by Tafira (2015) has illustrated how land is used to carve social niche for people owning enormous land acreage. However, the work does not reveal whether the social status and class position change with decline in land acreage mostly due to successive land sub-division like what is experienced in most rural areas in Africa and Nyamira North Sub County in particular, hence need for this study. Adding to the literature on land and social status, Owino (2019) established that people without land are deemed poor. The findings portrayed how households without land are looked down upon indicating that land is critical parameter in social ranking in society. However, the findings revealed how households without land are perceived by society but did not touch on how households with limited land resulting from land sub-division are perceived hence justification for this study.

As per studies reviewed above, land is a critical resource to rural people. The significance of land in the rural areas cannot be underrated. Literature has linked land to living space (Njunge, 2020; Kimeu and Maneno, 2017; Fobih, 2004; and Nandiemo, 2018), fulfillment of social norms/ cultural fulfillment (Gilbert, 2017; Kymlicka, 1995; Mbevi, 2015; and Dery, 2015), collective identity and well-being (Delville, 2000; Tafira, 2015; Barume, 2010; Gilbert, 2017), spiritual matters of communities

(Barume, 2010), and source social status (Njunge, 2020; Tafira, 2015; and Owino,2019).

Based on the above literature, there are a number of fundamental questions that need answers. First, as social status and land is concerned, what happens to social status and class position of men in society when land acreage decline as a result of successive land sub-division? Are men still deriving social status from such small land? Second, with modernization, globalization and modern religion, do communities still use land for spiritual matters? Third, land for indigenous people has been portrayed as a basis for social identity, what is the influence of land on social identity of non-indigenous people who might have purchased land way from their ancestral land? These are among the areas that need further research.

Having reviewed literature on the social meanings that people make out of land, it was imperative for this study to focus on how the social meanings of land influence land sub-division. This is because land sub-division in Kenya and other parts of Africa is so rife even in the 21st century that is characterized by high literacy levels, advanced technology and relatively low adherence to traditional norms and values (Omboki, 2016). Yet, even the educated, the rich and poor alike consider land as the single most important form of personal asset and is deeply entrenched with its distribution and use (Ambwere, 2003).

To begin with, Kimani and Pickard (1999), observed that the Maasai community in Kenya is slowly sub-dividing community land into individual land. What follows the land sub-division is further fragmentation of plots for sale, in many cases to non-Maasai. The authors maintained that average plot sizes have decreased, while the number of fenced properties and the levels of cultivation had increased. Due to land

sub-division, Kimani and Pickard argued, the Maasai are gradually losing their best land and are being pushed into the drier areas. From the findings of this study, it is evident that land sub-division of the community land is influenced by the desire by community members to acquire individual land and then sale to get money. The land sub-division is in no way influenced by social meanings of land instead it was influenced by financial gains.

A study by Museleku, Kimani, Mwangi, and Syagga (2018) revealed that socio-cultural and economic factors are the most significant drivers of agricultural land sub-division in Kajiado, Kenya. The authors asserted that land inheritance practices were among the socio-cultural factors influencing land sub-division in the area. However, this study focused on socio-cultural and economic factors influencing sub-division of agricultural land and not the social meaning of land that facilitate land sub-division.

Olayiwola and Adeleye (2006), reported that inheritance greatly influence land sub-division various parts of Africa. The authors contend that land inheritance is the primary cause of land sub-division particularly when households desire to provide each of several heirs with land. Olayiwola and Adeleye, (2006) concludes by saying that land inheritance laws applied in most countries facilitate or demand the subdivision of holdings into equal parts among all heirs or in some countries among only sons

According to Limo (2016), social factors also influence land sub-division. The author illustrates that the desire to own land is also a popular reason for land sub-division and that In and out migration in some high agricultural potential areas provide room to dispose and opportunity to own land. Although Limo (2016) has reported that

social factors influence land sub-division, the study did not focus on social meanings about land and how they have influenced land sub-division.

In a nutshell, authors have written on the factors influencing land sub-division. Kimani and Pickard (1999) has demonstrated that land sub-division among the Maasai community in Kenya is influenced by financial gains through sale of land, Museleku, Kimani, Mwangi, and Syagga (2018) have documented that socio-cultural and economic factors are influencing land sub-division in Kajiado, Olayiwola and Adeleye (2006) has reported that land inheritance has greatly influenced land sub-division in Africa and Limo (2016) has pointed out that social factors are influencing land sub-division in Trans-Nzoia West Sub-County, Kenya. From all these studies, a few studies have focused on how social meanings of land among various households/communities have influenced land sub-division. Thus, there is need for a study to investigate how various social meanings of land by communities/ households influence land sub-division hence this study sought to fill this gap. This will help build concrete literature on the social meaning of land and land sub-division.

After reviewing literature on how social meaning of land and land sub-division, this study briefly analyzed the link between land sub-division and household food security. This will help the study to have a ground that land sub-division has indeed influenced household food insecurity in various parts of the world. Studies have shown that land sub-division has an influence on food security and that the perennial hunger in most African countries is to some extent attributed to land sub-division that make arable land untenable. Obonyo, Otieno and Ang`awa (2016) sought to unearth the causal relationship between land sub-division and food security. The study revealed that land sub-division led to reduced land acreage and consequently low

yields. With low farm output, hunger is inevitable. The findings of this study depict the commonly held view in scholarly circles about the influence of land sub-division on food security at the household level. However, the study failed to provide a critical analysis on the food security approaches adopted at the household levels to ensure survival since man needs food for normal body functioning and energy. With the food security approaches at the household level, the study would have been fundamental in holistic understanding of the food survival mechanisms utilized by households in Nyamira North Sub County in the face of heightened land sub-division and the resulting food insufficiency.

Limo (2016) explored the factors behind intensified land sub-division and how it influenced agricultural outputs closely linked with food security. The outcome of the study was that land sub-division in Trans-Nzioa West Sub-County was instigated by cultural, financial and social factors and that such sub-division had a hand in reduced agricultural production. The study can be applauded for bringing forth new knowledge about the factors associated with skyrocketing land sub-division, but it did not address the approaches utilized by households to ensure food security despite dwindling agricultural production resulting from land sub-division and reduced land acreage.

Niragira et al (2018) revealed that households with small farms face food insecurity and heightened squalor. The study contributed to knowledge on land sub-division and food security by linking small farms to household income. However, the study did not focus on food survival strategies employed by households with small farms to overcome food insecurity.

Furthermore, Kebaso (2017) found out that Land sub-divisions had a negative impact on production of food. The findings were fundamental in understanding the extent to which land sub-division in Kajiado North has resulted to low food production but how households negotiate the food insecurity situation never featured in the study.

Wickramaarachchi and Weerahewa (2016) have contributed to the literature on land sub-division and productivity. The study established that the size of the land has a positive and significant effect on land productivity. This implies that as the land size decrease, the productivity of the land decrease. However, the study did not focus on strategies put in place by households to ensure their food security in the face reduced farm sizes thus need for the current study.

While undertaking study to establish the impact of farm-size on household food security across different AEZs in the Embu County, Ndirangu, Mbogoh and Mbatia (2017) found out that land size had a positive influence on food production. Households with large farms can produce adequate crops and livestock products. The findings implied that households with small farms had difficulties in producing sufficient food for their members. Although this study focused on the two facets of food production, that is, crop and livestock production, it left a gap as far as knowledge generation in the field of farm size and food production are concerned. With drastic reduction of farm sizes resulting from intensified land sub-division to fulfill cultural obligation or economic whims, the study failed to address fundamental issue: how land sub-division has influenced food security approaches at the household level. Without the two issues, the knowledge on land sub-division and food security is incomplete.

Although, studies have shown that small land size contributes to reduced productivity, Kitila and Alemu (2014) established that the size of farm under maize production did not affect productivity. Instead the technology used, including the amount of fertilizer used and the quality of seeds, had a mammoth effect on land productivity. Similarly, Sundqvist and Andersson (2006) revealed that the size of land is not essential in land productivity instead fertilizers and labour inputs are crucial.

What the two studies above (Kitila and Alemu, 2014; Sundqvist and Andersson, 2006) show is that even if the size of land is small, production can be higher depending on the type of farm inputs utilized. However, such technology go hand in hand with the economic status of a farmer; the farmer with resources can afford the technology while those living on society margins continue with the traditional tried-and true methods that can have a profound negative effect on production. With severe land sub-division in Nyamira North Sub County, poverty levels are high, and therefore most farmers might not afford such technology.

Nyangweso (2011) revealed that sub-division and allocation of land to sons, has reduced the farms sizes for households' which has a negative ramification on sugarcane production. This is because farmers are sub-dividing land to their sons thus resulting in reduction of mean land holding per individual. In addition, the study established that with reduction of the land sizes, per unit cost of production increase; thereby, discouraging farmers from sugarcane production.

With dwindling sugarcane production, household it will be a phenomenal task for households to ensure food security for the members. This is because households will receive little proceeds from sugarcane farming which will affect their purchasing power on foodstuffs like maize which is glorified in the Kenyan society. Thus, how

households ensure food security for their members remains unknown since Nyangweso (2011) study did not take that into account.

Niragira, et al (2018) revealed that those smaller farms are more efficient than the larger farms. This is attributed to the fact that smaller farms are based on more intense use of family labor, because of its higher efficiency and motivation than hired labor as suggested by Scandizzo and Savastano (2016) and the easiness of land owners to work closely on the farm that in the case of large farms. However, the study also established that too small farms are untenable since they cannot provide a realistic livelihood for the household to earn a living which leads to poverty and food insecurity despite their higher productivity. The implication of very small farms is the exposure of households to food insecurity and constrained income.

Based on the literature reviewed in this section, land has various social meanings to people. To some households land means place of fulfillment of cultural beliefs and rituals (Kymlicka, 1995; Olum, et al, 2017 and Mbevi, 2015), continuity of a generation and life through burials (Dery, 2015 and Doss, 2010), political meaning (Kebaso, 2017 and Doss, 2010), collective identity and wellbeing (Delville 2000), spiritual meaning (Barume, 2010) and living space to people (Kimeu and Maneno, 2017). The literature has depicted the centrality of land to people in various communities especially in Africa with Kenya included. Based on reviewed literature on social meanings of land, this study sought to answer the following questions: What is the social meaning of land to households in Nyamira North Sub County? How has the social meaning(s) influenced land sub-division in the above Sub County? These are some of the issues this study sought to address.

2.4 Land Sub-division and Household Food Survival Strategies

Studies have shown that food insecure households adopt various survival strategies to circumvent food insecurity. To start with, literature has shown that food insecure households have resorted to purchasing food from local market to deal with food insecurity resulting from declining land acreage and reduced farm productivity. Kabui (2012) showed that small-scale farmers mostly purchase food from markets to ensure their food security. Among the foods purchased according to this study is maize and millet. Similarly, a study by Sakyi (2012) revealed that majority of households in the Limpopo Province, South Africa evade food insecurity through purchase of food from the market rather than relying on their farms. According to Sakyi, 90% of major staple food (*mielies*) consumed by households is sourced from the market.

Arega (2015) established that the residents of Lay Gayint District in Ethiopia utilized various food access strategies. However, the most pronounced strategy, according to this study, is borrowing loans from friends and taking loans from financial institutions to purchase food from markets. But this strategy can only work when a population is composed of people of diverse social classes to make it possible for those endowed with resources to lend the poor households to meet their food requirements. In addition, loan taking for food purchase strategy may not apply in the current area of study because households may lack collaterals required by financial institutions to grant loans. Thus, with Nyamira North Sub County, the situation may be different because households in the Sub County, currently own little land that cannot guarantee them adequate food and financial stability hence borrowing from friends to meet household food requirement may be a toll order.

In addition, lack of collaterals to help households secure loans to purchase food can hinder residents of this study from utilizing the strategy. Therefore, there was need for this study to establish the survival strategies utilized by households to overcome hunger occasioned by continuous land sub-division and generational inheritance.

Contributing to the literature on markets and household food security, Shariff and Khor (2008) revealed that households in rural Malaysia utilized markets to ensure their food security. That food in secure households went to extent of borrowing money to purchase food from the market. Since food is sold in Kenya markets, is it true that Nyamira North Sub County residents are circumventing their food insecurity situation by purchasing food from markets? This study sought to answer this question.

Similarly, Ghimire (2014) established that food insecure rural households purchased food to ensure food security. The households according to Ghimire could take loan from financial institutions to purchase food. The findings of this study may not apply to the food insecurity situation in Nyamira North Sub County because for a household to qualify for a loan, collaterals are required and steady source of income too is compulsory thus it is unlikely that households in the study area are employing the same food survival strategy to deal with hunger resulting from reduced land sizes due to uncontrolled land sub-division. This study therefore sought to establish strategies utilized by households to deal with their food insecurity situation.

Cordero-Ahiman, Santellano-Estrada and Garrido (2018) established that the Sierra Tarahumara communities relied on markets for food. The study argued that in some occasions the households could get food on credit. However, taking food on credit as depicted by Cordero-Ahiman, Santellano-Estrada and Garrido (2018) applies to

households that have steady income either from salary or agriculture. This will make it possible for the households to pay for foods taken on credit. The finding is unlikely to apply to the current area of study because reduced land sizes has most likely constrained income generated from farms by households or from formal employment since unemployment in the country is high. Thus, purchase of food is among the prominent food survival strategies employed by households in Sierra Tarahumara may not be employed by households in Nyamira North Sub County, thus need for this study to unearth the food survival strategies utilized by households in the study to overcome hunger.

According to Owino (2019) households can enhance their food security through purchase of food from market. However, Owino cautions that a household will have food security if there is sufficient food available, necessary purchasing power or means of exchange to acquire it and if their social relationships allow them access to it within the household. Further Owino notes that the purchasing power of households is increased either through gifts or family support. Thus, purchase of food from markets depends among other factors a household purchasing power. It is however, not clear whether households in the study area have the necessary purchasing power to help circumvent food insecurity stemming from uncontrolled land sub-division and resulting from hunger.

Contributing to household food security debate, Nzuma and Ochola (2010) argued that food purchase is among household food survival mechanisms that households employ to avert food insecurity. The authors specifically posited that the main source of food for households without land is through purchase. This means that food purchase constitutes among other food survival strategies that households utilize to

avert hunger. However, according to Nzuma and Ochola (2010) this strategy is for households without land but in the area of study households have land whose sizes is small owing to the continued generational practice of land inheritance, the question begs, is food purchase a household food survival strategy in Nyamira North Sub County?

Apart from purchasing food, some studies have documented that hunger struck households overcome food insecurity through relief food provided by governments and/or non-governmental organizations. A study conducted by Kabui (2012) pointed out that 55.3% of households in Tharaka Central Division rely on relief food. The food (maize) is provided by faith-based organizations notably Catholic Relief Services and Plan International. The findings concurred with a study by Farzana et al (2017) who established that households with food insecurity in Bangladesh opted for relief food from various safety net programs involving government and nonprofit making organizations. Similarly, Uddin (2012) revealed that marginal farmers opted for relief food to circumvent food insecurity. Further, Gundersen and Ziliak (2014) established that food insecure households resort to social safety-net programs to overcome hunger in the US.

Seivwright, Callis and Flatau (2020) established that food insecurity among the disadvantaged segment of Australia population was positively correlated with access to food emergency relief services, indicating that these services are being used by those most in need, but do not address the root causes of food insecurity. To overcome food insecurity, the disadvantaged lot or households resorted to relief food from governmental and non-governmental authorities. Although these findings are

critical in the literature on household food survival strategies, the findings may not apply in the study area since the area is historically known to be food secure.

Further, Elmerinda (2016) established that food insecure households relied on food aid to circumvent hunger. The study contends that the households depended on food from the government and non-governmental organizations to avert hunger. This food survival strategy happens to work well in many developing countries because in most cases when households are in acute food insecurity, relief food by government, well-wishers, companies and faith-based organizations among other international agencies is distributed. But for Nyamira North Sub County that is perceived as “food secure”, it is imaginable that the Kenyan government and non-governmental organization can distribute relief food in the area since no hunger related deaths have ever been reported despite heightened hunger. Thus, this study intends to investigate what food survival strategies are households in Nyamira North Sub County are utilizing to ensure their food security since the area is grilling from food shortage brought by reduced land sizes and production that have been necessitated by uncontrolled land sub-division and inheritance.

The safety nets as documented by Farzana et al (2017), Uddin (2012) and Gundersen and Ziliak (2014) illustrates the survival tactic that are mostly applicable among households in advanced countries to avert hunger among households while relief food as pointed out by Kabui (2012) and Elmerinda (2016) applies to a survival tactic utilized by government and non-governmental organizations to address hunger among households in developing countries like Kenya.

However, relief food in Kenya is not an effective strategy in hunger alleviation. Relief food only comes into action when there is mass hunger at the northern part of Kenya

when the government, non-governmental organizations and Kenyan at large mobilize food stuff to assist the hunger-stricken northerners. This does not mean that the communities in the northern Kenya are food secure, the situation comes to limelight when it is acute and when people have already died. The food relief thus applies to places historically known to be food insecure but not in areas like Nyamira North Sub County regarded as food secure despite existence of high levels of food insecurity. Thus, do households in the sub county circumvent food insecurity through relief food?

Literature has shown that social networks play a pivotal role on food survival strategies. Uddin (2012) established that the marginal farmers in storm surge prone Coastal area of Bangladesh access food through social networks. This implies that the households are at apposition to get food assistance from relatives, friends and informal networks created at work place or from religious institutions. Although this tactic existed in pre-industrial African society, there has been social change resulting from reduced farm production, capitalism and decline in the worth of extended families.

Thus, relying on social networks in the 21st century may be a toll order. This is worse in Nyamira North Sub County because of reduced farm sizes that have resulted to household food insecurity. It is even difficult for households in the Sub County to get food through social networks because none is food secure because of reduced land sizes (to less than one acre) and productivity. Thus, relying for social networks may not be a possible tactic for food insecure households to access food hence there is need for a study to establish the strategies households are utilizing to access food in Nyamira North Sub County.

A study by Sarkar and Shekhar (2017) revealed that food insecure households in West Bengal, survived on food borrowed from relatives. The study established that

households could reach their relatives for food to circumvent hunger. However, the study did not document whether the borrowed food is refunded after food insecurity period or it is given on humanitarian grounds with no refunding plans in place.

In addition, the food survival strategy by Sarkar and Shekhar (2017) maybe applicable in circumstances where some segment of the population is food secure. These findings may not apply to the situation in Nyamira North Sub County because the genesis of the hunger in the sub county is unprecedented land sub-division that has reduced available arable land for farming. This means that almost every household, putting other factors constant, is facing food insecurity hence no household or relatives can come for the help of starving households or relatives. Thus, it was fundamental for this study to establish exactly what food survival strategy households in Nyamira North Sub County are employing to ensure their food security resulting from uncontrolled land sub-division that has seen households possess less than an acre of land.

A study undertaken by Ndeyapo (2013) established that households in informal settlements of Windhoek, Namibia shared food with neighbours as a means of addressing food insecurity. The study argued that sharing of food with neighbours and consumption of food provided by neighbours were the common strategies utilized by households to overcome hunger. The findings of this study may not apply to the food insecurity situation in this study area. This is because Ndeyapo's (2013) study was undertaken in the informal settlement in the capital city of Namibia and the current study was undertaken in the remote area where almost every family is food insecure occasioned by reduced land acreage due to intensive land sub-division. This indicates that even neighbours in the study area have nothing to feed other

neighbours. Thus, there was need for this study to establish the food survival strategies utilized by households in Nyamira North Sub County to ensure their food security.

According to Messele (2011) social networks form a crucial leeway for food insecure households to access food. This study established that households in the Woreda 01 in Gullele Sub-City, Addis Ababa utilized social networks especially neighbours to acquire food to circumvent food insecurity. The study maintained that some households went to the extent of sending children to eat with neighbours when available food was not enough for the neighbors to share.

However, the strategy by Messele (2011) was applied in an urban setting that provided a close proximity for interaction of neighbours. In this current study, the focus was a rural area (Nyamira North Sub County) where every household was food insecurity resulting from successive land sub-division and generational land inheritance that had led to a reduction in sizes of land that can be used for food production. Thus, it is not possible for the households in the study area to utilize “sharing food with neighbours” strategy because even neighbours may be experiencing food security. Therefore, this study sought to establish the food survival strategies utilized by households in the study area to circumvent hunger resulting from reduced land sizes due to uncontrolled land sub-division.

Contributing to social networks and household food security debate, Kimani-Murage et al (2014) established that hunger-struck households in Kenya’s urban slums resort to streets dust bins for food. That hunger drive people to resort to foods thrown in the dust bins in urban area to circumvent hunger. However, this food survival strategy is applicable in big towns and cities because this is where dust bins are and where

people are more likely to throw left over foods or bad foods in the bins. In the location of current study, the area was rural with no dust bins for throwing left over foods. Thus, it was unlikely that households in Nyamira North Sub County are utilizing “dust bin strategy” to overcome hunger hence need for this study to establish the food survival strategies utilized by households in the study area to cushion them from food insecurity.

The findings of Tawodzera (2012) were not different from the findings of other scholars on social networks and household food security. Tawodzera (2012) established that households in the urban area maintained close social relations with households in the rural areas for purposes of food assistance. That households in urban area acquired food from rural households to aid them overcome food insecurity. Although this food survival strategy greatly helped households in the urban areas overcome hunger, it is unlikely to apply to the residents of Nyamira North Sub County. This is because the setting of the study area is rural hence there may be no “other rural households” to provide food insecure households with food. Thus, close social links with rural households for food is unlikely to apply to the current study hence there is a need to establish the food survival strategies utilized by households in Nyamira North Sub County to circumvent food insecurity.

A study conducted by Bushara and Ibrahim (2017) established that households in Al-Qadarif State, Sudan, borrowed in their social network to promote their food security. The households relied on others households that were food secure for food. This strategy according to Bushara and Ibrahim (2017) to a greater extent cushioned household in the state from food insecurity. Although this strategy worked well in Al-Qadarif State, Sudan, it was unlikely to apply in the current study area because

food insecurity is a norm for all households on the study area. This is because the food insecurity situation is attributed to reduced arable land because of uncontrolled generational land sub-division and inheritance. Thus, the current study sought to unearth the food survival strategies employed by households to ensure their food security.

Martin et al (2004) observed positive correlation between food security and involvement of a household in neighborhood activities or organizations. The study established that households that participated in larger amounts of community activities were far more likely to be food secure, even when accounting for household socioeconomic status. Households that involve themselves in a social or civic organization within a community were far less likely to be hungry or food-insecure over long periods. This is because food insecure households could get food assistance or temporary “food relief” from their friends and social networks built up within a community. How these findings apply in the food insecure households in the study area, is unknown.

Similarly, Garasky, Morton, and Greder (2006) argued that high local food prices and an inadequate number of food stores are viewed by families as obstacles to meeting their food needs. The authors suggested that households counteract this by relying on informal support networks or farming. This shows that social networks are fundamental in addressing household food insecurity.

Shariff and Khor (2008) established that food insecure households received foods from their family members, relatives and neighbours. The food aid from these social networks helped food insecure households to attain some form of food security. This strategy is more applicable in situations whereby only a handful of families are food

insecure. However, in a situation where every household is grilling with food insecurity like in the case of Nyamira North Sub County, it is impossible for food insecure households to have regular access to foods from such social networks. Thus, this strategy is unlikely to inform food insecurity in the study area occasioned by reduced land sizes due to continuous land sub-division and inheritance.

Dunga and Dunga (2017) established that the female and male-headed households in South Eastern of Malawi ensured their food security by borrowing from social networks. The food insecure households had to survive on food assistance from neighbours, family members and friends.

The findings of this study (Dunga and Dunga (2017)) show the place of social networks in promoting household food security among households. However, the findings may not apply to the current study. This is because the prevailing condition leading to household insecurity (reduced land sizes due to continuous and uncontrolled land sub-division and generational inheritance) characterize all the households in the study area. That there might be no single household that is immune from the effect of continuous land sub-division and inheritance that has significantly reduced land for farming. Thus, borrowing food as a food survival strategy adopted by households do not hold water in the current study since none of households has food surplus to give food insecure households. This provides a solid justification for the current study to unearth the food survival strategies that households in the area are utilizing albeit shrinking of land due to continuous and uncontrolled land sun division and inheritance.

Additionally, studies have also indicated that food insecure households utilize begging as a food survival strategy. For instance, Uddin (2012) established that a food insecure

household in the coastal areas of Bangladesh use begging has a strategy to access food. However, it is not clear where begging take place: is it in the streets, homes or in markets? This strategy may not be possible in the study area because it is unlikely that people have adequate food to give to beggars.

A study by Messele (2011) revealed that begging was among food survival strategies that households in Woreda 01 in Gullelle Sub-City, Addis Ababa utilized to ensure their food security. The study argues that the households sent their household members to beg for food. The study maintains that this strategy worked well in the study area to the extent of reducing the incidences of food insecurity among the households in Gullelle Sub-City.

Although begging as household food survival strategy according to Messele (2011) worked well in the households, the results can be different for households in the study area. This is because almost all households are food insecure because of reduced farm production as a result of uncontrolled land sub-division and inheritance hence no or few households may be at a position to give beggars food. In addition, begging for food can be for short period but after people realize that a household is surviving on begged food, they may cease giving the beggars food thus complicating food security situation of beggars. Since begging as a strategy to ensure household food security may not be possible, this study sought to investigate the food survival strategies utilized by households in the study area to ensure their food security.

Furthermore, available literature has shown that food insecure households have adopted a strategy of consuming wild uncultivated food to circumvent food insecurity. A study undertaken by Uddin (2012) established that households in the coastal region in Bangladesh adopted gathering strategies to access food. They consumed wild fruits

to circumvent food insecurity. The findings concur with a study by Liru (2014) that revealed that women in Malava Constituency in Kenya resorted to wild vegetables as a tactic to circumvent food insecurity. This tactic may be more applicable in areas with natural forest cover. However, in regions like Nyamira North Sub County where land is a precious commodity, deforestation for purposes of farming and establishment of homes has led to loss of natural vegetation that people could get food (wild fruits, leaves and roots). Thus, consumption of wild fruits as a tactic to overcome food insecurity is not possible in the area of study because of high population density that has resulted to forest destruction.

Contributing to the debate on wild foods and household food security, Kruger, Schonfeldt and Owen (2008) established that farm-worker households in South Africa relied on wild foods to cushion them from food insecurity. The households ate wild fruits and herbs to fill their stomachs. However, according to the current study, this strategy (gathering) applies best in forest regions where there exist sufficient wild fruits like guavas, bellies etc that can be consumed by hunger struck people. This may not be the case for the study area. In this study area there are no forests for residents to gather wild fruits and herbs because of deforestation occasioned by high population growth in the past few decades.

In addition, there is low probability that residents in the study area, according to Schonfeldt and Owen (2008), can survive on wild fruits and herbs because culturally, *ugali*, is their main food or staple food. *Ugali* is a meal made from maize flour and water. Since gathering and consuming wild food strategy could not apply to the households' food security approaches in Nyamira North Sub County, this study

sought to establish the food survival strategies employed by households in the study area to ensure their food security.

Studies have also shown that households have utilized cultivation of short duration crops as a survival tactic by households to ensure their food security. Planting of short-term crops like legumes, vegetables, potatoes etc as opposed to long duration crops such as corn and harrow roots among others can help households have continuous food supply. This tactic was established in a study by Uddin (2012) who argued that small scale farmers used the method to circumvent food insecurity. This finding concurs with a study by Liru (2014) that established that the desire to overcome food insecurity saw women grow short term food crops. However, food consumption tradition may make adoption of the tactic (engaging in short term crops farming) in some parts of the world difficult.

According to Omosa (1998), among the Abagusii community in Kenya, households rely on maize meal known as *Ugali*. This implies that the main food crop in the community is corn farming which takes long (6-8 months) to mature especially for hybrid varieties. With Nyamira North Sub County being a region in the Abagusii community or Gusii region there is likelihood that growing of short duration crops will not be possible. Thus, need for a study to establish how they get food in the face of diminishing land acreage and skyrocketing food insecurity in the Sub County.

A study by Echebiri et al (2017) revealed that crop farming still remains the main source of food for households in Abia State in Nigeria. According to this study, although households in Abia State have diversified food survival strategies, households depended on their land for food. However, the finding may not apply to the current study area. This is because land owned by households in Abia State maybe

large enough to warrant households adequate food production for domestic consumption. This is contrary to the land size situation in Nyamira North Sub County where land sub-division has led to significant reduction in the size of land held by households (less than an acre) implying signaling reduced farm productivity in the absence of modern agricultural technologies. Such land may not be appropriate for farming for food hence this study sought to establish the food survival strategies by households of the study area to ensure households food security.

Kassie et al. (2014) established that farming is the prominent food survival strategy utilized by households to access food for domestic consumption. That households rely on their lands to produce their own food to overcome food insecurity. Although the study focused on Kenya, various regions of the country have varied degrees of food insecurity and climatic conditions. Areas like Northern part of Kenya hardly receive rains to support agriculture because the Kenyan government hasn't invested on agricultural systems to turn the region into food basket hence the region has the worst food insecurity index. For North and South Rift regions, available land is fertile and regions receive adequate rainfall to support agriculture.

The above regions form the Kenya's food basket. For Nyanza region where the study area is situated, soils and climate especially in the study area and entire Gusii region is good but high population and successive generational land sub-division and inheritance in the area has reduced arable land, complicating food production practices. Thus, it was fundamental for this study to establish the strategies households in Nyamira North Sub County are utilizing to ensure their food survival with the prevailing situation of reduced land acreage.

A study conducted by Elmerinda (2016) revealed that farming was the main household food survival strategy for households in Chamwino and Manyoni Districts in Tanzania. The study argued that through crop diversification, households were at a position to acquire food to deal with their food insecurity situation. The findings indicate that growing various types of crops increased households' chances of food security. However, this household food survival strategy is appropriate where households possess big land sizes that can support production of sufficient food for domestic consumption and even sale of surplus. This is contrary to the land situation in the study area where households possess less than an acre of land hence it may be impossible to undertake crop diversification strategy to avert household food insecurity. In addition, farming highly depend on the art and knowledge of the individual undertaking farming because according to Arene and Anyaeji (2010) older household heads were more knowledgeable on farming activities and on issues of household food security.

In land limited regions, studies have shown that households often resort to renting of land for purposes of growing food. The households rent land from persons with enormous land to grow food. A study undertaken by Kazal, Villinueva, Hossain and Das (2010) revealed that 30% of households in Haor area in Bangladesh utilized rented land to grow crops that greatly fostered food security. Similarly, Muraoka, Jin and Jayne (2014) noted that land rental is the dominant mechanism that poor rural farmers use to access additional land for cultivation. This tactic is fundamental in addressing food insecurity phenomenon in land limited regions like Nyamira North Sub County. However, with diminishing of land acreage to less than an acre, where can households in the Sub-County get land to lease? Thus, this tactic of accessing food seems impossible among households in the area of study.

Diminishing land acreage due to land sub-division compel households to adopt various strategies to ensure access to food. Adoption of such strategies among households depends on various features. Studies have shown that household size is among the characteristics of households that influence adoption of food survival strategies. A study by Farzana et al (2017) established that households with large family sizes are more likely to adopt more proactive food access strategies than households with small family sizes. Household income is also associated with adoption of food access strategies. Farzana et al. (2017) established a significant association between household income and adoption of food security strategies. With income, the study established, households are in a position to purchase food, lease land to undertake farming and even take loans to buy food.

Studies have linked gender of household head and household food access. A study by Sabila (2014) established out that female-headed households were more vulnerable to food insecurity this is probably due to the less empowerment of women economically in the region. Similarly, study by Wambua, Omoke and Mutua (2014) established that 54% of food insecurity vulnerable households were headed by female. The study identified lack of money among others has the challenges facing the household heads in undertaking farming activities hence food insecurity. Furthermore, Abdullah et al (2017) in their study established that gender play a dominant role in food insecurity in that female headed household were food insecure while male headed household were food secure. Mbutia (2017) also established that gender is a social factor that influences household food security in Kitui County.

Furthermore, available studies revealed that education level of household heads has a significant effect on household food security. A study by Abdullah et al (2017) found

out that education level had influence of household food security of farmers in rural northern hinterland of Pakistan. Similarly, Bimerew and Beyene (2014) established that educational status of the household head. This shows that education level of household head has a positively correlated with household's food security. In addition, Mbuthia (2017) and Ndegwa (2016) had similarly findings, that is, household head's level of education has an influence on household food security. Awinda (2018) established that the level of education of the household head played a role on household food security.

According to Mango, Zamasiya, Makete, Siziba, and Nyikahadzoi (2014), education of the household head influenced household food security in Mudzi district of Zimbabwe. Education helps the household head to use production information efficiently since more educated persons acquire more information which enhances production. Thus, levels of education improves use of agricultural technology hence improved farm productivity.

Studies have also shown a close link between household land size and household food access. Similarly, Awinda (2018) established that size and land ownership influence household food access and impacts negatively on farmers' participation in irrigation activities. Abu and Soom (2016) observed that inadequate land availability was found to influence household food security among rural and urban farming households of Benue State, Nigeria.

In a nut shell, available literature on food survival strategies have shown that households adopt various food survival strategies to circumvent food insecurity. Such strategies include purchasing food from markets (Kabui, 2012 and Sakyi, 2012), begging (Uddin, 2012), consumption of wild food (Liru, 2014 and Uddin, 2012),

cultivation of short duration crops (Liru, 2014), renting land for food production purposes (Kazal, Villinueva, Hossain and Das, 2010) as well as reliance on relief food and safety nets (Farzana et al, 2017; Gundersen and Ziliak, 2014; Kabui, 2012) and social networks for food (Uddin (2012).

However, the above survival strategies relate to the general food insecurity without due consideration to the genesis of the food insecurity. This is because food insecurity can stem from among others prolonged drought, poor food distribution systems, poor farming methods and reduced farm sizes. This study therefore sought to investigate the food survival strategies utilized by household to circumvent hunger resulting from dwindling land acreage due to successive land sub-division and the subsequent skyrocketing food insecurity in Nyamira North Sub County.

2.5 Household Food Survival Strategies and Social life in Households

In human societies, changes are continuous because of social interaction and relations. Introduction of any intervention, policy or change results to the transformation of a social, cultural, economic or political dimension of a society (Uddin, 2012). Food survival strategies adopted by households have influenced social life in households. This section explores literature on how household food survival strategies have influenced social life in households.

Hamelin, Habicht and Beaudry (1999) undertook a on *Food Insecurity: Consequences for the Household and Broader Social Implications*. The study revealed that the psychological manifestations related to a lack of access to food were leading to a clear feeling of being constrained to go against held norms and values, as well as creating enormous stress in the home among the French-speaking households in urban and

rural areas in and around Que´bec City. Based on results of this study, it is evident that food insecurity and resultant household food survival strategies have a social implication on the behavior change and violation of norms. Such violation of norms in this case may include stealing, poaching animals, among other deviant behavior in food security journey.

Further Hamelin, Habicht and Beaudry (1999) established that low wage workers had to overcome their own prejudice if their families were to be fed. They acknowledged to resorting to illegal means to access food. They had tendency to adapt in the long run to “unusual” means of food acquisition does not preclude the fact that most respondents of food-insecure households found it abnormal not to be able to feed their family adequately with current income. The results of this study may not apply in the current study since this study focuses on how food survival strategies adopted by households in Nyamira North Sub County have influenced social life.

In addition, Hamelin, Habicht and Beaudry (1999) established that food insecurity in households at Que´bec City disrupted household dynamics as well as distorted means of food acquisition and management. That meals were no longer a happy gathering opportunity for the family. However, the study failed to document other household dynamics with regard to households’ struggle to attain food security apart from the effect on the family gatherings and sharing of meals. Thus, there is a need for the current study to unearth other households’ dynamics changing stemming from the households’ pursuit for food security.

Kent et al (2014) established that food insecure juveniles who committed misdemeanors. The norm violation acts were necessitated by need to overcome hunger. This study provided evidence that food insecure juveniles resulted into illegal

activities to acquire food. As much as the study is fundamental in food insecurity and crime, the study focused on how food insecurity contributes to juvenile felonies but not on the social implications of food security survival strategies adopted by households hence need for this study.

According to Brinkman and Hendrix (2011), food prices have historically resulted into violent riots in most developing countries. The authors give an example of Protests and rioting occurred in response to sharp increases in world food prices in the 1970s and 1980s. High food prices for the three main staple grains (wheat, rice and maize) has led to numerous protests and riots in developing countries especially in the Arabs region and North Africa in the recent past. This implies that food insecure households result to markets for food and that increase in food prices can easily lead to protests and riots in societies (Helland and Sobo, 2014). However, it may not be possible for high prices for food items to instigate riots and protests (conflicts) among households in the study area since there might be other food alternatives because of favorable climatic conditions.

Change in gender roles in household food provision is a social implication in the household food security arena documented in literature. This is because in African society, it is the duty of a household head (man) to provide for the household. Nyamwanji (2016) established that households in which women did not take part in decision making about income and food management were more vulnerable to food insecurity because men were not concerned much about household food requirements. This implies that the responsibility for providing for the family lies in the domain of men but it is imperative for women to participate in food management as well as income planning if a household is to be food secure.

Similarly, FAO (2011) argues that within households, men are considered as principal decision makers while women hold a subordinate position in negotiation about managing family resources including those related to ensuring household food security. In addition, as pointed out by FAO (1996), in many African societies, the role of the husbands is to manage the granary of household whereas the wife oversees the kitchen. This implies that men are responsible in making decisions on food production and storage.

In addition, Ishengoma (1998) argued that women play a big role in household food production but cannot make decision on different production activities a phenomenon that contributes to household food insecurity. This study is therefore concerned how household food survival strategies in the study area have influenced gender roles, that is, whether women are currently involved in household provision, a role that has been played by men since the traditional African society.

Lamerz et al. (2005) argued that food insecurity and household food survival strategies can affect social cohesion within a community. That food deserts and communities of persistent poverty have lower rates of indicators that “add value” to a community. This implies that household food survival strategies can inhibit social interaction and cohesion in the community. This study focused on household food survival strategies and community cohesion and the findings may not apply to the current study since the focus is on household food survival strategies and social cohesion within the wider family.

Nanama and Frongillo (2012) argued that social breakdown in households due to food insecurity has been associated with various social problems in the world today. The study established that households in Burkina Faso that applied farming as food

survival strategy during harvest seasons, because of low farm production, they experienced large changes in attitude towards members of their immediate community as well as latent psychological effects. The study revealed that 4 of the 10 heads of households surveyed felt guilty and alienated because they were “not able to provide for their family” as well as ashamed when they were forced to borrow food from their neighbor.

In addition, Nanama and Frongillo (2012) established that unviable household food survival strategies, (for instance purchase of food from markets when there are no funds) leave heads of households irritable and occasionally aggressive towards other members of their household, including children. Deterioration of intra-household relationships led to breakdown of social cohesion within families that ultimately affected how neighbors and surrounding communal groups interacted.

Chung et al (2012), established that the effect of food insecurity and its mitigating strategies creates changes in one’s psychosocial makeup, interactions within their community and household and ability to build a support network. Those who reside in food insecure households exhibit increased feelings of alienation, resulting in isolation and diminishing frequency of interaction with their community. This affects social cohesion within and outside a household. However, the study utilized quantitative approach that could not provide a clear picture on household food survival strategies and social life in households. Thus, the current study is employing qualitative approach which is appropriate for the study involving social phenomenon like the how household food survival strategies in Nyamira North Sub County have influenced social life within the household.

A study by Alaimo et al. (2001) established that in pursuit for food security households' heads invests a majority of their available time into survival at a basic level, which severely impacts their health, levels of stress, and mindset. Household heads spend time to feed their families, especially in farms and markets to produce and secure food. The fundamental question is, do food survival strategies by households in Nyamira North Sub County consume much of their time in ensuring food security leading to high level of stress and deteriorating health?

In sum, there is scanty literature on the social implications of food survival strategies adopted by households to circumvent hunger. Available literature has documented that food insecurity and inability of households to access food through the socially approved means among them purchase from market, has resulted to violation of norms and values with felonies reported being among such violations. In addition, studies (Nyamwanji, 2016 and FAO, 2011) have also shown that the need to meet food requirements in the households has resulted in change in roles in household provision where women have joined hands with their husbands to provide for the family.

Thus, there is change in gender roles in the context of household provision where women are taking over the roles traditionally played by men. Some studies have documented that food survival strategies adopted by households have resulted to stress among household heads as well as strained relationships in households and in neighborhood. However, it is not clear whether household food security strategies have had the same social implications as the ones discussed above hence this study sought to establish the social implications of food survival strategies employed by households in Nyamira North Sub County.

2.6 Summary of Literature Reviewed and Research Gap

Land being a critical resource for human survival has various social meaning to various people. Depending on cultural orientations of people land socially perceived as a source of livelihood, a place of fulfillment of cultural beliefs and rituals, continuity of a generation and life through burials, living space, political and spiritual connotation as well as source of collective identity and wellbeing. However, the social meaning attached to land by Nyamira North Sub County residents is not known. Therefore, there is need for a study to investigate what meaning the households make out of land that has reinforced land sub-division in the Sub-County to the extreme.

In addition, studies (literature) reviewed have undoubtedly established that continuous land sub-division has resulted into food insecurity because of resultant diminishing land acreage. Since people need food to survive, they need innovative ways to access food.

Literature on food security survival strategies has shown that households adopt various survival strategies to circumvent food insecurity. Such strategies include purchasing food from markets, begging, consumption of wild food, cultivation of short duration crops, leasing of land to for food production purposes, and reliance on food relief and safety nets and social networks for food. However, these survival strategies relate to the general food insecurity without due consideration to the genesis of the food insecurity. This is because food insecurity can stem from prolonged drought, poor food distribution systems and poor farming methods, reduced farm sizes, etc. There is therefore need for a study to investigate the food insecurity

survival strategies utilized by households with small land sizes stemming from continuous land sub-division and subsequent skyrocketing food insecurity.

Lastly, there is scanty literature on the influence of household food survival strategies on social life in households. Available literature such as Hemelin, Habicht and Beaudry, 1999 and Kent et al (2014) have documented that food insecurity and inability of households to access food through the socially approved means among them purchase from market, has resulted to violation of norms and values with felonies reported being among such violations. The studies ((Nyamwanji, 2016 and FAO, 2011) have also shown that the need to meet food requirements in the households has resulted in change of gender roles with regard to household provision where women have joined hands with their husbands to provide for the family. Thus, there is change in gender roles in the context of household provision where women are taking over the roles traditionally played by men. However, it is not clear whether household food security strategies have influenced social life in households as discussed above hence this study sought to establish the social implications of food survival strategies employed by households in Nyamira North Sub County.

2.7 Theoretical Framework

This section discusses the theories that informed this study. The study was anchored on the Social Construction Theory and Population Pressure Theory.

2.7.1 Social Construction Theory

Social construction theory was propounded by Berger and Luckman in their 1966 book entitled *The Social Construction of Reality*. Social constructionism is a sociological theory which asserts that all meanings are socially constructed through

social processes and actions (Zhao, 2020). The theory posits that social meanings might be so ingrained that they feel natural, but they are not. Instead, they are an invention of a given society and thus do not accurately reflect reality. The theory is based on the premise that meanings are socially constructed, that is, things that are generally viewed as natural or normal in society are socially constructed, and consequently are not an accurate reflection of reality. Many things we take for granted and believe are objective reality are actually socially constructed, and thus, can change as society changes. Thus, what we take to be true and objective is the result of social processes that take place in historical and cultural contexts (Galbin, 2014 and Chu, 2008).

Thus, according to Social Construction Theory, meanings are socially constructed via the coordination of people in their various encounters; therefore, it is always fluid and dynamic (Gergen and Gergen, 2012). Social constructs are often created within specific institutions and cultures and come to prominence in certain historical periods. Social constructs' dependence of historical, political, and economic conditions can lead them to evolve and change (Galbin, 2014).

The social construction theory helped this study to unearth the social meanings that households in the study area derive out of land and how such meanings have influenced land sub-division. However, this theory could help the study link household food scarcity with food survival strategies households have adopted to circumvent food scarcity emanating from reduced land sizes and how the food survival strategies have influenced social life in households in the study area. The study therefore introduced the Population Pressure Theory to fill the gaps.

2.7.2 Population Pressure Theory

This theory was put forward by Mark Cohen (1977). According to this theory, rising population density causes population pressure on resources. As population grows resources like land remain constant implying that the increasing population must depend on available resources for survival (Cowgill, 1975). Survival does not just happen, but the population is compelled by the environment and the desire to satisfy their needs propel them to come up with innovative ways to address their unlimited needs. Thus, population adapts innovative approaches to circumvent the environmental, economic and social hurdles to fulfill human needs and have a functional life.

The population pressure theory fits in this study from the dimension of population (households) survival in the face of dwindling resources, in this case, land. The study area is historically known for its food abundance. However, with high population growth rate coupled with continuous and uncontrolled land sub-division the area has experienced drastic reduction of land sizes. The area is among the regions in Kenya with high population density (Kenya National Bureau of Statistics, 2018; County Government of Nyamira, 2018; Mbula, 2018). Consequently, the small farm sizes have become untenable in the context of food production leading to perennial food insecurity.

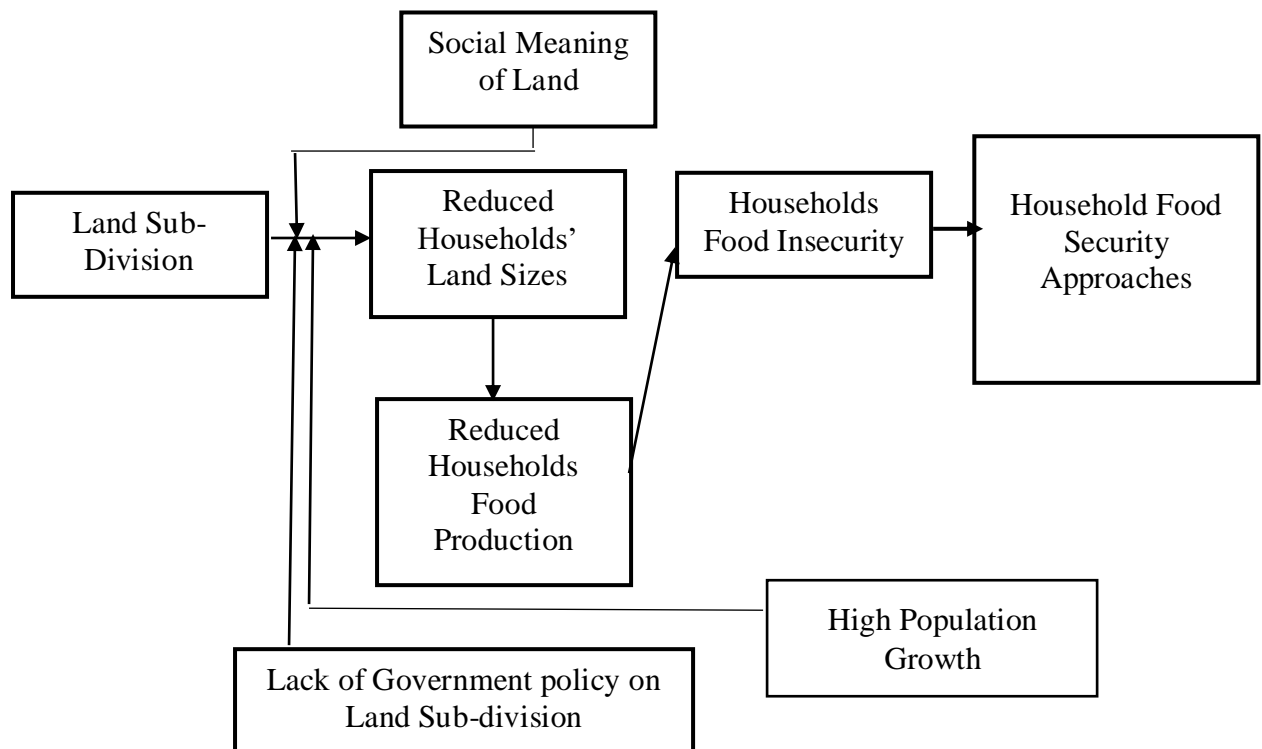
It is therefore not clear how households that have historically relied on their land for food are surviving since land can longer sustain household food requirements. Thus, this study used Cohen's ideas in the Population Pressure Theory to analyze the food survival strategies that households in Nyamira North Sub-County have innovated or

utilize to ensure their food security and to investigate how the food survival strategies are influencing the social life in households.

In conclusion, the social construction theory and population pressure theory complemented each other. The social construction theory helped the study to investigate the social meanings that households in the study area derive from land and how such meanings influence the heightened land sub-division in the area. The population pressure theory analyzed land pressure and food survival strategies that households have adopted to circumvent hunger in the face of reduced land sizes in Nyamira North Sub County.

2.8 Conceptual Framework

To better understand the influence of how land sub-division has influenced household food security approaches in Nyamira North Sub County, a conceptual framework has been presented figure in 2.1. According to Miles and Huberman (1994) a conceptual frame work explains either graphically or in narrative form, the main dimensions of a study (the key factors, constructs or variables) and the presumed relationship between them. In this framework, independent variable is land sub-division while dependent variable is household food security approaches.

Independent Variable**Dependent Variable**

Source: Researcher, 2019

Figure 2. 1: Conceptual Framework

As shown in figure 2.1, land sub-division is the independent variable and household food security approaches dependent variable. According to this conceptual framework, land sub-division, a practice in most parts of the world but more intense in Africa, might be fueled by the meanings that people make out of land and lack of government policies to guide the practice. Such government policies would outline situations and preconditions under which land sub-division can occur. The government policies on land would also provide the framework within which the land sub-division exercise ought to be undertaken. In addition, land sub-division especially in the African context is also fueled by exponential population growth rate to ensure

that each household member has a place to call “their own home”. Thus, meanings of land, lack or weak government policies on land sub-division and exponential population growth rate are the main factors according to this conceptual framework greatly influencing land sub-division.

With continuous land sub-division, sizes of land held by households will shrink. This is because successive land sub-division will contribute to insignificant and uneconomical land sizes by households. Consequently, reduced land sizes will not translate to adequate household food production unless households adopt modern and high-end farming technologies to revitalize farming. However, this may not be possible for households characterized by high poverty levels among other social indicators that inhibit modernization of crop production.

Decline in farm yields is likely to be a recipe for hunger; people are bound to experience hunger. However, since human beings depend on food for survival, they must devise new approaches to circumvent food insecurity.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter focuses on this study's research process. Based on pragmatism philosophy, this chapter presents information on the study site, research design, unit of analysis, target population and sample selection, methods of data collection, data collection procedure, validity and reliability, data analysis and ethical considerations in the study.

3.2 Study Site

The study was undertaken in Nyamira North Sub County, Nyamira County, Kenya. The Sub County borders Bomet, Kisii, Kericho and Homa Bay Counties (See figure 3.1). The main economic activity in the Sub County has historically been mixed farming in which tea, bananas, pineapples, coffee and corn are planted. Animal rearing is also practiced in the area although in small scale. The Sub County experiences relatively good weather patterns, that is, rains of 1743 mm and temperature of 17.3 centigrade. The good weather justifies why farming is a predominant economic activity in the Sub County and households in the study area have historically relied on food from their farms for survival. The population in this Sub County is homogenous because it is predominantly composed of Ekegusii speaking people who belong to Abagusii community. The Sub County is situated in Gusii region which comprises five wards namely Magwagwa, Bokeira, Itibo, Ekerenyo and Bomwagamo (See appendix IX).

The basis for choosing the study area is that Nyamira North Sub County is among the sub counties in Kenya with highest population density. The Sub County at the time of this study had 787 persons per square kilometer (Kenya National Bureau of Statistics, 2018; County Government of Nyamira, 2018; Mbula, 2018). In addition, the Sub County is ranked among sub counties in Kenya with high rate of land sub-division and reduced land sizes- currently standing averagely at less than an acre- and that the diminishing land sizes has significantly contributed to reduced food production and heightened hunger among households in the Sub County (Mbula, 2017 and Kipkemboi, 2019).

Although, diminishing land sizes is a common feature in Kenya, it is worse in Nyamira North Sub County. In fact, the rate at which land sub-division is contributing to declining farm sizes in the area is alarming to an extent that Mbula (2017) has called for an urgent intervention to address the menace. However, the current situation is contrary to the situation in the past few decades. In 1970s, for instance, the average land acreage among most households was 10 acres but due to successive land sub-division and high population growth rate, the average land acreage at now stands at less than an acre (Mbula, 2018). Thus, the Sub County was an ideal site for this study.

3.3 Research Design

The study employed embedded variant of mixed methods research design. According to Creswell, Plano Clark, et al. (2003), embedded design is a mixed methods design in which one data set (quantitative or qualitative) provides a supportive, secondary role in a study. The design is based on the premises that a single data set is not sufficient in a study and that each type of question requires different types of data hence

researchers have to include qualitative or quantitative data in answering a research question within a largely quantitative or qualitative study.

The design was relevant in this study because of its ability to blend quantitative and qualitative data in complimentary manner. Some research questions in this study were designed to obtain quantitative data while others were designed to obtain qualitative data. For instance, to answer a question on the way land sub-division has influenced household food survival strategies, requires qualitative data to provide supportive role to the quantitative data. On the other hand, research questions on social meaning of land and how it influences land sub-division as well as question on how food survival strategies adopted by households have influenced social life in households require quantitative data to provide supportive role to qualitative data. This is the justification for utilizing embedded type of mixed methods design in this study.

3.4 Unit of Analysis

The unit of analysis was households in Nyamira North Sub County.

3.5 Target Population and Sample Selection

3.5.1 Target Population

The target population of the study comprised of all 37965 households in the Sub County. Households were used in this study because land in the study area is predominantly owned by households. The household heads provided information on how land sub-division has influenced on food security at the household level in the Sub County. The list of households in the Sub County was obtained from Nyamira North Sub County Social Development Office. The justification for using the entire

households in the Sub-County is that land sub-division is relatively a universal phenomenon in the Sub County (Mbula, 2017).

3.5.2 Sample Size and Sampling Procedure

The sample size selection was determined by Krejcie and Morgan (1970) sample determination table which recommends a sample of 379 for a study target population of 37965 households (See Appendix VIII). Krejcie and Morgan sample determination table was used because of its ability to draw an accurate and reliable sample from relatively large population. After sample determination, stratified sampling technique was utilized to divide the Sub County into strata (wards). The researcher then determined the number of respondents from each ward using the following criteria or formula:

$$\text{Ward Sample} = \frac{\text{Total Number of Households in the Ward}}{\text{Total Number of Households in Nyamira North Sub County}} \times \text{Sample Size}$$

The justification for determining the number of respondents from each stratum was to ensure that each of the five wards was well represented in the sample according to population size. At the end, the researcher came up with sample depicted by table 3.1.

Table 3. 1: Sample Determination

Ward	Total Population (Number of households)	Sample Size Per Ward
Magwagwa	8323	83
Bokeira	8727	87
Ekerenyo	7305	73
Bomwagamo	5517	55
Itibo	8093	81
Total	37965	379

Source: Kenya National Bureau of Statistics (2018)

After determining sample size for each ward, systematic sampling technique was used to select specific household heads on whom semi-structured questionnaire was administered to collect data. To determine *n*th item to be included in the sample, the following formula was adopted:

$$N_{th} = \frac{\text{Total number of households in a specific ward}}{\text{Sample size for a specific ward}}$$

After determination of *n*th item, the starting point for selecting items from the list of households in ward into the sample was number one. The reason for using systematic sampling technique was the need to ensure good regional representation of households in each ward in the sample. In the event that the researcher was unable to access a selected household because of various reasons like unavailability due to migration or unavailable of household head during the entire data collection period, the researcher chose the next household in the sampling frame to fill the gap.

Apart from stratified sampling technique that was utilized in selecting study sample, the study employed purposive sampling technique to select FGDs participants and key informants for in-depth interviews. Purposive sampling was significant in limiting the sample elements to only those that are relevant to the study based on their knowledge on land sub-division and household food security in the study area.

3.6 Methods of Data Collection

This study utilized three data collection methods: questionnaire, focus group discussions and key informant interview.

3.6.1 Questionnaire

Semi structured questionnaire was administered to 379 household heads in the Sub County. The questionnaire was divided into five sections; three of which focused on study objectives whilst the other two focused on demographic information and general aspects reflecting the topic under investigation.

This instrument was administered by the researcher and research assistants who asked questions and recorded responses. Respondents were accorded adequate time (10 to 15 minutes) to provide well thought out answers. In addition, respondents were allowed to freely provide their views without any form of interference. The instrument was pretested in Borabu Sub County on twenty purposively selected respondents to determine any difficulties in answering the questions and necessary changes were incorporated. The findings of the pretest showed that the respondents answered questionnaire items well apart from few challenges on the section of “Influence of Household Food Survival Strategies on Social life in the Household” but the researcher addressed the difficulties by changing the structure of the question to make it easier for respondents to answer the questions. Pretesting of the questionnaire was done a month to the actual data collection exercise and it lasted for three days. All the 379 household heads responded to this data collection tool.

3.6.2 Focus Group Discussions

The researcher organized for five Focus Groups Discussions (FGDs). Participants in focus groups discussions were purposively selected taking into account the following factors.

First, gender. The study ensured that both men and women were involved in the study to provide their opinions, experiences and information regarding land sub-division and household food security approaches.

Second, regional balance. This ensured that the focus group discussions had participants from all parts of the wards to aid the study to have inclusive views and experiences of the issues under investigation.

Third, age composition. The researcher selected participants aged between thirty and eighty-five years. The reason for choosing participants in this age bracket was the need for lived-experiences and information pertaining the issues under investigation. The population especially the old was better placed to give information on social meanings of land and issues associated with land sub-division because of long lived experiences while the relatively young ones provided information on the current household food survival strategies and how the food survival strategies are influencing social life in households in the study area.

Fourth, length of stay in the area. The focus group discussion was designed to incorporate individual experiences and perceptions on changes on land sizes putting the conversation within the broader contexts of changes in household food security strategies and influence of the changes in the household food survival strategies on social life in households in the study area. Thus, the locals who had lived in the area for a long period of time were more likely to point out some of the key changes on land, household food security and changes in social life resulting from households' food security strategies.

Each focus groups discussion comprised of six to ten participants. According to Morgan (1998a) effective focus groups discussion should comprise of six to ten participants. Morgan (1998a) recommends a smaller group because participants are likely to have a lot to say about the research.

The discussions were conducted in quiet and conducive environments such as tea buying centres, churches, schools and coffee farmers societies compounds. The researcher who doubled as a moderator used focus group discussion guide to ensure orderly discussions. The discussions were based on topics such as meaning of land and how it influences land sub-division, extent of land sub-division in Nyamira North Sub County, land sub-division and household food survival strategies, household food survival strategies and social life in households. Efforts were made to ensure that each participant contributed something to each discussion topic. In addition, equal time (three minutes) was given to each participant per discussion topic to avoid domination in the discussions.

Each ward had one focus groups discussion. In Bokeira Ward focus group discussion was conducted at Matongo Coffee Society, in Magwagwa Ward it was conducted at Riomego Pentecostal Assemblies of God (PAG) Church, Bomwagamo Ward at Eyaka Coffee Society, Itibo Ward at Bonyunyu Tea Buying Centre while in Ekeronyo Ward focus group discussion was undertaken at Kiemuma Primary School. The researcher ensured regional balance when selecting focus group discussion participants to capture the views of households in each part of the wards. With regard to gender composition in focus groups discussions, table 3.2 shows the distribution.

Table 3. 2: Distribution of Focus Groups Discussions Participants by Gender

FGD Serial Number	Ward	Place		Number of Male participants	Number of Female participants	Total Number of FGD Participants
1.	Bokeira	Matongo Society	Coffee	3	6	9
2.	Magwagwa	Riomego Pentecostal Assembles of God (PAG) Church		4	4	8
3.	Bomwagamo	Eyaka Society	Coffee	4	6	10
4.	Itibo	Bonyunyu Buying Centre	Tea	4	4	8
5.	Ekerenyo	Kiemuma School	Primary	4	6	10

Researcher, 2019

Based on the distribution of focus groups discussion participants by gender in table 3.2, there was good representation of participants in terms of gender in discussing topical issues in this study.

The researcher used two research assistants to document the emerging information from the discussions. Participation was voluntary and there was no incentive offered by the researcher for one to participate and this was made clear by the researcher at the beginning of each focus groups discussion sessions. Each focus groups discussion lasted for three hours. Participants in focus groups discussions were not part of the respondents for purposes of information cross-checking.

The focus group discussions yielded insights into the social meaning of land and how it influences land sub-division, influence of land sub-division on household food survival strategies and influence of household food survival strategies on social life in household in Nyamira North Sub County to cross check the information given by respondents.

3.6.3 Key Informants Interviews

As pointed out by Saravanel (1992), the main purpose of key informant interview is to obtain expert information on the phenomenon under investigation. Such information helps a researcher to gain deeper understanding on the issue under investigation so as to corroborate with the information given by respondents. In this study fifteen (15) experts were interviewed. The experts interviewed were: County Secretary for Agriculture (1), County Secretary for Land (1), extension officers (5), Officers from ministry of land (4) and officer from ministry of agriculture (4). They were asked questions relevant to their area of specialty and work. An interview guide was utilized in interviewing them. Interview for key informants was done by the researcher himself and it took place at their convenient place and time. The exercise lasted for two weeks.

The key informant interview method generated information on expert knowledge about the social meaning of land and how it influences land sub-division as well as the food survival strategies adopted by households in Nyamira North Sub County to cross-check information given by household heads.

3.7 Data Collection Procedure

After approval from relevant government bodies (National Council for Science and Technology and Nyamira County Commissioner and Nyamira County Director of Education Office), the researcher sought assistance from local administration to access data source. The researcher explained the research purpose to the administrators and clarified the concerns that were raised. To establish rapport with

people at the data source, the researcher made three visits to each ward prior to the data collection exercise.

The researcher recruited two research assistants from the study area to assist in data collection exercise. The research assistants were competitively selected and those who had a masters degree and strong foundation in social sciences were selected. After selection the researcher trained research assistants on research expectations for four days. They were taken step by step through research objectives, the contents of data collection tools and the modalities of filling research tool as well as documenting information during focus group discussions. The roles of research assistants were to document information during focus group discussions and administer a questionnaire. Key informant interviews were undertaken by the researcher himself. Data collection exercise lasted for three months.

The study preferred the focus group discussion participant to use vernacular language (Ekegusii) because it was appropriate for participants with little or no proficiency in English or Kiswahili to communicate effectively in the discussions. The researcher and research assistants translated the communication or information to English language because they understand the Ekegusii language.

3.8 Validity and Reliability

To ensure reliability of data collection instruments, a pilot study was carried out and findings were utilized to revise the data collection tools. The pilot study on the questionnaire was undertaken on twenty selected respondents, key informants guide was undertaken on two purposively selected key informants while focus group guide was piloted on a purposively constituted focus group discussion of eight participants

in the neighboring Borabu Sub County. The area was perceived as having similar characteristics as Nyamira North Sub County hence it was ideal for piloting of data collection instruments. The pilot study was done a month before the actual data collection exercise.

The reliability of the instrument was tested through the use of the Cronbach Alpha value. That is, to establish the reliability of the questionnaire. Cronbach alpha coefficients are reported as an indication of the construct reliability of the measuring instruments. Values range from 0 to 1, with higher values indicating greater reliability. Alpha coefficient of; below 0.60 is unacceptable, between .60 and .65 undesirable, between .65 and .70 minimally acceptable, between .70 and .80 respectable between .80 and .90 very good, > 0.90 is considered perfect. However, if Cronbach Co-efficient alpha of $\alpha = 0.70$ is obtained, then it indicates that the research instruments are reliable and therefore can be adopted for data collection.

Cronbach's alpha coefficient measures the internal coefficients of the instrument as follows;

$$\alpha = \frac{N \times C}{V + (N-1) \times C}$$

Where;

α - internal consistency; C-average covariance;

N - Number of items and is V-average variance.

The researcher computed internal consistency of data after piloting the research instruments in the Borabu Sub County. After a pilot study, the collected data were

coded to SPSS software to run Cronbach Alpha. If the Cronbach Alpha value is above 0.7, this indicates that the research instruments are reliable. However, if the Cronbach Alpha value is less than 0.7, then have an implication that the research instruments are not reliable; hence the researcher should readjust them before going for main data collection. The Cronbach Alpha value for this study was 0.85.

On the other hand, to determine validity, the research collection tools were subjected to content validation, that is, the tools were presented to supervisors and experts in the School of Arts and Social Sciences, Moi University for scrutiny and suggestions were incorporated to the finalization of the tools.

3.9 Data Analysis

The data collected was analyzed by quantitative and qualitative methods. Quantitative analysis involved derivation of statistical descriptions and interpretations of data by use of descriptive statistics that purely relied on numerical values. The data was presented by frequency tables. Data presentation, analysis and interpretation were in accordance with the research objectives. Statistical Package for Social Scientists (SPSS) program version 20 was adopted to generate data analysis tools.

On the other hand, qualitative data obtained was coded and analyzed using salient and recurrent themes that emerged in the data, but which related to land sub-divisions and its influence on household food security in Nyamira North Sub County. Qualitative data then became a source of interpretations of meanings, experiences and perceptions on how land sub-division has influenced household food security approaches in the study area. Qualitative data analyzed was presented by use of quotes and narratives. Before qualitative data analysis, responses from focus group

discussions were translated from vernacular (Ekegusii) to English by research assistants.

After data analysis, results and discussions in chapter four were arranged in accordance with research objectives. Conclusion and recommendation were made based on analyzed data.

3.10 Ethical Considerations

Ethical issues are essential in social research. Before embarking on data collection exercise, research permit was obtained from National Council for Science, Technology and Innovation and approval from the County administration and ministry of Education offices in the County sought. While in the field, the researcher provided accurate and complete information to research participants on the purpose of the study to obtain their verbal consent regarding participation in it. In addition, the privacy of the research participant was safeguarded.

The information collected was treated with the utmost confidentiality and was only used for research purposes. Any identifiable information was removed during the data analysis and interpretation stages. Another ethical measure for consideration was treating the respondents with respect and courtesy. The researcher also provided a five-page report to administrators in the Sub County and national government agencies notably Ministry of Agriculture and Ministry of Land to enable them understand how social meaning of land has influenced land sub-division, influence of land sub-division on household food survival strategies and how food survival strategies adopted by households have influenced social life in the households in Nyamira North Sub County.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND INTERPRETATION

4.1 Introduction

This chapter presents analysis of data in accordance with research objectives. The data collected by questionnaire method was analyzed by descriptive statistics and presented in frequency tables whereas data obtained from focus group discussions and key informant interviews were analyzed thematically and presented in the form of narratives. This chapter is organized in four sections: demographic information of respondents, social meaning of land and how it influences land sub-division, land sub-division and household food survival strategies and influence of household food survival strategies on social life in households in Nyamira North Sub County.

4.2 Demographic Information of Respondents

In this section, the study will discuss the details of the demographic features of the 379 respondents involved in this study. This section provides crucial information to aid the study understand the various aspects of land sub-division and household food security in the study area. Specifically, this section focuses on gender, education level, age, occupation other than agriculture, number of children as well as land sizes owned by respondents.

4.2.1 Gender of Respondents

Table 4. 1: Gender of Respondents

Gender	Frequency	Percentage
Male	296	78
Female	83	22
Total	379	100

Source: Field Data, 2019

From data displayed in table 4.1, 296 (78%) of respondents were men while 83 (22%) were female. This implies that majority (78%) of respondents in this study were male. The study attributed the phenomenon to the African culture that places men above women in household leadership. This finding concurred with Olum, et al (2017) African men play a critical role in household leadership as provided by the African culture. On the other hand, the 21% number women population in this study was explained in two ways. First, households' heads may have been absent for one reason or the other including engaged in incoming generating activities elsewhere (in towns or other places around the world) hence they were represented by their wives. Secondly, the female respondents may be widowed or divorced hence they have assumed the role of household heads. However, involvement of both men and women household heads in this study provided rich data because there are some research aspects that would be best documented by men and women respondents.

Having high number (78%) of male respondents in this study was fundamental because of three reasons. First, according to African culture, men have a responsibility of providing for the family hence they formed an essential group to provide accurate information on the strategies utilized by households to ensure their food security in the study area in the current situation-dwindling farm sizes and food

productivity. Second, high number of male respondents helped the study to obtain information on how household food survival strategies adopted by households have influenced social life in households in the study area.

Third, men are the custodians of land according to the African culture. They are at the core of decision making on land use. In addition, it is the duty of household head (man) to make a decision on how to sub divide land for his sons. This argument concurs with Molen (2017) who contends that women in Africa are not affected by land reforms especially land sub-division and land allocation to sons due to entrenched cultural practices and customary laws that bestow land ownership, inheritance and allocation rights exclusively on men. Since men are the custodian of land and breadwinners and majority in this study, highly credible data about land sub-division and food security among households in Nyamira North Sub County was collected.

Conversely, involvement of female respondents (22%) in this study was also critical especially in getting their views or answering research questions relating to women involvement in actualizing household food survival strategies and on how the food survival strategies have influenced social life in the household.

In brief, majority (78%) of respondents in this study were male. The study attributed the phenomenon to the African culture that places men above women in households leadership. This number was essential in providing details on land sub-division and household food security in the study area because men are the custodians on land and culturally mandated to fend for their families.

4.2.2 Level of Education of Respondents

Education level of household heads in this study was crucial in understanding the food security strategies adopted by households in the face of declining land sizes and heightened food insecurity. In society, education as one of the five social institutions helps people to think on how best to overcome social problems and expose them to life realities. As such, this study sought to investigate the education level of the household heads involved in this research. Results are provided in table 4.2.

Table 4. 2: Education Level of Respondents

Education Level	Frequency	Percentage
None	16	4
Primary	241	64
Secondary	93	25
College	18	5
University	11	3
Total	379	100

Source: Field Data, 2019

As shown in table 4.2, out of the 379 respondents who took part of this study, 16 (4%) had no formal education, 241(64%) had primary education, 93 (25%) had secondary education, 18 (5%) had college education while 11 (3%) were university graduates.

These findings show that majority (64%) of respondents had primary education as their highest education level. The study attributed the “low literacy level” among respondents to the little regard for education in the traditional Abagusii community. During a focus group discussion, participants agreed that traditionally, people in the study area never attached much significance to education since there were abundant

resources at the top of the list land and food hence few learners went past elementary education level. During a focus group discussion, a participant argued that:

“Before 1990 people many households didn’t recognize the significance of education because of available large tracts of land and a lot of food. That is why a large number of senior generation never made it past primary school education,” (Female, 66 years).

This is a clear demonstration that higher formal education has not been the interest of the people of the study area and this is likely to have ramification on household food security, land sub division and change in household social life.

With such minimal education, the respondents are more likely to engage in agriculture to make ends meet, thus a justification for farming as the major economic activity in the study area. This because farming as perceived by many does not need advanced education. Additionally, since the household heads with minimal education lack necessary training or skills to place them in formal employment thus, they are more likely to spend more time if not the entire lives at home.

However, the main challenge with low education as farming career is concerned is the inability of farmers to access and comprehend agricultural information essential for fostering farming. Without advanced education, it is difficult for farmers to upscale agriculture because access to and adoption of new agricultural technology and information is a toll order. This is associated with digitization of agricultural information by telecommunication networks and other stakeholders in agriculture in Kenya where farmers are required to visit some online sites for agricultural information and training as well as for agricultural support in terms of access to loans and farm inputs. The language used in the dissemination of such information is mostly English that people with low literacy levels are unlikely to understand, read or speak.

This finding concurs with Awinda (2018) who noted that education helps a household head to use production information efficiently since more educated person acquires more information to become a better producer. The level of education is believed to influence the use of improved technology in agriculture and, hence, farm productivity. It also agrees with Kabui (2012) who argues that the number of years spent in formal education is one of the important determinants of increased household food production and adoption of new behaviors. Education catalyzes the process of information flow and leads persons to explore as wide as possible, different pathways of getting information about agriculture and food security. Thus, education level is highly linked to household food security.

In a nutshell, majority (64%) of respondents had primary education as their highest education level while least segment of respondents (4%) had no formal education at all. Thus, with low education levels, farm productivity is likely to be low and adherence to culture especially with regard to land sub division and inheritance might be the norm.

4.2.3 Age of Respondents

It was imperative to establish the age of respondents that took part in this study. This is because addressing most issues investigated by this study required range of lived experiences among respondents. For instance, social meaning of land and its influence on land sub-division, how land sub-division has influenced household food security strategies as well as how adopted household food security strategies have influenced social life in the households, required relatively elderly respondents to provide detailed accounts on such issues. Thus, with older respondents, credible data would be collected. Table 4.3 provides data on age of respondents in this study.

Table 4. 3: Age of Respondents

Age Group	Frequency	Percentage
18-27	30	8
28-37	65	17
38-47	102	27
48-57	106	28
58 and above	76	20
Total	379	100

Source: Field Data, 2019

Out of 379 respondents in this study as shown in table 4.3, 30 (8%) were aged between 18 and 27 years, 65 (17%) were in age bracket of 28-37, 102 (27%) were aged between 38-47, 106 (28%) were in age bracket of 48-57 whereas 76 (20%) of respondents were 58 years and above.

Based on the findings displayed in table 4.3, it is clear that most (28%) of respondents were aged between 48-57 years and when we combine this with those aged 58 years and above, it can be concluded that most (48%) respondents in this study were aged above 48 years. Having such number of respondents in this study that involved cultural practices is advantageous because of cumulative experience on cultural practices concerning land sub-division and inheritance. As stated above, this age set was deemed significant in providing information on social meaning of land and how it influences land sub-division and inheritance, the changes in household food security strategies overtime.

In addition, the study regarded this group essential in providing vivid information on how food strategies pursued by households have influenced social life in households. Thus, this group was considered critical in this study based on the lived experiences

of the respondents on cultural matters touching land sub-division and inheritance, household food security and social life in households. This argument is in line with Arene and Anyaeji (2010) observation that older household heads were more knowledgeable on farming activities and on issues of household food security.

It is also critical to note that at this age (above 48 years), people from agricultural rich areas may be preoccupied with agricultural activities since agriculture is seen as the occupation for the old and those with low education because educated youth move to towns to search for white collar job opportunities. This argument was confirmed during an interview with an agricultural extension officer who asserted that agriculture in the study area is largely undertaken by older household members. Thus, issues of declining farm production and household food security strategies could be best explained by this group. This is because older people have accumulated more farming experience overtime placing them at a higher level in agricultural career than the young people. This finding concurs with Mango, Zamasiya, Makete, Siziba, and Nyikahadzoi (2014) who observed that agriculture is predominantly an economic activity of the old people thus the young people have little interest in agriculture as an economic activity prompting their move to urban areas to search for other economic ventures.

As discussed above, most (48%) of respondents in this study were aged above 48 years. The study considered the respondents critical in providing cultural related information on about social meaning of land, land sub-division and household food security approaches in Nyamira North Sub County.

4.2.4 Occupation of Respondents Other than Agriculture

The information on occupations of respondents besides agriculture was essential in determining the level of diversification on economic activities by residents of the study area. Responses are provided in table 4.4.

Table 4. 4: Occupation of Respondents Other than Agriculture

Occupation of Respondents Other than Agriculture	Frequency	Percentage
None	170	45
Business	25	7
Teaching	18	5
Clerical Work	23	6
Health Practitioner	17	5
Casual Labourer	121	31
Other	5	2
Totals	379	100

Source: Field Data, 2019

Based on the data in table 4.4, 170 (45%) respondents were not engaged in any other livelihood activity other than farming, 25 (7%) are engaged in business, 18 (5%) were engaged in teaching, 23 (6%) were involved in clerical work, 17 (5%) were health practitioners, 126 (33%) were engaged in casual work while 5 (2%) were involved in other occupation.

The data shows that most (45%) of respondents rely only on agriculture for livelihood. The study attributed this phenomenon to four possible reasons. First, little exposure of respondents to advanced western education to guarantee them white collar jobs within or outside the community. This has left them with farming as the only option because agriculture is perceived by many as a livelihood venture that doesn't require education. This is because from the data analyzed in section 4.2.2,

68% of respondents had primary education and no formal education (combined). This was echoed during focus group discussions where participants unanimously agreed that most household heads in the study area are engaging in agriculture due to minimal education and skills that is an hinderance to securing formal employment opportunities. In addition, during key informant interview, an agricultural expert in the Sub-County reported that majority of farmers have little formal education and this complicates communication and adoption of new agricultural technologies capable of revolutionizing farming despite small parcels of land in the study area. The key informant said the following:

“Majority of farmers in this Sub-County have little formal education and this becomes an obstacle when we try to communicate new agricultural technology for adoption bearing in mind that land sizes in this Sub County have diminished severely due to successive generational land sub-division and inheritance”, (Agricultural extension officer, 47 years).

This is evident that households in the study area are more likely embracing the traditional tried-and true agricultural methods which have resulted into reduced food production and heightened hunger. This is due to non-application of modern technology boosts agricultural production.

Secondly, farming does not require heavy capital investment since households in the study area majorly undertake small scale farming. Thus, relatively small capital requirement drives households into farming. For instance, the cost for buying farm inputs and farm operations are affordable because of small scale farming. The low capital requirement cropped up as a reason for most households engagement in agriculture during a focus group discussion. It was argued that households do not need a lot money because in some situations they plant seeds from previous harvest hence they only need some few kilograms of DAP fertilizer and that is all.

Third, favorable weather conditions in the area reinforces farming. The area receives adequate rains throughout the year making it an agricultural potential zone with a warm and temperate area with a temperature of 17.3 degrees centigrade and average rainfall is 1743 mm a year. During a key informant interview, an agricultural expert reported that:

“This region is known for farming because of adequate rains throughout the year hence every household is involved in farming in one way or the other” (Agricultural extension officer, 51 year).

Lastly, the area has fertile soil that highly supports crop production. The high agricultural potential of the study area is confirmed by Mbula (2018) who argues that Nyamira and Kisii regions are fertile regions hence potential for transformative agriculture.

Similarly, the number of respondents who reported their engagement in casual labour was quite high (33%). This was also explained from the stand point of little education among respondents that makes it difficult for them to secure formal employment hence high number of respondents earning a living through provision of labour for payment besides engagement in agriculture. During focus group discussions, respondents pointed out that some household heads in the sub County are employed as casual labourers in tea factories especially Mogeni, Ng’oina, Keritor, Sang’anyi, Sotik Highland, and Kipkebe.

For those who had other economic ventures alongside farming did so to increase income to support their families. However, the percentage of the respondents who engaged in other economic activity in addition to farming was small (18%). This was confirmed during focus group discussions were participants agreed that income from

other ventures supplements farm proceeds. This indicates that farming is undertaken by almost all households in the Sub County.

In brief, most households (45%) in the study area are exclusively involved in farming. This was attributed to little exposure of household heads that bars them from securing formal employment opportunities, good climatic conditions and soils as well as the low agricultural capital requirement.

4.2.5 Number of Children in Households

In this study, the number of children was critical to understand the dynamics of land sub-division and food security in households in the study area. This enabled the researcher to determine how households land sizes are likely to be impacted in future as a result of land sub-division and generational inheritance. This sub section presents data on the number of children by households involved in this study as well their gender to establish the likely effect of future land sizes. Respondents were required to provide the number of children and further split it down in terms of gender.

Table 4. 5: Number of Children in Households

No of Children	Frequency	Percentage
0	2	1
1	12	3
2	38	10
3	83	22
4	95	25
5	72	19
6	47	12
7	19	5
8	11	3
Total	379	100

Source: Field Data, 2019

From the responses in table 4.5, 2(1%) of households had no child, 12 (3%) had one child, 38 (10%) had two children, 83 (22%) had three children, 95 (25%) had four children, 72 (19%) had 5 children, 47 (12%) had six children, 19 (5%) had 7 children while 11 (3%) of households involved in this study had eight children. Based on the data, majority of households (61%) of households had less than four children. The study attributed this scenario to two reasons. First, in the contemporary society, high cost of raising children in the context of financing for child's education and other basic needs are beyond reach for many households. Secondly, the idea of diminishing land sizes has also played a role in existence of lean families in the study area. During focus group discussions, participants noted that households in the study area have embraced small families to avert future problems associated with land, food security and misery for their children. This focus group participant put it out correctly:

“Land sizes have reduced. Small number of children is good to avoid suffering in future. In the past most families had more than 10 children but now things have changed” (Male, 63 years).

This is a clear indication that households in the study area currently prefer lean families and this may be attributed to reduced land sizes emanating from continuous land sub division and resultant food insecurity. Thus, households prefer wiry families instead. This can be justified by Liru (2014) assertion that household with high number of children consume a lot hence the chances of food insecurity is high while households with small number of children consume less and are likely to be food secure.

When the data was expressed quantitatively, the mean for household size is 4.17. This data is in agreement with the 2019 Kenya Population and Housing Census that puts household size in Nyamira North Sub County at 4.1 persons (GOK, 2019).

When breaking down the data on number in terms of sex, the study established that 46% of children in the households were male while 54% were female. This indicates that the number of girl child in the households is high. However, based on the current land sizes, this study concludes that land sizes are likely to decrease further in future since the 46% of boys are likely to inherit land from their parents.

It is evident from the findings that households in the study area have resorted to lean families (4.17 average) that can afford to raise in the face of reduced land sizes due to intensive and continuous land sub-division and food insecurity. On gender of children in households, the study established that there are more girls (54%) than boys (46%). Although, the number of boys is lower than that of girls, there is a likelihood that the current land sizes held by households will reduce in the future due to sub-division of land and inheritance.

4.2.6 Land Sizes Owned by Respondents

This study sought to establish the land sizes by households to understand household food security dynamics in the study area. Table 4.6 gives responses.

Table 4. 6: Land Sizes owned by Respondents

Land size (in acres)	Frequency	Percentage
0.5	164	43
1	154	41
2	46	12
3	12	3
4	2	1
5	1	1
Total	379	100

Source: Field Data, 2019

Based on responses in table 4.5, 164 (43%) of households own less than half an acre, 154 (41%) own an acre, 46 (12%) own two acres, 12 (3%) own three acres, 2 (1%) own four acres while 1 (1%) own five acres. Based on data findings, the mean of acres of land owned by households in the study area is 0.995 implying that land sizes by households are relatively small. The findings totally agree with Mbula (2018) that land in Nyamira North Sub County has reduced drastically. This finding was also confirmed during key informant interview who held that:

“Land is currently a precious resource in Nyamira North Sub County. Land has reduced tremendously to the extent that households now own less than an acre” (Land expert, 49 years).

This is a demonstration that land in the study area has reduced and that the average land size by households is less than an acre. The study attributed shrinking of land sizes to probable two factors. First, the rate of land sub-division and generational inheritance in the study area has resulted into condensed land sizes. This argument was confirmed during focus group discussions that the main cause of diminishing land sizes in the study area is land sub-division and inheritance.

Second, the reduction of land sizes was attributed to high fertility rate in the region leading to high population growth rate and consequently reduced land sizes occasioned by cultural land sub-division and inheritance. This is because according to the culture of people in the study area, parents are supposed to sub-divide land for their sons, a practice that lingers from one generation to another (Kiplimo and Ng'eno, 2016; Wickramaarachchi and Weerahewa, 2016). Such small land sizes held by households are likely to pose food security challenges in households because as documented by Kabui (2012) small farmland size increases vulnerability to household

food insecurity because the smaller the farmland size, the smaller the volume of crop output.

Based on the findings on land sizes owned by respondents, it is evident that land sizes held by households in the study area is relatively small as supported by appendix V that depicts the extent to which land sizes held by households in the study area have declined. The study attributed the reduction of land sizes to uncontrolled land sub-division and generational land inheritance. Although some households own more than three acres of land, the number of such households is small (4%) signaling the extent to which sizes of land held by households have diminished and this is likely to have a negative implication on household food security in the study area.

In a nutshell, in this section, the study has explored the demographic information of the 379 respondents involved in this study to understand the various aspects of land sub-division and household food security in Nyamira North Sub County. Descriptive statistics was employed to analyze the data. In this section, the study has examined gender, education level, age, and occupation other than agriculture and the number of children as well as land sizes owned by respondents.

To start with gender of respondents, the study established that majority (78%) of the respondents were men, affirming that men are head of households as provided in the African Culture. The relatively high numbers of men were deemed essential in answering study questions pertaining land and household food security because land control and allocation as well as provision for the family culturally lie within the domain of men. Thus, male respondents provided first-hand information on aspects of land sub-division and households food survival strategies and more importantly

information on how the food survival strategies that have been adopted by households have influenced social life in households.

On education level of respondents, the study established that majority (64%) of respondents had secondary education. The study attributed the “low literacy level” among respondents to the little regard for education in the study area in the past because resources like land and even food were abundant hence, they saw no need to struggle in acquiring education particularly post primary education. The study however, saw the main challenge with such low literacy levels among the respondents who are predominantly farmers being the inability to access or even comprehend agricultural information essential in farm production process. Without advanced education, it is difficult for the farmers to upscale agriculture because access to and adoption of new agricultural technology and information will be relatively low compared to farmers with higher educational levels.

The study also established that most (48%) respondents were aged above 48 years. In addition, the study regarded this group essential in providing vivid information on how the food strategies pursued by households have influenced social life in households. Thus, this group was considered critical in this study based on its lived experiences on cultural matters on land sub-division, household food security and social life in household in the study area. This study also sought to establish the other livelihood engagement that respondents engage in apart from farming. The data revealed that most (45%) respondents relied only on farming for livelihood. They didn't have any other livelihood venture other than farming. The study attributed this situation to low education among respondents to guarantee them white collar jobs,

little capital requirement in farming undertakings, favorable weather conditions and fertile soils in the study area that fosters crop production.

Furthermore, on the number of children by households, the study established that majority (61%) of households had less than four children. This was attributed to the contemporary high cost of raising children where financing for child's education and other basic needs is high compared to the past times when most household had more than ten children and to the idea of diminishing land sizes where families have resorted to small number of children to ensure good future for their children with regard to land.

With regard to the sizes of land owned by households held by respondents, the study established that most (43%) owned less than half an acre. However, the mean of land sizes found to be 0.995 acres. This finding was attributed to the high rate of land subdivision and generational inheritance that has led to dwindling land sizes and high agricultural potential of the area leading to high population pressure on the available land.

CHAPTER FIVE: SOCIAL MEANING OF LAND AND ITS INFLUENCE ON LAND SUB-DIVISION

5.1 Overview

Land is a precious resource to the rural folk. Land is synonymous with rural livelihoods in most societies in the Least Developed Countries. For instance, African communities value land to the extent of even engaging in conflicts and displacement. Although land is a natural resource that guarantees rural livelihoods, the manner in which people value land in Africa and other parts of the developing world is so emotive and complex to the extent that everyone needs land for survival culminating to intensified land sub-division and generational inheritance (Tafira, 2015). The unprecedent desire for land has transformed areas that initially exhibited typically rural characteristics to urban based features due to intensified land sub-division and successive inheritance.

Interestingly, the significance attached to land is endemic even in the 21st century that is characterized by advanced technology, high literacy levels and heightened international movements and social interaction induced by globalization (Omboki, 2016; Ambwere, 2003). Thus, the fundamental questions in this study are: why do people need land? Why don't they settle in towns instead of scrambling for insignificant and uneconomical parcels of land in the remote areas? This chapter provides answers to these questions to help us understand the social meaning that people of Nyamira North Sub County make out of land and how it influences land sub-division in the area.

5.2 Households Land Access in the Study Area

The study sought investigate how households acquire land in the study area. The study established that there are two avenues through which households access land: inheritance and purchase. However, of these two channels of land access, the study established that inheritance is the major avenue through which households in the study area access land. From all focus group discussions held, participants agreed that in Nyamira North Sub County the major avenue for land access is inheritance from parents via land sub-division and that even those who have acquired land through purchase, they are still entitled to a portion of their ancestral land. The focus group discussions also established that most people who have bought land in the study area had their family roots in West and South Mugirango. During a focus group discussion, a participant argued that:

“Households acquire land through inheritance. Culturally, sons are allocated land through land sub-division to establish their homes. Land inheritance here is mandatory hence parents have a duty to sub-divide land for their children. Inheritance is the common avenue through which households acquire land although some few buy but they still have their ancestral land” (Male, 73 years).

From the above sentiments it is clear that land inheritance is a cultural entailment to male child according to the culture of the people in the study area. This has continued from generation to generation. Thus, through land sub-division and inheritance, households are able to acquire land. Similarly, during key informant interviews, a land officer in the Sub County reported that lack of land sub-division policy and deeply entrenched social norms on land have greatly contributed to generational land sub-division and inheritance and that this has had a negative implication on land sizes and farm production in the study area.

The findings on households land access from focus group discussions echoed the responses from respondents in which 367 (97%) of respondents argued that households in the study area acquired land through inheritance whereas (3%) argued that land was acquired through purchase but still the households have a portion of ancestral land.

The findings were supported by Mbula (2018) who argued that land sub-division and generational inheritance is the most common way in which households access land access in the study area. According to Mbula (2018) land sub-division and generational inheritance in the region has never ceased even in the 21st century that is characterized by high literacy levels and non-adherence to some traditions and beliefs in the wake of the intense globalization and westernization. This phenomenon has led to the drastic decline in land sizes in the region.

In brief, the common avenue for land access in the study area is inheritance. Households in the study area acquire land through inheritance. Through sub-division, the households were able to acquire land from their parents.

5.3 Social Meaning of Land to Households

From the findings in section 5.2, it is interesting that households in the study area almost entirely inherit land from their parents. On the basis of this data, the study sought to investigate the social meaning that respondents derive from land and how it has influenced generational land inheritance. Based on the study findings, it was evident that land has various social meanings and that no single social meaning is common to all the households or populace in the study area.

To begin with, the study established that land means a living space. The data from focus group discussions revealed that land is a site where people live. This has given rise to individual land tenure in which households prefer individual land ownership as opposed to community or group land ownership. During interviews, a respondent said the following:

“Land is everything to all households here. Land is our home. It is on land that we establish our homes and spend the entire of our lives. This is why private land is valued here and households sub-divide and allocate their sons land because land is home to every household. Without land one is nothing. If one has no land, he’s homeless” (Male,82 years).

From the sentiments, it is clear that people regard land as a living space where households establish homes hence without land life will be complicated. The focus group discussion participants reported that need for a place to call home has necessitated individual land ownership and that people derive a sense of belonging and independence from this typology of land tenure system. This finding agrees with Kimeu and Maneno (2017) who established that land provides a living space for people.

In addition, the study established that continuity of generation was another social meaning that households in the study area derive from land. This is because continuity of family lineage is a fundamental aspect for households in the study area. The findings from focus group discussions revealed that parents in the study area would love their children to carry on with the family lineage since this is what defines their belief systems. This is because ancestral land is associated with continued relationships and associations with the ancestors. During a focus group discussion, a participant noted that:

“Ancestral land is critical in the continuation of generations. It is the only way that family origin and future prospects depends on. Ancestral land provides continuity of associations with ancestor. That is why it is difficult for households to sell ancestral land” (Male, 73 years).

This is an illustration how ancestral land is treasured in the context of continuity of generation in the study area. Such social meaning of land is likely to influence generational land inheritance since residents need continued relationship with ancestors.

From the focus group discussions, it also emerged that collective identity and wellbeing is among the social meanings households in the study area derive from land. That since people have common origin, family lineage and social norms, they intend to live in their original land. This is the surest way of the continuity of their social norms. The residents of the area of study tend to attach utmost significance to their ancestral land because it the only way they can ensure continuity of their social norms and practices thus easy for them to be identified with the place. This was articulated during a focus group discussion as follows:

“Every community has its own land. It derives a community name courtesy of the land on which it is occupying. Without land, we cannot have identity. It is land that makes us known as the Abagusii or the North Mugirango community. Thus, our land is our identity mark” (Male, 79 years).

It is clear from the above sentiments that land is the identity mark for households in the study area. That need for collective recognition and wellbeing, according to focus group discussion participant, has necessitated residents of the study area to cling to their ancestral land. This finding agrees with Delville (2000) who established that land is intimately related to the holders' identity which is paramount to belonging.

From the focus group discussions, it also emerged that fulfillment of social norms occur on land. Land is among the most important sites where cultural practices are undertaken. The common example by focus group discussion participants is burial. According to the social norms of the people in the study area, it is a requirement that the dead be buried at home and most preferably at the ancestral land. This was said to ensure continuity with generation even after death as the deceased joins ancestors. Due to this, land is an important burial site for the residents of the study area. During a group discussion, a participant averred:

“According to Abagusii culture the dead should be buried at home even though a person dies in America, Nairobi or anywhere in the world. This is a cultural requirement. The body must be transported home for burial. Burying the dead at home provides a connection of the deceased with the ancestors” (Male, 73 years).

This is a demonstration how ancestral land is fundamental in fulfilling cultural rite, burial. The centrality of ancestral land to the social norms of residents has most likely influenced a desire for ancestral land. The finding on land as a place for fulfillment of culture concurs with Kymlicka (1995) who argues that survival of community’s culture depends on protection of ancestral land. It also agrees with Olum, et al (2017) and Dery (2015) who argues that communities have historically used land to perform various cultural activities and rituals among them burial.

From focus group discussions, the study also established that land is a source of prestige. The size of land owned by a household head influences his social status in society. The study established that household heads with large land acreage are respected than those with small parcels of land. Traditionally, this determined the number of wives an individual could marry because household heads with large tracts of land were presumed to be wealthy and able to take care of their families. However,

with the current diminishing land sizes, this is fading away because available land sizes are not vast enough to guarantee such high status. During focus group discussion, a participant noted that:

“Men with large tracts of land in this area are respected and accorded high esteem than those with small parcels of land. The size of land is sometimes used as a basis for respect” (Male, 77 years).

This is a clear demonstration on how land in the study area is associated with class and position in society. Men with enormous land are held with high status than those in possession of small land. The finding concurs with the work of Tafira (2015) and Owino (2019) who argues that land define the social status and class position people in society.

Based on the findings on social meaning that households in the study area attach to land, it is evident that the respondents derive a number of social meanings from land including continuity of generation, living space, collective identity and wellbeing, fulfillment of social norms and source of prestige among other meanings. When collaborating the findings on social meaning of land to people in the study area from focus group discussions and findings from respondents, it emerged that data tallied as depicted by table 5.1.

Table 5.1: Social Meaning of Land to Respondents

Social Meaning of Land to Respondents	Frequency	Percentage
Continuity of Generation	102	27
Living Space	152	40
Collective Identity and Wellbeing	81	21
Fulfillment of Social Norms	27	7
Source of Prestige	11	3
Others	6	2
Total	379	100

Source: Field Data, 2019

From table 5.1, 102 (27%) of respondents reported that land ensures continuity of generation, 152 (40%) indicated that land provides a living space, 81 (21%) were of the opinion that land provides collective identity and wellbeing, 27 (7%) said that land provides avenue for fulfillment of social norms, 11 (3 %) argued that land is a source of prestige while 6 (2%) attributed land to “other” social meanings. This is a true reflection of the qualitative data obtained from focus group discussions because continuity of generation, living space, collective identity and wellbeing, fulfillment of social norms and source of prestige featured as social meanings that households derive from land in both focus group discussion participants and from respondents. However, social meanings from respondents can be ranked according to their popularity in that most respondents (40%) in the study area perceive land as a living space, followed by continuity of generation (27%), collective identity and wellbeing (21%), fulfillment of social norms (7%), and source of prestige (3%) in that order. Thus, there is no deviation of data on social meaning from both focus group participants and respondents because the study findings revealed that the most profound social meaning of land in the study area is living space.

5.4 Land Sub-division and Reduced Land Sizes in the Study Area

The study sought to investigate how land sub-division has influenced land sizes in the study area. This is because Mbula (2017) and Kipkemboi (2019) have argued that land sizes in the larger Gusii land, with the study area included, have reduced drastically. Participants in the focus group discussions were asked whether the current reduced land sizes could be attributed to land sub-division. The study from all the focus group discussions held established that indeed land sub-division is the major cause of dwindling land sizes in the study area. According to the study findings, the

average land sizes held by households three decades ago was ten acres but now it is less than an acre, a finding that is in line with the results in section 4.2.6 in which average land sizes held by households currently stands at 0.995 acres. The study established that it is a common practice for households to sub-divide land for their grown-up children since this has been the tradition. During a focus group discussion, a participant held that:

“Over time land sizes in this area have reduced drastically and many households nowadays are in possession of less than an acre which is contrary to the land sizes held thirty years ago. During this period households held more than ten acres of land. However, due to land sub-division and generational inheritance land sizes have reduced and continues to reduce. I really sympathize with the future generation. Will they really have a place to call home?” (Male, 77 years).

The above narration shows how land held by households have tremendously reduced over the last few decades. Land reduction in the study area is attributed to generational land sub-division and that the future generation in stake because there may be no land to settle on.

The findings were a true reflection of the data from respondents in which 371 (98%) contended that land sub-division are behind the current reduced land sizes in Nyamira North Sub County while 8 (2%) attributed the phenomenon to “other factors”. Similarly, interviews with land officers revealed the same information. The findings were in agreement with the Mbula (2017) and Kipkemboi (2019) that reduced land sizes in the whole of Nyamira and Kisii counties is attributed to land sub-division.

5.5 How Social Meaning of Land has Influenced Land Sub-division in the Study Area

From the findings on social meaning of land to respondents in section 5.3, there is evidence that households derive various meanings from land. The study established that households in Nyamira North Sub County perceive land as an avenue for continuity of their generation, living space, collective identity and wellbeing, fulfillment of social norms, source of prestige among other social meanings. These social meanings show the significance households in the study area attach to land.

Based on the findings in section 5.3, the study sought to investigate how the social meanings of land have influenced land sub-division in Nyamira North Sub County. Based on the focus group discussions held, the study established that the social meanings households in the study area attach to land do not exclusively influence land sub-division. There exist other factors influencing land sub-division in the study area.

During a focus group discussion, a participant said that:

“Social meanings of land have influenced land sub-division but not much. There are other factors that are responsible for the intensified land sub-division in this area. This is because if social meaning of land for example, living space, continuity of generation, collective identity and wellbeing etc would best apply when households occupy ancestral land communally without sub-divisions. Thus, there are other factors influencing land sub-division and not necessarily social meanings of land” (Male, 65 years old).

The narration above clearly shows that social meanings of land have minimal influence on land sub-division and it is true that for instance if a place to call home was essential, households could have simply settled on their ancestral land without sub-dividing it. This indicates that social meanings of land don't have much bearing in the current land sub division witnessed in the study area. When collaborating this

the findings from respondents, the results were the same, that is, 83% indicated that social meanings of land have no influence on the land sub-division in the area while 17% were in agreement that the social meanings indicated in section 5.3 have a bearing in the land sub-division in the study area. This finding disagreed with Molen (2017) and Jayne et al (2014) who have documented those social norms and values are behind continuous land sub-division in Africa.

Since the social meanings of land has minimal influence on land sub-division, the study sought to investigate reasons behind the intensified land sub-division that has seen the average household land sizes to be 0.995 acres as illustrated in section 4.2.6. The findings from focus group discussions indicated that need for independence and livelihood, poverty and lack of land sub-division policy are behind land sub-division in the study area.

To begin with need for independence, the study established that the practice of land sub-division is closely tied to a desire for freedom. That once sons are grown-ups, they aspire to establish their homes because they perceive themselves as grown up whom should not be controlled by their parents; thus, they need land for the same. This, according to focus group discussions held, is assign of adulthood. They detach from their parents and begin their lives. During focus group discussion, a participant noted that:

“Once sons reach adulthood age something from 20 years, they may demand land to start their lives. They perceive themselves as grown-ups who should not be controlled by parents or provided for by parents. This compels parents to think of sub-diving and allocating them land so that they can eke a living and support themselves in terms of food and establishing homes” (Male, 56 years).

This is a clear demonstration of how need for freedom of grown-up sons is influencing land sub-division in the study area. The young ones (sons) demand for land to have independent lives in terms of establishing homes among others.

The study also established that need for a living drives land sub-division in the study area. Participants in all focus group discussions held agreed that food production and wealth generation from land influence land sub-division. The study established that parents sub-divide land for their sons eke out a living and establish their homes. By growing food and engaging in commercial activities like chicken rearing, growing cash crops etc. the children are able to raise their families or promote their wellbeing in case they are not yet married. During a focus group discussion, a participant averred that:

“Households sub-divide land for their children so that they can produce food and generate wealth. This occurs when grown up children are married or when they are aspiring to. In this area, food production is the basis for household preservation/maintenance. It is also a basis for wealth generation especially business undertakings. Land guarantees better future for the children” (Female, 67 years).

The above narration shows centrality of land in livelihood enhancement and guarantees for a bright future for the children in the study area. This forms a ground for land sub-division. The finding with argument by the Daily Nation (2014) that land is not just a commodity of trade but also a principal source of livelihoods.

In addition, poverty featured as factor contributing to land sub-division in the study area. During focus group discussions some participants felt that high poverty levels is to blame on the intensive and continuous land sub-division in the study area. Poverty has forced some households to sub-divide their parcels of land for sale. Some of the households especially those along the roads, shopping centres and those around higher

academic institutions like technical training institutes, have found it economical to subdivide land and sell for purposes of development of real estate, a lucrative business in the area at the moment. During focus group discussion, a participant had this to say:

“Poverty force many households to sell land. Households along Chabera-Ikonge road, those around market centres like Ikonge, Magwagwa, Ekerenyo among other markets have sub-divided land into plots to sell to investors to build commercial houses. In addition, households around Technical Training Institutes like Ekerubo Gietai, Gitwebe among other technical training institutes have divided land into plots for sale” (Male, 47 years).

This is an illustration of the land tenure and land use changes in the study area. Perceptions and social meanings that households have historically attached to land especially continuity of generation and collective identity and wellbeing are slowly fading out. This is because poverty is taking a centre stage in land sub-division where households are sub-dividing land into plots for financial gains.

Lastly, participants in focus group discussions held attributed lack of government policy to continued land sub-division in the study area. Lack of land sub-division policy in place to guide land sub-division has resulted to continued land sub-division in the study area. According to focus group discussion participants, if there was a policy outlining the minimum land sizes to be sub-divided and the conditions under which land sub-division should take place, the high rate of land sub-division in the study area won't occur.

“There is no law governing land sub-division by our county government or national government. If there was legal framework on land sub-division, this practice would have gone down like for the case of female genital mutilation and planting of blue gum trees along rivers. The problem of uncontrolled land sub-division relies squarely with the national and county governments” (Male, 39 years).

From the above sentiments the national and county governments are to blame for the heightened and uneconomical land sub-division because there is no legal framework that prohibit or guide land sub-division leading to untenable land sub-divisions in the study area. This finding was confirmed by a forty-five key informant from Land Department who argued that the Minimum and Maximum Land Holding Bill 2015 could have truly solved the problem of land sub-division in Kenya but it failed to get parliament's approval. Thus, land sub-division will continue to be a challenge in Kenya unless the national and governments do something.

In a nutshell, land sub-division is a practice that has resulted into reduced land sizes in the study area. Although social meanings of land influence land sub division, the main factors influencing the practice is need for independence and living, poverty and lack of government policy on land sub-division.

5.6. Social Dynamics of Land Sub-division in Nyamira North Sub County

After establishing the social meanings of land to respondents in section 5.3, the study sought to investigate how land sub-division is conducted and the social issues associated with it. To achieve this goal, the study specifically focused on decision making in land sub-division, determinants/consideration and gender dimensions land sub-division and the future of the practice land sub-division in the study area.

5.6.1 Decision Making in Land Sub-division

Although African culture places men above women with regard to land issues and overall household decision making, the study sought to establish how decision to sub-divide land is arrived at in the household. This is because with globalization, westernization and women empowerment, women's role with regard to land issues

might have changed. Participants in focus group discussions were asked to document who in the household decides when to sub-divide land. The study established that the task of land sub-division in the study area lies squarely in the domain of a household head (man). It is the man who decides when to sub-divide land. However, in a situation where the man is dead, the woman can make a decision but will invite male relatives of her late husband to actualize the plans. This is because the social norms of people in the study area do not allow women to sub-divide land. This was well documented during a focus group discussion by a participant who said that:

“From our fore-fathers the task of land sub-division is a role of men and it is cultural abomination for a woman to lead land sub-division and inheritance process” (Male, 63 years).

This is a demonstration that decision making on land sub-division is still the task of men. The finding concurs with Molen (2017) who argues that land ownership and inheritance rights and process lies in the domain of men. However, in some situations, according to participants in focus group discussions, women can make a decision to sub-divide land but the actual sub-division is done by relatives of her late husband or any close male friend. This was captured in the focus group discussion where a participant reported that:

“Widows and single women also make decisions on when to sub-divide land for their sons. They make a decision before inviting their late husbands’ relatives to actualize the decisions” (Female, 65 years).

This shows that decisions on land sub-division is not only men’s affair but, in some situation, female household heads can do it but actualizing the decisions is by male relatives.

To put it briefly, men in the study area are culturally mandated to make decisions on land sub-division but in some situation women households heads can make the decisions but implementation of such decisions are done by male. This a clear manifestation that men are the custodian of land as documented by Wickramaarachchi and Weerahewa (2016).

5.6.2 Gender Dimensions in Land Inheritance in the Study Area

. The study sought to establish whether gender equality exists in land sub-division and inheritance because the Kenyan Constitution 2010 grants equal opportunities with regard to household land inheritance by both sons and daughters. The findings from focus group discussions established that land sub-division in the study area involves men and that daughters by virtue of culture of the community and marriage are not entitled to the share of their parents' land. That girls are expected to get married and join their husbands who have also inherited land from their parents. During a focus group discussion, a participant's contribution to the gender and land sub-division in the study area was of interest to the researcher. This is what he said:

“Girls have never inherited land from their parents in the Abagusii community. That is the culture of our community. Girls are supposed to get married and not inherit land from their parents” (Male, 76 years).

This is a clear illustration how girl child is excluded from land sub-division and inheritance matrix. Patriarch is deep entrenched in the norms and traditions of the people in the study area to the extent that households have not realized the need to empower their girls through land inheritance and even to align themselves with modernity by embracing gender equality.

Since girls are not factored in land inheritance, the study sought to investigate what happens to girls or women who never get married for one reason or the other. The study established that unmarried girls have to acquire their own land through purchase for purposes of establishing homes and eking out a living or resort to “other” avenues to survive in the absence of land. However, in some situations, the focus group participants agreed that parents or brothers to the unmarried women, can assist them buy land by contributing some amount towards the same. In situation where parents or bothers are unwilling or poor, the girls/women have to take the mantle and ensure they have somewhere to call home for their good or that of their children. From the findings, it is apparent that boys are given free land while girls have to sweat to purchase or use other avenues to survive since they are not part of heirs of their parents’ land. During a focus group discussion, a participant had this to say:

“Unmarried or divorced women are supposed to look for a place to live. They should look for money to purchase their own land or rent a house. However, if their parents or brothers are capable, they can chip in and buy the unmarried daughters or sister land but this arrangement is not common, (Male, 65 years).

The above sentiments may be attributed to patriarch and African customary laws that place land inheritance rights on men. The finding supports Wickramaarachchi and Weerahewa (2016) that men are the custodians of land because customary laws especially in Africa grants them power to inherit land and excludes girl child from land inheritance matrix and that this has a bearing in women suffering and disempowerment in Africa.

Among the poor households, it emerged during focus group discussions that sometimes it is frustrating to get unmarried daughters off their homes especially after

demise of their parents because they are not entitled to the family land. To illustrate this, a respondent narrated this story during a focus group interviews.

“This happened last week when my neighbor, a widow who has been staying with her grown up daughter died. This family was blessed with six children, four boys and two girls. All children are now above 30 years and married except a girl who married and divorced with her husband some ten years ago and went back home to stay with her mother. It is because when the mother died, the lady was told by her brothers to pack and go because she is not entitled to land or anything in the family. The lady with her two children packed and I hear she has rented a house in Ikonge Centre. These are frustrations that unmarried ladies undergo in the villages. If the lady had been allocated land by her parents, such mistreatment would not occur”, (Male, 53-years).

This is a demonstration of difficult experiences unmarried women undergo especially after the death of their parents. This incidence happened because of culture which grants men powers to inherit land while women are let out in that land inheritance arrangement. The narration is solid evidence for the responses (98%) of respondents that unmarried women have to rent houses elsewhere to stay or buy their land. This is the interesting bit of gender and land sub-division in the study area.

Since land sub-division and inheritance in the study area takes into account only sons, the study sought to investigate what happens to families that have been blessed with only daughters and what social relations exist between such household and the society. The researcher began by asking focus group participants what happens to in the situation where a household have only girls. The study established that in the event that a household is blessed with only girls, a woman mostly with children is married to take place the “place of a son”. Such woman is referred to as daughter in-law. The daughter in-law carries the household generation after the demise of the parents.

On the social relations of the household members with the society, the study established that the social relations are so strained because a generation is marked by sons and land sub-division and inheritance. The social strain may emanate from family members or community members who gossip or insult the household as not having boy child at small provocation. Such household is not accorded necessary respect like households with male children. This was clearly put a cross by a focus group discussion participant:

“There is nothing stressful like having no boy child in a family. The whole society will look down up on such household. The household in most cases cannot be accorded much respect like households with a boy or boys. The insult, “Nyabisagane” (person with only girls), is most likely to take centre stage. Having no boy child is not a good thing here.” (Female, 67 years).

The above sentiments illustrate the pain that households without sons undergo as land sub-division and inheritance is concerned. The social norms that place boy child above girl child have contributed to strained social relationships of households without boy child with the wide society.

In short, findings on gender and land inheritance in the study area has ruled out gender equality in the process. Social norms of the community grants male child powers to inherit land from parents while girls are left out. The girls are expected to get married and join their husbands in enjoying land allocated to them by their in-laws. This culture does not take into account the unmarried women because in absence of land, where will the unmarried women settle? Suppose they have no resources to buy themselves land, what happens to them? The study has revealed that household without boy child will have a woman with children who will be called daughter in-law to ensure continuity of generation by inheriting household land. However, the study established that it is so stressful for a household without a boy

child because this opens up room for insults and disrespect. because a generation is marked by sons and land sub-division and inheritance

5.6.3 Considerations During Land Sub-division and Inheritance

In section 5.7.2, the study has revealed that gender equality in land sub-division and inheritance is out of question. It is only men participating and benefiting from this cultural practice in the study area. Since it is only men affair, the study sought to investigate the factors taken into by households when sub-dividing land for sons in Nyamira North Sub County. Based on the data from focus group discussions, the study established that commonly three factors are considered when sub-dividing land for sons: marital status of sons, economic status of sons and the nature of household head.

To start with the marital status of sons, the study established that marital status of sons influences land sub-division decisions among households. That when some or all sons are married, the household head has no option but to make arrangements to sub-divide the land so that sons are able to cater for their families in terms of food and establishment of homes. During a focus group discussion, a participant revealed that:

“Marital status of sons is a major factor influencing a decision to sub-divide land. When sons are married household head has to sub-divide land so that the sons can have independent life in addition to establishing their homes and producing their own food” (Female, 67 years).

The narration above indicates how marital status is key in influencing decision to sub-divide land for sons in the study area. The study also revealed that the economic status of sons is another factor influencing the household decision to sub-divide land for sons in the study area. The study found out that in households where sons are

educated and in employment in towns and cities, it takes long to sub-divide land because the sons may not be interested in land since they may be staying in town with their families. During focus group discussions, some participants confirmed that they haven't sub-divided land for sons because their sons are not interested on land since they are living in Nairobi and other towns in Kenya. Thus, they have no time to eke a living from land instead parents are utilizing the land for food production and wealth generation.

The study also established that the nature of household head has influence on land sub-division decision in households in the study area. The study established that some households take a while to sub-divide land for their sons, sometimes until they are too old or die. The study found out that some of such household heads claim that they spent sundry resources in educating sons hence none should ask for land. During a focus group discussion, a participant noted that:

“I will never sub-divide land for my sons. The land I have is mine and my wife. We educated them hence they can buy their own land”, (Male, 59 years).

This shows how some household heads in the study are unwilling to sub-divide land for their sons. The study attributed this to reduced land sizes to the extent that if such land is sub-divided for sons, parents will have no source of livelihood even though Caldwell (1976) argues that wealth flow from children the elderly especially at old age. This is associated with hard economic times in the contemporary society that assistance from children may be insufficient to cater for all needs of parents especially when parents are young like the forty-nine years focus group discussion participant.

When data from focus group discussions on considerations during land sub-division was collaborated with the data from respondents, it emerged that the findings were

similar. This is because 65% of respondents reported marital status, 27% said economic status of sons while 8% argued that the nature of household head influence land sub-division for sons.

In brief, there are factors that influence land sub-division and inheritance. The study has established that there are three common factors are considered when sub-dividing land for sons in the study area. They include marital status of sons, economic status of sons and the nature of household head

5.7 The Future of Land Sub-Division in the Study Area

According to available literature, land sub-division in Kenya is more pronounced in Nyamira and Kisii counties and it has resulted to alarming decline in land sizes (Mbula, 2017). The literature has been confirmed by this study in section 4.2.6 that indeed the average land size in possession of households in the study area currently stands at 0.995 an acre. Based on these finding, this study sought to find out whether respondents intend to sub-divide land for their children in the near future despite the drastic reduction of land acreage to insignificant and uneconomical level.

The study established that the practice of land sub-division in the study area is not ending soon despite drastic decline of household land sizes to uneconomical and insignificant levels as depicted in section 4.2.6. During focus group discussion, participants reported that the practice of land sub-division is expected to continue in future because it is the only surest way of ensuring living space for children, livelihood, independence among other social significance of land as presented and discussed in section 5.3.3. During focus group discussions, a participant noted that:

“I have three quarters of an acre and i intend to sub divide it for my four sons. I will sub divide no matter how small it is. Through land sub-division, my children will have a place to live and ensure continuity of my generation. According to Abagusii culture, parents must sub divide and allocate land to their sons (Male, 51 years).

This shows that the practice of land sub-division is deeply entrenched in the culture of people in the study area. It is almost mandatory that parents sub-divide land for their children. The interesting bit of land inheritance for the study area according to the above fifty-one focus group participant is that it is only meant for sons, implying that girls are not in the land sub-division matrix. The sentiments were also confirmed by other focus group discussions. This finding supports Molen (2017) argument that women in Africa own less than 2% of land because they are not affected by land inheritance due to entrenched cultural practices and customary laws that bestow land ownership and inheritance rights exclusively on men.

However, some participants in focus group discussions argued that they intend not to sub-divide the household land for their children. The study attributed these intentions to three reasons. First, westernization where some households have realized the insignificance of small pieces of land and the value of engaging in non-agricultural activities. This has changed the attitudes of some households towards land sub-division and inheritance hence encourage their children to put up in towns. This justifies the reason for the emerging burial trends where the dead from the study area are buried in non-ancestral land including cemetery as documented during focus group discussions. Secondly, land owned by households has become too small to be sub-divided hence children may look for alternative survival mechanisms. Thirdly, some households have heavily invested in their children’s education hence children

are expected to buy their own land due to insignificant land at home (ancestral land).

During a focus group discussion when a participant said that:

“Have educated my sons hence they can buy their own land. The half an acre I possess can’t be sub-divided” (Male, 59 years).

As far as land sub-division and inheritance is concerned, drastic land acreage decline among households, has resulted to social change where some households have realized the insignificant value of land sub-division as posited by the group discussion participant above. This indicates that even though respondents attach various social meaning to land, going forward such meaning loose gist. The findings on households intention to sub-divide land for their sons in future reflected the results from respondents in which 364 (96%) respondents reported that they intend to sub-divide land for their children while 15 (4%) respondents are not planning to sub-divide land for their children.

Based on the data on respondents’ intention to sub-divide land for children in future, it is evident that land sub-division and inheritance as provided in the culture of people in the study area will continue despite tremendous reduction of land sizes. Households cling to the cultural practice of land sub-division and inheritance to ensure survival and living space as well as foster continuity of generation among other significance of land sub-division. Thus, households in the study area however small the parcels of land are, land sub-division for their children in future is obligatory.

5.8 Social Implications of Land Sub-division in the Study Area

After understanding the social meaning that households in the study area derive from land and how it influences land sub-division, the study sought to investigate the social implications of land sub-division to the households in the study area. From the focus

group discussions held, the study established that land sub-division has various social implications to the households. To begin with, poverty emerged as a social effect for intensified land sub-division in the study area. Participants in focus group discussions argued that relative deprivation experienced by households in the study area stems from reduced farm sizes that have in turn resulted to decline in food production making households to allocate more funds in food purchase. The amount that would be used for socio-economic development projects in the family is spent in putting food on the table. This has greatly affected the social and economic wellbeing of households in the study area. During a focus group discussion, a participant said that:

“Land sub-division here in Nyamira has resulted to poverty among households. Households spend a lot of money to buy food in a year. Were it not for hunger, households would use the resources to undertake development activities that will see socio-economic improvement of households. Land sub-division is to blame for high poverty levels currently experienced in this area” (Male, 56 years).

This is a clear indication that land sub-division has contributed to poverty among households since the funds that would turn around the progress of households are diverted to purchase food.

In addition, during focus group discussions, it was reported that land sub-division has contributed to migration out of the study area. The study established that reduced land sizes coupled with reduced farm production have made household members to move to other areas perceived as resource abundance to enhance survival. The study revealed that household members in the study area have moved to urban areas in search for jobs and to areas like Narok, Kuria and North Rift to undertake food production. Some households have permanently settled in the agricultural rich areas above. During a focus group discussion, a participant reported that, “reduced land

sizes occasioned by land sub-division have led to migration out of the study area. Some households have moved to agricultural potential areas either temporary or permanently to produce food or household members have moved to towns in search of jobs to provide for their families” (Woman, forty six years). This statement confirms that land sub-division has driven households or households’ members out of the study area to eke out a living to support household members.

The focus group discussions also revealed that land related conflicts have emerged from land sub-division. The study established that competition for land as a resource has resulted into land related conflicts some of which have resulted to death and severe injuries. Conflicts on land boundaries, land ownership and destruction of neighbours’ crops by livestock etc., have created tension among households in the study area. That reduced land sizes have pushed households close to each escalating disagreements and boundary conflicts. That some of such conflicts resulted in death and severe injuries. This finding is in line with Nandiema (2018) who documented that competition for land as a living space resulted into death.

The above findings on the social implications of land sub-division in the study area from the focus group discussions was a true reflection of findings from respondents as provided in table 5.2.

Table 5.2: Social Implications of Land Sub-division in the Study Area

Social Implications of Land Sub-division	Frequency	Percentage
Land Related Conflicts	52	14
Poverty	242	64
Migration	78	20
Others	7	2
Total	379	100

Source: Field Data, 2019

According to results from respondents in table 5.2, 52 (14%) of respondents argued that land sub-division has led to land related conflicts, 242 (64%) said it has led to poverty among household, 78 (20%) land sub-division has resulted into migration while 7 (2%) said that land sub-division in the study has led to “other” social implications in the study area. When we compare data from focus group discussions and data from respondents, we realize that the data agrees on the social implications of land sub-division in the study area. Poverty, migration and land related conflicts as social implications of land in the study area featured in both. However, if we rank data from respondents, it is evident that poverty is the outstanding social implication of land sub-division in the study area, followed by migration and land related conflicts in that order. The study can conclude that poverty is the major social implication of land sub-division in Nyamira North Sub County.

In brief, this section focused on the social meanings that households derive from land and how such social meanings influence land sub-division in the study area. Based on the study findings, households in the study area acquired their land through inheritance courtesy of the cultural practice of land sub-division. Although few households have purchased theirs, still they have a portion of their ancestral land. In addition, the study established that respondents derive various social meanings from land. The study established that households in the study area attach various social meanings to land among them living space, continuation of generation, collective identity and wellbeing, fulfillment of social norms and source of prestige. However, living space emerged as the most profound social meaning that households in the study area attach to land.

The study revealed that land sub-division is a practice that has resulted into reduced land sizes in Nyamira North Sub County. The study established that it is a common practice for households to sub-divide land for their grown-up children since this has happened since traditional times. The study also established those social meanings of land has minimal influence on land sub-division but instead the main factors influencing the practice is need for independence and living, poverty and lack of government policy on land sub-division.

The findings of this study have also shown that the social norms of the people in Nyamira North Sub County have ruled out gender equality in land inheritance in households. This is because social norms grant male child powers to inherit land from parents while girls are left out. The daughters are expected to get married hence they have no right to land inheritance. The social norms do not take into account the unmarried women because in absence of land, life will be impossible taking into consideration the significance of land to the households in the study area. Unmarried women according to the study findings are expected to buy their own land or make arrangements for accommodation especially by renting houses. The study also established that household head is culturally mandated to decision making on land sub-division. However, in the absence of household head, due to death or other reasons, women households heads can make the decisions but implementation of such decisions is done by male. When sub-dividing land for children, the study established that a number of factors influence that process. In addition, the study established that marital status of sons, economic status of sons and nature of household head influence land sub-division and inheritance decisions. The study has established that the major social implications of land sub-division in the study area are poverty among

households, land related conflicts and migration but poverty emerged as the major social implication of land sub-division.

CHAPTER SIX: LAND SUB-DIVISION AND FOOD SURVIVAL STRATEGIES AMONG HOUSEHOLDS

6.1 Overview

Nyamira North Sub County is historically known as food secure but is nowadays struggling with food insecurity. This has been attributed by reduction of land sizes resulting from unprecedented land sub-division and inheritance (Mbula, 2017). The diminishing land sizes has contributed to dwindling food production which has in turn placed families on food insecurity spectrum (Molen, 2017). Since food is a basic necessity, this section seeks to investigate the food survival strategies households in the study area are adopting to circumvent food insecurity.

This section interrogates how residents of the study area conceptualize food insecurity, the traditional households food security strategies, diminishing land sizes and current food production, ways in which reduced land sizes has contributed to reduced food production, current food survival strategies among households, factors influencing household adoption of food survival strategies and challenges households face in the process of ensuring their food security in Nyamira North Sub County.

6.2 Conceptualization of Food Security by the Respondents

The study sought to investigate what respondents in this study refer to food security because definition of the concept may be relative. Respondents were required in the questionnaire to document this whereas participants in focus group discussion were also asked to contextualize the concept of food security. The findings were interesting. Of the 379 participants in this study, 329 (87%) of respondents argued that food security entails a situation where a household has enough maize for

consumption throughout the year whereas 19 (13%) argued that food security is a state where any food is available for consumption.

Although some households grow sweet potatoes, bananas, sorghum and so on, to some households, these are not included in the contextual definition of food security. During focus group discussions, a participant noted that among the Abagusii community, maize meal known as *ugali* is measure of food security. That if a household has access to enough maize for preparing *ugali*, then such household is said to be food secure. Such conceptualization of food security is contextual in a sense that staple food of a community is given more weight in the definition of food security. In this case, the Nyamira North Sub County residents use maize in the definition of food security and this concurs with the “food preference part” in the United Nations’ Food and Agricultural Organization (FAO) definition of food security. According to FAO food security is defined as “a situation that exists when all people, at all times, have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”(FAO, 2006).

Thus, to residents of Nyamira North Sub County, food security is synonymous to availability of maize for preparing maize meal commonly known as *ugali*. The other foods and components including quality is not much taken into consideration. This is because the nutritional aspect of food security as defined by FAO (2006) is missing as this part is not taken into account when the respondents in this study define food security in terms of maize availability.

6.3 Traditional Households Food Security Strategies Among the Respondents

To have a basis for interrogating the contemporary food security strategies adopted by households in the study area to circumvent hunger resulting from reduced land sizes and food production, the study sought to investigate the household food security strategies that households have traditionally utilized to overcome food insecurity. Responses were as displayed on table 6.1.

Table 6.1: Traditional Households Food Security Strategies

Strategy	Frequency	Percentage
Farming	354	93
Social networks	8	2
Purchase	17	5
Total	379	100

Source: Field Data, 2019

Households in Nyamira North Sub County have traditionally engaged in a variety of ways to ensure their food security. As provided in table 6.1, 354 (93%) of respondents reported that in the past households in the study area relied on farming for food, 8 (2%) relied on social networks while 17 (5%) relied on market (purchase) for food. From the findings it is clear that households acquired food from their farms (93%). That farming was the common household food survival strategy households utilized to ensure their food security.

When asked how farming was done, respondents reported that households grew their own food because there was land was vast and fertile to produce enough food that could sustain a household even for a period of two years. During this period, the study established, no sophisticated farming technologies were applied because soils were

fertile and crop yields were extremely high. With regard to farming, a focus discussion participant had this to say:

“Before nineteen eighty households in entire Gusii region grew their own food. Land was big and fertile. Households had in possession of more than twenty acres of land. There was extremely good harvest. Ploughing and planting was done by use of oxen but preparation of land for sowing millet and planting sweet potatoes was done by hands by women” (Male, 69 years).

This is evident that traditionally households in the study area relied on farming for food. Households produced enough food because soils were fertile and land big (exceeding twenty acres). In addition, the vastness of land couldn't see households use human labour in ploughing instead they used oxen because of their ability to plough acres of land within short period. The study established that the vastness of land necessitated women to form groups that helped them sow millet, weed and harvest. The group would rotationally work member's farms because a single person couldn't made it in undertaking the farm operations owing to vastness of the land. The work of men during this period was to clear bushes, ploughing land using oxen and digging furrows for maize and planting purposes. This information was crosschecked by focus group discussions where a participants lamented that:

“In the past, land was enormous. An individual could not plough alone, plant, weed and harvest. Women formed groups to assist members with planting, weeding and harvesting. Men's work during this time was clearing bushes, ploughing and making furrows using oxen for women to plant maize and bean planting”, (Female, 65 Years).

This a clear demonstration that the role of women groups in traditional Abagusii community has been emphasized. Crop production was a communal affair.

When asked what type of crops they grew, the respondents reported that from the traditional Abagusii community, households have planted maize (the major food

crop), millet, sorghum, sweet potatoes, beans, bananas and vegetables. The households have also been engaged in dairy farming for meat, blood and milk. This information was confirmed during focus group discussion where participants reported that the above were grown in the past by household in the study area.

In a focus group discussion, participants reported that even though land sub-division existed in the past in the study area and Abagusii community in general, there was minimal impact on land sizes because of the vastness of land possessed by families. And in some cases, focus group discussions revealed, households had separate parcels of land in mountainous areas and flat cotton soil areas known as “*Borabu*”. Thus, sons would be given or allocated either land hence there would be no much impact on land sizes hence household food production was not affected.

Further, the study established that social networks (2% responses) traditionally played a pivotal role in ensuring household food security. Family member and friends came to the rescue of households with food constraints. This was attributed to strongly knit social fabric and intimate relations within social circles. Wherever hunger struck a household, social networks could provide food assistance to sustain a household until the next harvest. The household would or would not refund the food stuff given through social networks. This finding was confirmed during focus group discussions where participants pointed out the place of family, village and friends in supporting hunger struck households. It was argued that households would refund the food during harvest season or not depending on the agreement with provider in the social networks. The food insecurity could result from failure of a household to plant crops due to various reasons including sickness, because of natural calamities or because of

pests and diseases that destroy crops leading to poor harvest. The act of getting food from social circles is known as “*ogosuma*”.

Furthermore, purchase of food from markets (8% response) was another reported food survival strategy traditionally used by households in Nyamira North Sub County. The study established that purchase of food items from market occurred during acute shortage of food beyond help of social networks. Although, rarely used, households could buy some food items from market by exchanging with other commodities or livestock. The study established that the common food items sourced from the market were gheese (“*egechieto*”) and yeast (“*ememera*”). The foods were obtained in markets such as Sondu and Nyambambo in which there were traders from the neighboring Luo community. The food items were exchanged with maize, bananas or sweet potatoes. This was well articulated by a focus group discussion participant who said that:

“In the past, households from this area did not buy food from markets. Instead, they gave maize, bananas and sweet potatoes to members of Luo community in Sondu and Nyambambo markets in exchange with gheese and yeast. gheese was used as an accompaniment of ugali meal in families that didn’t have milk and yeast was used in brewing local brew” (Male, 76years).

This is a clear indication that traditionally households in the study area produced food with surplus exchanged in markets for other commodities. This implies that traditionally, households were food secure a phenomenon attributed to vast land in possession by households.

In nutshell, traditionally households in Nyamira North Sub County sourced their food from farms but in rare cases they would turn to social networks and market. The household instead gave out maize, sweet potatoes, and bananas to the members of

neighbouring Luo community in exchange for gheese and yeast. Thus, the major strategy households utilized to ensure their food security was farming.

6.4 Land Sub-division and Household Food Production in the Study Area

Since land sub-division has resulted to reduced land sizes held by household to less than an acre as established in section 4.2.6, the study investigated how this has influenced current household food production. Of the 379 respondents, 370 (98%) reported that diminishing land sizes resulting from continuous land sub-division have negatively influenced food production exposing households to dire food insecurity while 9 (2%) were of the opinion that reduced land sizes has had no impact on food production. These findings clearly show that land sub division has led to reduced land sizes that have in turn had a negative impact on food production the study area. According to respondents, food production has drastically reduced since early 1990s. During focus group discussion, participant unanimously agreed that diminishing land acreage in Nyamira North Sub County has resulted in low food production, that is from an average of from more 20 bags of maize in 1990s to less than two bags of maize at the moment. This study attributed changes in crop production to two reasons. First the current land acreage (reduced land size to less than an acre) has led to reduced food production because households have limited land for food production. Second, reduction in soil fertility due to continuous cultivation (planting twice a year). This finding was confirmed during key informant interviews where an agricultural officer privileged to serve in the study area in 1990s before transferred to another region and reposted again in the area. He had this to say:

“This region has been a food basket in the former Nyanza province. In 1990s, households in this area produced a lot of food! Actually, almost all households produced about 25 bags of maize, most preferent food here. But now as we

speaking, households barely produce two bags per harvest. From my official statistics, general food production in this Sub-County has reduced by 70% from 1980s and now 2019. In the coming times, it will be tough if not disaster” (Agricultural Extension Officer, 53 years).

This is evident that food produced by households has reduced by 70 percent since 1980s and 2019 leading to households’ food insecurity. This finding agrees with Mbula (2017) and Catholic Church’s Jesuit Hakimani Centre (2017) that households in the area of study are currently characterized by hunger resulting from uncontrolled land sub-division and inheritance.

6.5 Ways in Which Land Sub-division has Affected Household Food Production in the Study Area

The study sought to investigate the ways in which land sub-division has contributed to reduced food production in the study area. Findings are shown in table 6.2.

Table 6.2: Ways in Which Land Sub-division has Affected Household Food Production in the Study Area

Ways in Which Reduced Land sizes have Contributed to Reduced Food Production	Frequency	Percentage
Two Planting seasons	227	60
Limited crop variety	98	26
Non application of organic manure	31	8
Total	379	100

Source: Field Data, 2019

From table 6.2, 250 (66%) two planting seasons, 98 (26%) limited crop variety and 31 (8%) pointed out that non-application of organic manure are the ways in which reduced land sizes have contributed to reduced food production in the study area. Based on the findings, two crop planting seasons (60%) majorly contribute to reduced food production.

The two crop planting seasons (66%) has reduced farm productivity in the Sub County. The study established that, traditionally, the households in the study area had one planting season, that is between February and July. However, this was during the time when land was adequate but with the current land situation, households are compelled by circumstances to plant twice a year to at least produce more for household consumption. The two planting seasons has led to exhaustion of soil fertility which with time has negatively affected food production. During key informant interviews, an agricultural extension officer argued that “the two planting seasons has negatively affected food production in Nyamira North Sub County since the soil is not given time to regenerate”. These sentiments were not divergent from findings of focus group discussions that established that, with emergence of two planting seasons, farmers are not reaping much because of reduced soil fertility due to continuous use. During focus group discussions a participant said that:

“Planting twice a year has really messed us. Soils never get time to regenerate hence decline in fertility. The quantity of crop produced has reduced compared to when planting season was one. This has resulted in hunger in households”, (Male, 62 years).

From this narration, it is evident that reduced land sizes due to uncontrolled land sub division and inheritance has resulted into households having two planting seasons a year to boost their food security levels. This is likely to reduce food production and heighten hunger due to overutilization of the soil.

In addition, the study established that the quality of seeds grown is poor. During a focus group discussions and key informant interviews, it was reported that most households in the study area don't plant hybrid maize seeds instead maize grains for previous season is used as seeds. A focus group participant said that:

“Most households plant early maturing varieties known as mogagori and ekebure. Households plant maize seeds from previous harvest” (Female, 53 years).

This indicates why the area is experiencing reduced food productivity. This is because for production to be high, farmers need to plant hybrid seeds that fit their ecological zone this use of poor-quality seeds will only subject households to constant hunger. This information was also confirmed by an agricultural expert that most households have lost faith in high quality inputs sold in agricultural stores partly because of rogue traders who package ordinary maize seeds and sell to unsuspecting farmers hence some have developed a cold foot for the seeds sold. In addition, the study established that the cost of hybrid seeds is high for some households.

Furthermore, the study established that limited crop variety (28%) is associated with reduced food production. The study found out that in the past when land acreage in the study area was big, households would plant a variety of crops that could supplement available food (maize) consumption. Households would plant sweet potatoes, bananas, sorghum and millet. This greatly boosted household food security. But with the current land situation, households are unable to plant variety of crops complicating food security situation. During focus group discussions, a participant had this to say:

“We are no longer able to plant variety of crops. We only plant maize and vegetables for consumption. It is not like in the past where we planted sweet potatoes, cassava, sorghum, millet and plenty of bananas that supplemented ugali because reduced land sizes and even soil fertility” (Male, 72 years).

This is a clear indication that reduced land sizes in the study area has limited the types of crops grown in farms. That currently, households are majorly growing maize and vegetables while foods grown in the past including potatoes, sorghum etc are no

longer in the list of crops grown in the study area. With this state of affairs, it is likely that hunger will be the norm in the households.

The study also established that non-application of organic manure in farming (8%) has contributed to reduced farm productivity in the study area. During focus group discussions, participants were in agreement that in the past when land sizes were big, households used manure in farm production processes. They argued that households would site a cowshed rotationally in various parts of the farm. This ensured distribution of manure in the farm that led to high yields. The participants however faulted the excessive use of artificial fertilizer as the genesis of farm production woes in the area. They have negative perceptions towards excessive use of fertilizer that they say has led to soil acidity and reduced farm production. A participant had this to say:

“The origin of reduced farm productivity is when households began using artificial fertilizers in production processes” (Male, 74 years).

This is a demonstration that reduced land productivity is also attributed to the use of inorganic fertilizers. This is due to the likelihood of soil acidity from continuous use of fertilizers and this may have an influence on household food security.

In brief, reduced land sizes in the study area has seen households resort to two planting seasons in a year to boost household food security. However, with time, the two planting seasons (66%) has led to reduced food production because soils are unable to regenerate. Apart from planting crops in two seasons a year, the study also established that limited crop variety (26%) and non-application of organic manure are other ways, although with little magnitude, that have affected household food production in the study area.

6.6 Current Household Food Survival Strategies Among the Households

With reduced food production in the study area as presented in section 6.4, households must look for alternatives to ensure their food security. This is according to the Population Pressure theory by Mark Cohen (1977) which argues that when population increase and overstretch available land, people become innovative to enhance their survival. Thus, this study was majorly interested in investigating the food survival strategies currently adopted by households to ensure their food security in the face of hunger instigated by reduced land sizes and reduced food production. Responses are shown on table 6.3:

Table 6.3: Current Food Survival Strategies Among the Households

Strategy	Frequency	Percentage
Purchasing from market	116	31
Farming	28	7
Farming and purchasing from market	216	57
Renting land for farming	19	5
Total	379	100

Source: Field Data, 2019

As shown in table 6.3, 116 (31%) of respondents reported that they exclusively buy food from the market, 28 (7%) obtain food exclusively from farming, 216 (57%) acquire food both from farms and market while 19 (5%) have resorted to farming on leased land to foster household food security. Based on the findings, it is evident that households in Nyamira North Sub County are utilizing various food survival strategies to circumvent food insecurity. However, the outstanding food survival strategy is farming and purchase of food from market (57%). Households plant crops in their limited land that they consume for few months after harvest before resorting to markets for food. The study established that in most households, maize which is the

common food crop in the area, lasts for at most three months after harvest before the commodity is sought from market. That households are food secure in the months of July, August and September after first maize harvest season and from the month of December, January and February after the second harvest season before turning to the market for food. However, vegetable for accompanying *ugali* are available at the kitchen gardens of almost all households. During a focus group discussion, participants alluded that households in the study area nowadays source food from farms and market. That households are food secure three months after harvest season before turning to market for food. This was put very well by one of the focus group discussion participants:

“Nowadays households undertake farming and purchase food from markets once the harvested is over probably three months after harvest season. However, vegetables for accompanying the ugali are available in kitchen gardens in almost all households. They only buy maize and other food stuffs including rice”(Female, 43 years).

This is clear demonstration that households in the study area are relying on their farms and markets for food. Reduced farm production resulting from reduced land sizes due to uncontrolled land sub division is behind the changes in household food security. The finding on obtaining food from farms and market when food from sourced from the farm is over concurs with Mbula (2018) who reported that shortage of land for agriculture in Nyamira County has led to reduced food production hence households are forced to buy food from neighboring counties.

The study established that households (31%) in Nyamira North Sub County also purchase food exclusively from the market to beat food insecurity. The study attributed this scenario to two factors. First, land owned by households has become so thin for households to undertake meaningful farming activities. That some households

have land sufficient for only erecting houses for household members. During focus group discussion, a respondent indicated that some households in the study area are in possession of half an acre of land sufficient only for building houses. That the households obtain food from the market except vegetables that they grow in their small kitchen gardens. The participant categorically said that through his family boda-boda business and a shop his household is in a position to purchase food from the market throughout the year. This finding concurs with a study by Sakyi (2012) which revealed that majority of households in the Limpopo Province, South Africa evade food insecurity through purchase of food from the market rather than relying on their farms.

Second, some households have resorted exclusively into tea and coffee farming. This implies that the households don't grow food crops. They only acquire food from markets using proceeds from tea and coffee farming. This phenomenon of growing only cash crops was attributed to reduced soil fertility to support crop farming and the reduced quantities of food crops from farms hence a decision to focus only on cash crops that mostly rely on rains and less on soil fertility. During a key informant interview an agricultural expert had this to say:

“Households in this Sub County have realized that food crop farming especially maize, sweet potatoes, beans, bananas etc is not doing well because of reduced soil fertility due to overutilization of the soil. They have now resorted to tea and coffee farming, crops seen to have high return value. Such households have nowhere to grow food crops because they are only preoccupied with cash crop farming although in small scale because of reduced farms sizes. They use the proceeds from the cash crop farming to buy food from markets. Tea and coffee farming is doing well owing to conducive climatic conditions in the area” (Agricultural expert, 46 years).

This narration shows the adaptive mechanisms households in the study area have put in place to get value of their land. Since food crops production is no longer reliable, they have resorted to cash crop farming to obtain funds to purchase food.

Although land acreage has diminished still some households (7%) exclusively obtain food from their farms. From the analyzed data, the study established that households that exclusively engaged on farming for food had more than four acres of land and less than three children. This information was confirmed during focus group discussions in which participants agreed that some households still able to feed from their farms because they possess relatively adequate land to produce food.

Apart from acquiring food from their farms, 5% of respondents reported that they have leased land for purposes of growing food to circumvent hunger in their households. The study established that leasing of land is mostly done outside the Gusii region. This concurs with Mbula (2018) who argues that reduced land sizes have forced households in the study area and entire Gusii region to look for land in other counties for purposes of food production. The finding is also in line with Muraoka, Jin and Jayne (2014) who established that land rental is the dominant mechanism that poor rural farmers use to access additional land for cultivation. This was confirmed during focus group discussion where participants reported that nowadays households in the study area are undertaking farming on leased land especially in Narok, Trans Mara, Kuria and in Kitale. During focus interview discussions, a participant had this to say:

“Many households have gone to Narok, Transmara, Kuria and Kitale to undertake farming to produce food. They lease land for purposes of growing maize that they bring for household consumption” (Female, 48 yeas).

This is evident that need for household food security and reduced land sizes have forced some households to rent land to grow food. This strategy is likely to increase household food security and income incase surplus is sold, thus uplifting living standards in the households.

This finding is in line with a study undertaken by Kazal, Villinueva, Hossain and Das (2010) revealed that households in Haor area in Bangladesh utilized leased land to grow crops that greatly fostered food security.

In brief, based on the study findings, it is evident that households in Nyamira North Sub County are utilizing various strategies to ensure their food security. However, the common food survival strategy employed by households is farming and purchase of food from market (57%). The study revealed that households resort to the market few months after harvest season. However, some households are exclusively undertaking farming or purchasing food from markets while some have resorted to leasing land for purposes of food production for households to meet household's food requirements.

6.7 Factors Influencing Household Adoption of Food Survival Strategies

The study was also interested in investigating the factors influencing the choice and adoption of a household food survival strategies. Responses are shown in table 6.4.

Table 6.4: Factors Influencing Household Adoption of Food Survival Strategies

Factor	Frequency	Percentage
Level of education of household head	17	4
Financial strength of a household	21	6
Land size	216	57
Household size	125	33
Total	379	100

Source: Field Data, 2019

As depicted in table 6.4, 17 (4%) of respondents reported that level of education of household head influenced the type(s) of food survival strategies a household adopts, 21 (6%) said financial strength of household, 216 (57%) said land size and 125 (33%) reported that household size influences the type of food survival strategies adopted by households in Nyamira North Sub County.

Based on above findings, land size (57%) is the major factor influencing food survival strategies pursued by households in the study area. The study attributed this to two reasons. First, households with big land acreage can grow their own food. This is the reason why households 7% of respondents in section 6.6 above exclusively rely on farming to ensure their food security. This is because land at their disposal is enough to produce sufficient food for household's consumption.

Conversely, households with small land acreage may be forced to adopt other food survival strategies discussed in section 6.6. Thus, the size of land is a critical factor influencing household food survival strategies adopted in the study area. This was confirmed during focus group discussion in which participants agreed that households with more than five acres of land are usually more food secure all year round. This finding agrees with Awinda (2018) who established that size and land ownership influence household food access and impacts negatively on farmers' participation in food production activities. It also concurs with Abu and Soom (2016) who observed that inadequate land availability was found to influence household food security among rural and urban farming households of Benue State, Nigeria.

The size of household (33%) was also reported to influence the food survival strategy pursued by households in the study area. This is because the bigger the size of a household, the more elaborate food survival strategy a household will adopt since big

households may consume relatively more food compared to small households. During focus group discussions, some participants argued that households' food access strategies largely rely on their sizes where large households pursue more than one strategy to ensure food security. The finding concurs with a study by Farzana et al (2017) established that households with large family sizes are more likely to adopt more proactive food access strategies than households with small family sizes.

The study also revealed that a household food security strategy depends on the financial capability of household heads (6% response). It emerged from the focus group discussions that households with strong financial base are capable of farming, purchase of food from the market and leasing land for food production. Thus, households with strong financial muscle can pursue different food survival strategies to circumvent food insecurity than poor households. During a group discussion, a participant lamented that:

“Money is everything. Households with money are able to purchase maize, farm or lease or buy land outside Gusii region to grow food” (Female, 53 years).

This is clear illustration that household financial capability has an influence on the food security strategies a household can pursue. Thus, poor and rich households have differential capacity to ensure household food security.

Level of education of household head (5 %) too was found to influence the type of food survival strategies a household in Nyamira North Sub County pursue. With high education level of a household head, it is possible that the household can access critical information to guide food survival strategy decisions or the household head may have finances through employment to influence the type of food survival strategy to be adopted. This finding agrees with Awinda (2018) who established that education

level of a household head is correlated with food security since an educated household is able to use production information efficiently and pursue other viable food security options. In addition, educated household head is at a position to use of improved technology in agriculture and, hence, farm productivity.

In conclusion, there exists a number of factors that determine food security strategy a household undertakes. From the study findings, the size of land owned by household greatly influences food survival strategy adopted by households to circumvent hunger occasioned by reduced land acreage in the study area.

6.8 Challenges Households Face in the Process of Ensuring Their Food Security

Since human undertaking in most cases face challenges, this study sought to investigate the challenges in household in Nyamira North Sub County face in the quest to be food secure as discussed in section 6.6. Responses are as shown in table 6.5.

Table 6.5: Challenges Households Face in the Process of Ensuring Household Food Security

Challenge	Frequency	Percentage
High cost of food items	148	39
Climate change	42	11
Fraud associated with land acquisition	33	09
Reduced land sizes	102	27
Lack of agricultural extensional services	46	12
Others	8	2
Total	379	100

Source: Field Data, 2019

Adoption of household food survival strategies in the study area does not come without hiccups. As depicted in table 6.5, 148 (39%) of respondents cited high cost of

food items as a challenge, 42 (11%) cited climate change, 33 (09%) cited Fraud associated with land acquisition, 102 (27%) cited reduced land sizes, 46 (12%) cited lack of agricultural extensional services whereas 8 (2%) cited “other” challenges facing households face in attempt to ensure their food security or pursuing their food survival strategies. Based on the findings, most respondents (39%) face high cost of food stuff as an obstacle in the quest to be food secure.

Respondents mainly expressed concern over the prices of food commodities especially maize. They argued that traders have exploited them through selling of maize grains at exorbitant prices. The traders who source maize from North Rift and Narok regions are reported to sale the product at a price that make households heads scratch their heads when purchasing. During a focus group discussion, participants cited high prices of maize as an impediment to household food security in the study. It was noted that sometimes a ninety-kilogramme bag of maize goes at above four thousand shillings. The participants noted that maize prices are beyond reach of some households because of poverty. Low purchasing power of households was attributed lack of income generating activities as illustrated in figure 4.2.4 where 45% of respondents didn't engage in any income generating activities apart from agriculture. The study attributed high maize prices to transport cost from the source to the study area.

Reduced land sizes (27%) also emerged as challenge facing households in their quest for food security. The study established that diminishing land acreage is hitting hard farm productivity, complicating food security situation at the households in Nyamira North Sub County. With reduced farm sizes and non-application of modern farming technologies, farm productivity has reduced and consequently led to food insecurity in

households. The study attributed the reduction of food production to land sub-division and inheritance as presented and discussed in section 4.2.6 in this study. This is worrying since most households in the area of study depend on their farms for food. Thus, with reduced land sizes to less than an acre and non-application of modern advanced, farmers are constrained from producing enough for household consumption leading to food insecurity as documented by Mbula (2017), Wickramaarachchi and Weerahewa (2016), Mbula (2017), Kiplimo and Ng'eno (2016), and Obonyoa, Otieno, and Ang`awa, (2016).

Lack of agricultural extension services (12%) emerged as among the challenges that households are struggling with in their attempts to be food secure. The study has shown that households hardly see agricultural extension officers in their farms for purposes of disseminating current and best agricultural practices despite the drastic reduction of land. Some households have never seen an agricultural officer in their farms in their farming career as noted by a participant in focus group discussion:

“I have never seen an agricultural officer in my farm. I don't have information about modern farming methods”(Male, 56 years).

This narration demonstrates how respondents have inadequate information about farming technologies that have a far-reaching ramification on household food security. This is because, agricultural research is continuous and new innovations and inventions are made each day to boost agricultural productivity. The technologies are best disseminated to farmers through agricultural officers. Thus, lack of interaction between households and agricultural officers contributes to practice of outdated farming methods leading to reduced food production and hunger. This was confirmed during focus group discussions where participants unanimously agreed that lack of agricultural education has seen many farms avoid planting hybrid seeds to planting

recycled early maturing seeds namely *moragori* and *ekebure*. This has seriously affected farm productivity in Nyamira North Sub County.

The other challenge confronting households in their food security attempts is climate change (11%). Respondents reported that prolonged drought especially between December and March greatly affects food production because households only rely on rain-fed agriculture delays in planting and consequently food insecurity. This was confirmed during focus group discussions where some participants were of the opinion that reliance on rain fed agriculture affects planting cycle.

Furthermore, the study established that fraud associated with land acquisition (9 %) has affected attempts by households to achieve food security. Scarce land has led to increased land acquisition fraud due to high demand for land the study area and in other areas perceived to have “adequate land”. The study established that households are being swindled by criminals purporting to sell or lease them land. During a focus group discussion, a participant shared his experience with regard to land fraud:

“Have leased land in Narok twice but conned. The first round I paid fifteen thousand shillings, going to back to the leased land I got another person has planted crops. I didn’t get my money back. The second round I leased land in Kuria by paying eleven thousand but I realized other four people had leased the same land. I totally stopped leasing land. Let me die of hunger” (Male 47 years).

This indicates the frustrations that households are going through in their food security quest. Indeed, when demand of something is high, the probability that fraud is associated with access to such thing is high. Similarly, heightened demand for land has resulted to conmanship where people can lease land to more than one person. This can be a hindrance to household food security since households will shy off from releasing land for purposes of food production that contributing to food insecurity.

The study established that fraud is not only associated with leasing of land but also in purchase of land. During a focus group discussion, a participant narrated how he was conned Kenya shillings six hundred thousand in land buying deal in Narok County. He had requested his friend residing in the County to assist him buy a piece of land for purposes of farming and allocation to his sons in future since he has half an acre at home. After two weeks, the friend called to inform the buyer that the land is available. The buyer armed with all his savings, headed to Narok where they met the purported seller. After negotiation, they settled for six hundred thousand for two acres of land which the buyer paid in cash fearing that someone else can take the piece of land. When the buyer went to fence the land, the genuine owner emerged claiming ownership of land. After a tussle in the local administration offices, it emerged that the buyer had been conned and the person who sold land was nowhere to be seen.

It was so painful that the participant will never dream of buying land. He asserted that he sold all he had including cows and goats and went further to borrow money from money lending groups to secure the land. This case shows how households in resource constrained are asstrive to make end meet. Thus, fraud has proved a blow to some household food security in the study area. The study also established that “other” challenges (2%) are facing households in the study area in their attempts to ensure their food security.

In brief, this section focused on the food survival strategies that households in the study area have adopted to overcome food scarcity stemming from uncontrolled land sub-division and successive generational inheritance. The study has established that the definition of food security is contextual; that staple of food of a community is given more weight in the definition of food security. In this case, the residents of

Nyamira North Sub County use maize as the denominator in defining food security (87% response) where availability of the commodity (maize) in a household is regarded as food security while its unavailability is termed as food insecurity.

In addition, the study has established that traditionally in the study area, households produced food from their farms (93%) and in some situation traded produce from their farms notably maize, bananas and sweet potatoes in exchange of food commodities, yeast and gheese, from the market (5%). The households also used social (2%) networks to ensure their food security is some tough situations including during sickness, natural calamities etc.

Furthermore, the study revealed that the cultural practice of land sub-division and generational inheritance has negatively affected food production in the study area (98% response). That available land for farming has shrunk leading to seventy percent reduction of food produced in farms in the last two decades. The study established that reduced land acreage has led to reduced food production in that households have resorted to planting twice a year (66% response), an act that has led to reduced soil fertility since the soil is not given time to regenerate. Additionally, limited variety of crops grown (26%) and non-application of organic manure (8%) due to reduced land sizes has contributed to the general reduction of food production in the study area.

After reduction of food produced and upsurge of food insecurity the households have no option but to invent new ways to ensure their food security. This is in line with the Population Pressure theory that stipulates that as resources are strained by increase in population density, people or rather households have to invent new survival strategies. As such, the residents of Nyamira North Sub County have devised a number of food survival strategies in the face of reduced food production.

The outstanding food survival strategy was farming and purchasing of food in market (57%). That once food produced in farms is over, households resort to the market for food, indicating that it is difficult for a community to do away with its traditional way of doing things, in this farming. However, due to various prevailing factors, some households have adopted exclusive farming (7%), exclusive purchase of food from market (31%) while other have resorted to leasing land outside (5%) the study area for purposes of food production.

The study also established that the food survival strategies adopted by households in the study area are influenced by various prevailing factors. The study revealed that the size of land (57%) owned by a household majorly influence the food survival strategy a household pursue. In this way, households with bigger land (for example above five acres) were at a position to grow food capable of sustaining the households the whole year.

On the other hand, households with small land parcels can grow food and supplement it through purchase of additional food from the market or they can simply erect houses for household members and exclusively access food from markets because there is no remaining land to grow crops. Additionally, household size (33%), financial position of a household (6%) and educational level of household head (4%) were found to influence the type of food survival strategy a household in the study area pursue but they are of small magnitude.

The study also established that in the course of actualizing the above food survival strategies, households encounter challenges. The most notable challenge from the data analyzed is the high cost of food items (39%) making it difficult for some households to realize their food security goal. However, reduced land sizes (27%), lack of

agricultural extensional services (12%), climate change (11%) and fraud associated with land acquisition (9%) are among other challenges household in Nyamira North Sub County face in their food security journey.

CHAPTER SEVEN: HOUSEHOLD FOOD SURVIVAL STRATEGIES AND SOCIAL LIFE IN HOUSEHOLDS

7.1 Overview

From section 6.6, households in Nyamira North Sub County have adopted a number of strategies including exclusive purchase of food from the market, exclusive farming, access of food from both farms and market as well as renting land for purposes of food production to circumvent hunger resulting from diminishing land sizes and subsequent dwindling of food production. Since this is a relatively deviation from the main traditional household food security strategy, farming (as per data in sub section 6.6), the mind-boggling question was, how have the newly adopted household food survival strategies influenced social life in households in Nyamira North Sub County?

7.2 Influence of Household Food Survival Strategies on Social Life in the Study Area

During focus group discussions, participants were asked to document how household food survival strategies have influenced social life in households in the study area. The study established that the food survival strategies adopted by households has influenced morality in the study area. The need to meet food requirements have changed the social behaviour associated with rural setting. The study established that change in household food survival strategies has resulted in moral decay: theft. The study revealed that some hungry residents invade farms at night to steal food so as to feel their stomachs. This social implication emerged in the focus group discussions in which participants shared in details how change in households food survival strategies have resulted to moral decay. During focus group discussions, a forty-five year old

female participant said the following with regard to household food survival strategies and theft of food from farms:

“Food insecurity resulting from reduced land sizes in this area, has led to theft of food items from farms. I am a victim of this, not once or twice but several times. In many occasions, people have stolen green maize, beans and bananas from my farm at night. They literally take almost everything from my farm. I have reported the incidences several times but nothing has been done by area administration to curb this or apprehend perpetrators of the vice. Hunger is mostly driving this people to steal the food stuffs not necessarily for sale but to fill their stomachs” (Female, 45 years).

The above sentiments were shared by a number of focus group participants who indicated that theft of food items have become rampant in the area, a phenomenon orchestrated by hunger stemming from reduced land sizes and food production. This shows that inability of households to access foods sold in markets has necessitated devise of illegitimate approaches -theft of food items- to meet their food requirements. The results concur with Hamelin, Habicht and Beaudry (1999) assertion that the psychological manifestations related to a lack of access to food were leading to a clear feeling of being constrained to go against held norms and values in which stealing was among the illegitimate means that violated norms and values. The results also agree with Kent et al (2014) who established that food insecure juveniles committed misdemeanors.

The study also established that change in women role in household food provision is an emerging social implication of the current household food survival strategies in the study area. This is contrary to the African culture that place the role of households provision in the hands of men (FAO, 2011). This finding shows a significant alteration of functions and structures in society overtime in the sphere of household food provision in that women are said to have assumed the role of household food provision previously played by men. The study attributed this state of affair to the

current state of land sizes (small) and heightened hunger which has necessitated combined efforts from both men and women who opt to work closely towards realization of household food security. This is because it is incredible for men or women alone to actualize household food security considering the hard-economic situations and reduced land sizes for food production hence need for synergy between men and women to put food on the table. During a focus group discussion, a participant noted that:

“Food shortage is a really problem in households in Nyamira North Sub County today. Households are feeling a pinch. This problem has mainly affected women who initially depended on their husbands for food to go out and fend for their families. Women in this area are increasingly engaging in daily wages to supplement food provisions in households. The reduced land sizes and hunger has taught women many lessons.” (Female, 42 years).

The above sentiments illustrate the extent to which hunger has contributed to change in gender roles in household food provision in which nowadays women are engaged in assisting their husbands in providing households with food. The finding concurs with Nyamwanji (2016) and Ishengoma (1998) that women play a big role in household food provision. Thus, in the contemporary society, the traditional view that a man is the sole breadwinner in the family is long gone and hence women have been incorporated in the food provision matrix to ease food insecurity, which results from the reduced land sizes owing to successive land sub-division and inheritance.

Breakdown of families emerged as another social implication of household food survival strategies on the wellbeing of households in the study area. Attempts to ensure household food security has resulted into disintegration of some households. The study established that the disintegration is caused by family conflicts and social distance. To begin with family conflicts, the study revealed that lack of funds to

purchase food in some households has resulted in quarrels that sometimes turn into fights. This common especially among households heads taking alcohol. The focus group discussions reported that once such household heads arrive at home drunk, they demand for food that they never bought since they rarely left money behind to buy food. During a focus group discussion, a participant reported that:

“I am not the only victim of domestic violence resulting from lack of finances to buy food. There are a number of women experiencing the same in my locality. Most men spend the little money they get from manual work in drinking and when they come back in the evening, they expect food. If there is no food, they start beating us. The problem is that food from our one-hectare farm cannot sustain the family until next harvesting season hence somehow, we need to purchase maize once the harvest is over but now, I do not have money to purchase food hence I receive beating when the family sleeps empty stomach. Some of my friends have resorted to employment in tea farms around Sotik estate leaving husbands with children at home. Am also contemplating that” (Female, 43 Years).

In addition, some men and women have left their families for work never to return. Since the task for providing for households is becoming a shared responsibility between men and women, moving out to work in farms, business, or to rent land for purposes of food production forms part of household food survival strategies. While away to fend for their households, some men and women have ended up remarrying increasing social and economic burden in households. This has contributed to the breakdown of some households. During a focus group discussion, a participant noted the following:

“Contemporary households food survival strategies have caused problems to households. Men and women have moved out to do businesses, farm on rented land, purchase land for food production etc but ended up having other families. Some have never comeback or show up occasionally leaving households to suffer. The notorious ones are those working in farms in Transmara and Narok. Personally, I know more than six men and two women from my locality who have deserted their families. If land was producing enough, these men and

women wouldn't have moved away from home hence the household would be intact." (Female, 51 years).

The above sentiments show the extent to which household food survival strategies adopted to circumvent hunger resulting from dwindling land sizes due to successive land sub-divisions have caused problems in households. Staying away from family has resulted into some household heads having other families a phenomenon that complicates situation in the face of social and economic problems orchestrated by land sub division and hunger.

Household food survival strategies have also led to weakening of extended family ties. That nowadays the extended family in the area of study is not effective as it used to be traditionally. This is because some households have moved out of their ancestral land to settle in places far from their original homes. They have moved to Kitale, Trans Mara and Narok, bought land and settled their permanently. The challenge with this according to participants in this study is that social fabrics in families has become weak and the social support a household received from the larger family has declined as family are staying apart to the extent that some hardly visits the households at their original home. This was said by a focus group participant:

"The need for food has forced some households to move to far places where they bought land and settled permanently. This has weakened the family relations because the support a household received from the extended family is not common nowadays. Moreover, families rarely visit each other as a result, social capital which connects family members has reduced together with family unity, cooperation and social support. What to blame in all these is reducing land sizes and hunger" (Male, 62 years).

The above narration is a clear indication on how households social fabric has been affected by families moving out of their original land to fend for themselves. If there

was enough land, the families would have not migrated. Thus, land sub-division in the region has reduced social capital and social solidarity among the affected members.

In a nutshell, the food survival strategies that have been adopted by households to overcome food insecurity stemming from reduced land sizes have had some social implications. The study established that Moral decay, change of gender roles in household food provision, breakdown of families, and weakening of family ties are social implication of new household food survival strategies households have adopted. The findings from focus group discussions echoed the results from respondents where 49 (13%) reported that the household food survival strategies adopted by households have contributed to moral decay, 155 (41%) argued that the strategies have led to change of gender roles in household food provision, 91 (24%) said the strategies have led to break down of families, 76 (20%) asserted that the household food survival strategies have contributed to weakened extended family ties and 8(2%) were of the opinion that the household food survival strategies had “other” social implications.

This section focused on how the food survival strategies adopted by households have influenced social life in households. The study established that Moral decay, change of gender roles in household food provision, breakdown of families, and weakening of family ties are social implication of new household food survival strategies households have adopted.

CHAPTER EIGHT

SUMMARY, CONCLUSION AND RECOMMENDATION

8.1 Overview

This study focused on how land sub-division has influenced household food security in Nyamira North Sub County. Specifically, the study sought to investigate the social meaning of land and how it influences land sub-division, influence of land sub-division on food survival strategies among households as well as influence of the household food survival strategies on social life in households in the study area.

8.2 Summary of Findings

Based on data analyzed in chapter four, this sub-section provides summary of the findings. The first objective of this study was to investigate the social meaning of land and how it influences land sub-division in the study area. According to the study findings, living space, continuity of generation, collective identity and wellbeing, fulfillment of social norms and source of prestige emerged as the common social meanings households in the study area derive from land. The findings echoed data from respondents where living space (40% response) emerged as the most profound social meaning that households in the study area attach to land, followed by continuity of generation (27%) , collective identity and wellbeing (21%), avenue for fulfillment of social norms (7%), source of prestige (3%) and “other” social meanings (2%) in that order. With regard to how social meanings of land have influenced land sub-division, the study revealed that the social meanings of land highlighted above have minimal influence on land sub-division instead the main factors influencing the

practice of land sub-division are need for independence and a living, poverty and lack of government policy on land sub-division.

Additionally, the study established that households in the study area majorly acquired land through inheritance where parents sub-divided land for their grown-up sons to establish their homes and eke out living. Although some households have purchased theirs, still they have a portion of their ancestral land. The study also revealed that the practice of land sub-division has contributed to shrinking land sizes in the study area because it is a cultural requirement for households to sub-divide land for their grown-up children (sons), a practice that has taken place from traditional times. Further, the study findings established that the major social implications of land sub-division in the study area are poverty among households, land related conflicts and migration.

The second objective of this study was to determine how land sub-division has influenced households' food survival strategies in the study area. The study established that land sub-division has negatively affected food production in the study area (98% response). The findings indicated that land held by households has shrunk drastically leading to seventy percent reduction of food produced in farms in the last two decades and this has consequently resulted into household food insecurity. After reduction of food produced and upsurge in food insecurity, households have no option but to invent new ways to ensure their food security as documented by the Population Pressure theory. As such, households in the study area have devised a number of food survival strategies to circumvent reduced food production. The outstanding food survival strategy was farming and purchasing of food in market (57% response). That once food produced in farms is over, households resort to the market for food. However, due to various prevailing factors, some households have adopted exclusive

farming (7% response), exclusive purchase of food from market (31% response) while other households have resorted to leasing land outside the community (5% response) for purposes of food production.

The last objective of this study was to investigate the influence of the household food survival strategies on social life in households in the study area. The study established that the food survival strategies that have been adopted by households to overcome food insecurity stemming from reduced land sizes have had some influence on social life in households. The study established that the household food survival strategies have influenced morality, change of gender roles in household food provision, breakdown of families, and weakening of family ties in households in the study area. When expressing these findings quantitatively, change of gender roles in household food provision (41% response) emerged as the most profound implication of the food survival strategies on social life in households, followed by break down of families (24%), weakened family ties (20%), moral decay (13%) and “other” influence (2%) in that order.

8.3 Conclusions

Land and rural livelihoods are inseparable. Rural dwellers attach much significance on land because their lives revolve around land. The significance of land is the foundation of individual land tenure in the study area. This study concludes that households derive various social meanings from land and that no social meaning is peculiar. Social meanings that households derive from land include living space, collective identity and wellbeing, fulfillment of social norms, source of prestige and continuity of generation among other social meanings. Although there exist social meanings on land among households in Nyamira North Sub County, land sub-division

is greatly influenced by need for independence and living, poverty and lack of government policy on land sub-division rather than social meanings of land and this has led to reduced land sizes, if unchecked, lives and livelihoods of future generation is at stake.

On how land sub-division has influenced household food survival strategies, the study concludes that reduced land sizes have contributed to reduced food production hence households have devised food survival strategies. The pronounced food security strategies among households in the study area are sourcing of food from farms and market, exclusive farming, exclusive purchase of food from markets and renting land for purposes of food production. However, of all these household food survival strategies, sourcing of foods from farms and markets is the common strategy for households implying that wherever there is change in a social system, it is possible that households might still maintain their traditional ways of doing things or life. This is because households don't discard their traditional ways of doing things easily. This is justified by the way households in Nyamira North Sub County are clinging to their traditional food access strategy (food production in farms) despite reduction of land sizes to uneconomical levels and supplementing it with food purchase from markets when food produced is over.

Furthermore, food survival strategies by households have influenced social life in households in the study area. This is because in human societies, changes introduced into the social system are more likely to result into unintended outcomes. The study concludes that food survival strategies adopted by households in the face of heightened hunger stemming from uncontrolled and continuous land sub-division has influenced social life in households in Nyamira North Sub County. The food survival

strategies that have been adopted by households have contributed to unintended outcomes on social behaviors and social change in households including moral decay, change of gender roles in household food provision, breakdown of families, and weakening of extended family ties.

8.4 Link Between Research Findings and Theoretical Framework

Based on the analyzed data, this study links research findings with theoretical framework. The study utilized two theories. First, the Social Construction Theory propounded by Berger and Luckman in their 1966 book entitled *The Social Construction of Reality*. According to this theory, meanings are socially constructed via the coordination of people in their various encounters thus, the meanings are always fluid and dynamic (Gergen and Gergen, 2012). The theory further argues that social constructs are often created within specific institutions and cultures and come to prominence in certain historical periods. As per this theory, social constructs' dependence of historical, political, and economic conditions can lead them to evolve and change (Galbin, 2014). Thus, this theory is based on the premise that meanings are socially constructed.

Based on the findings of the study, it is evident that households in the study area derive various social meanings from land and that there is no universal social meaning since each and every household has socially constructed its social meaning of land. Among the social meanings on land held by households according to study findings include land as living space, living space, collective identity and wellbeing, fulfillment of social norms, source of prestige and land as an avenue for continuity of generation. Thus, based on the Social Construction Theory and findings of this study it is evident that there is a link between the two, that is, households have socially

constructed meanings of land as outlined above and that such meanings, to some extent, have influenced land sub-division among households in Nyamira North Sub County.

The second theory in this study was the Population Pressure Theory put forward by Mark Cohen in 1977. According to this theory, increase in population density cause population pressure on available resources. That as population increase resource like land remain constant but still the increasing population continue to depend on it for survival. This is because survival does not just happen, but the population is compelled by the environment and that the desire to satisfy their needs force the population to come up with innovative ways to address their unlimited needs. Thus, population adapt innovative approaches to circumvent the environmental, economic and social hurdles to fulfill human needs in the face limited resources.

Based on study findings, it is true that households come up with innovative ways to foster their survival in resource limited situations. For the case of this study area, hunger resulting from reduced land sizes and reduced food production, has seen inventions by households to ensure their food security. The households have adopted strategies among them purchase of food from markets and renting land for food production which was not the case three decades ago. Thus, the study findings are in line with the Population Density Theory which argues that as population pressure on land occur, households are forced to adopt new survival strategies as documented above.

8.5 Recommendations

The study gave two typologies of recommendations: policy recommendations and recommendations for further studies.

8.5.1 Policy Recommendations

Based on findings, this study makes policy recommendations in line with study objectives. In the first objective, social meaning of land and how it influences land sub-division in Nyamira North Sub County the study makes the following policy recommendation:

- a) There is need for alternative livelihoods sources especially business to help household members eke out a living outside land. This will reduce value and appetite for land hence minimizing the practice of land sub-division.
- b) There is need for the National and County Governments to cap the minimum sub-divisible land at an acre and a policy to prolong land sub-division process. The policies will discourage households from sub-dividing land.
- c) Through County and National governments' land use awareness initiative, households should foster independence of sons by encouraging them to reside in one compound instead establishing new homesteads to deter land sub-division.

In the second objective, influence of land sub-division on household food survival strategies in Nyamira North Sub County, the study makes the following policy recommendations:

- a) There is need for County and National Governments to prioritize social investment on households' food security strategies including farmer education on modern food production technology. This will foster food production in households with limited land.
- b) There is need for households to diversify food crop production in that food crops that do best in the study area can be introduced to replace the traditional staple food crop -maize so as to better address the challenge of hunger.
- c) There is need for the government to regulate food prices to enable households to access food at affordable prices. This will shield households from exploitation from food traders who hike prices for their benefit hence households will be at a position of accessing food.

In the third objective, the influence of household food survival strategies on social life in the household in Nyamira North Sub County, the study makes the following policy recommendations:

- a) There is need for the local administration to needs to utilize community policing strategy to curb theft of food from farms so as to increase food production and consequently reduce the food purchased from the market by households.
- a) Since women are increasingly taking an active role in household food provision, there is need for government and other development partners to empower women in the study area with requisite knowledge through trainings and resources to help them better implement household food

survival strategies. This will foster food security and reduce pressure on household heads in providing for households.

- b) There is need for religious institutions to take a centre stage in ensuring adherence and internalization of religious norms and principles among household members to curb moral decay resulting from food survival strategies that have been adopted by households in the study area. This can be achieved through organizing seminars to create awareness on the issue.

8.5.2 Recommendations for Further Studies

The study suggests the following areas for further research:

- a) There is need for a study on the influence of the household food survival strategies on social structure and social interaction especially with regard to food support for the elderly in Nyamira North Sub-County.
- b) There is need for a study on the alternative livelihood sources and the best way to apply them to reduce land sub-division in the study area.
- c) There is need for a study to investigate the coping mechanisms by households to deal with the implications of household food survival strategies on social life especially immorality, strained social cohesion and family breakdown emerging from food survival strategies by households.

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APPENDICES

APPENDIX I: QUESTIONNAIRE

My name is Samwel Auya, a postgraduate student at Moi University pursuing a Doctor of Philosophy in Sociology course. Currently, am undertaking a study on “Land Sub-division and Household Food Security in Nyamira North Sub County”. Any information given will be highly appreciated and confidential.

PART A: DEMOGRAPHIC INFORMATION OF RESPONDENTS

1. What is your gender? Male [] Female []
2. What is your highest education level?
None [] Primary [] Secondary/High school [] College []
University []
3. What is your age? -----
4. A part from farming, what other economic activity do you engage in? -----
5. What is the number of your children in terms gender? Boys-----Girls-----
6. What is the size of your land/farm in acres? -----

PART B: SOCIAL MEANING OF LAND AND ITS INFLUENCE ON LAND SUB-DIVISION

1. How did you acquire your land?

Inheritance [] Purchase [] Gift []

Any other (specify.....)

Explain your answer

.....
.....
.....
2. What is the social meaning of land to you as a household heads and resident of Nyamira North Sub County? Explain

.....
.....
.....
3. a) According to you, is land sub-division associated with reduced land sizes in Nyamira North Sub County?

Yes [] No []

Explain

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

4. Is social meaning of land in question 2 above influenced land sub-division in this area?

Yes [] No []

Explain

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

5. On land sub-division in this area:

a) Who makes decision on when and how land sub-division is done?.....
.....

b) Are all children (sons and daughters) in a household allocated land? Explain.....
.....

c) What is the main factor considered during land sub-division for children in a household?
.....
.....

6. As a household head, do you do you intend to sub-divide it for your children in future despite reduced land sizes in the area?

Yes [] No []

Why?

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

7. What is the social implication of land sub-division in this area?.....
.....
.....

PART C: LAND SUB-DIVISION AND FOOD SURVIVAL STRATEGIES AMONG HOUSEHOLDS IN NYAMIRA NORTH SUB COUNTY

1. According to you, what constitutes food security in this area?

.....

2. a) What food survival strategies did households in this area used in the past?

Farming [] Social networks [] Purchase from markets [] Food aid []
 Other (specify).....

Explain how it was done

.....

3. What is the effect of land sub-division on household food production in Nyamira North Sub County?

.....

4. In what way has reduced land sizes contributed to reduced food production in Nyamira North Sub County? Explain

.....

5. What is the common food survival strategy currently used by households in this area?

Purchasing from market [] Farming [] Farming and purchasing from market []
 Renting land for farming[] Others (Specify).....

6. How does the strategy in 5 above work?

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

7. What is the major factor influencing adoption of food survival strategy by a household?

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

8. What is the major challenge facing households in Nyamira North Sub County in the process of implementing food survival strategies in 5 above?

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

PART D: INFLUENCE OF HOUSEHOLD FOOD SURVIVAL STRATEGIES ON SOCIAL LIFE IN HOUSEHOLDS

1. What is the effect of the current household food survival strategy on social life in households in this area?

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

2. What have households done to address the effect in question 1 above?

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

PART E: GENERAL

1. According to you, what can be done to address the following in Nyamira North Sub County:

- a) Continuous land sub-division

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

b) Food insecurity in Nyamira North Sub County

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

2. Any comment on land sub-division and food security approaches at the household level?

.....
.....

THANK YOU FOR YOUR TIME

APPENDIX II: FOCUS GROUP DISCUSSION GUIDE

1. What is the average land sizes owned by households in the sub County?
2. How do households acquire land in this area?
3. What is the social meaning of land to households in this Sub-County?
4. What is your take on the idea that land sub-division has led to reduced land in this area?
5. Is the social meaning (s) of land influence land sub-division? How?
6. How is land sub-division done and who is involved?
7. Who decides when and land should be sub-divided and allocated to heirs?
8. Are sons and daughters entitled to land in household?
9. What considerations are made when sub-dividing and allocating land to heirs?
10. What are the social implications of land sub-division in this area?
11. What constitutes household food security in this area?
12. How have households in this area acquired food from the past?
13. Has land sub-division influenced household food production in this area?
How?
14. What are the current household food survival strategies after drastic decline of land sizes in this area?
15. What factors influencing the type of food survival strategy a house adopts?
16. What are challenges that households are facing in the pursuit for their food security?
17. What are the effects of the current food survival strategies adopted by households on social life in households?

**APPENDIX III: INTERVIEW SCHEDULE FOR COUNTY SECRETARY FOR
LAND AND LAND OFFICER IN NYAMIRA NORTH SUB COUNTY**

1. How long have you worked in this Sub-County/County?
2. As a leader in the land sector in Nyamira County/ Nyamira North Sub County, in your opinion, why are land sizes declining so fast in this Sub-County?
3. What has the national government /County government done to address the issue of continuous and intensive land sub-division in his Sub-County?
4. According to your official statistics on the current land sizes, what is the average land sizes held by households in this Sub-County?
5. As a land expert, what can be done to address the problem of declining land sizes in this Sub-County?

**APPENDIX IV: INTERVIEW SCHEDULE FOR COUNTY SECRETARY FOR
AGRICULTURE AND AGRICULTURAL EXTENSION OFFICERS IN
NYAMIRA NORTH SUB COUNTY**

1. How long have you worked in this Sub-County/County?
2. What is your opinion on the land sub-division and current food production in this Sub-County? How has reduced land sizes influenced household food security?
3. As an expert in agriculture and food matters in this County/Sub-County, what are the common food crops grown in this region and which is most preferred by residents?
4. Being key in agricultural sector in this County/Sub-County, how has agricultural office in this Sub-County helped to improve food production despite reduction of land sizes?
5. Since land sizes have reduced and the residents have historically relied on their land for food production, how are households getting food with the reduced land sizes?
6. As an agricultural expert, in your opinion, what can be done to improve food production and household food access in this Sub-County?

APPENDIX V: HOUSEHOLDS LAND SIZES IN NYMAIRA NORTH SUB-COUNTY PHOTO



APPENDIX VI: RESEARCH BUDGET

No	Item	Description	Estimated Amount (Ksh)
1	Stationery	Flashdisks@900	900.00
		50 Assorted Pens @25	750.00
		Envelopes, assorted sizes	250.00
		Writing materials@ 600	2000.00
		5 Mark pens@100	500.00
2	Service and Costs	Typing and printing	10000.00
		Photocopying and Binding and relate costs	10000.00
3	Transportation and Related costs	Transportation costs	50000.00
		Subsistence costs	5000.00
4	Research assistants (2)	2 Research assistants @1000 per day by 30 days	60000.00
5	Meals and Accommodation expenses	Meals	10000.00
		Accommodation	10000.00
6	Airtime	30days @250	7500.00
Total			166900.00

APPENDIX VII: WORK SCHEDULE

Activity	Time Period							
Development of proposal	Jun-Oct 2018							
Defense of proposal		Oct 2018- Jan 2019						
Proposal correction and development of research instruments			Feb- March 2019					
Pre-testing data collection instruments				April 2019				
Training of research assistants					April 2019			
Data collection						May-July 2019		
Data analysis and interpretation							Aug-Sep 2019	
Report Writing & Submission								Oct 2019-Feb 2020

APPENDIX VIII: KREJCIE AND MORGAN SAMPLE DETERMINATION

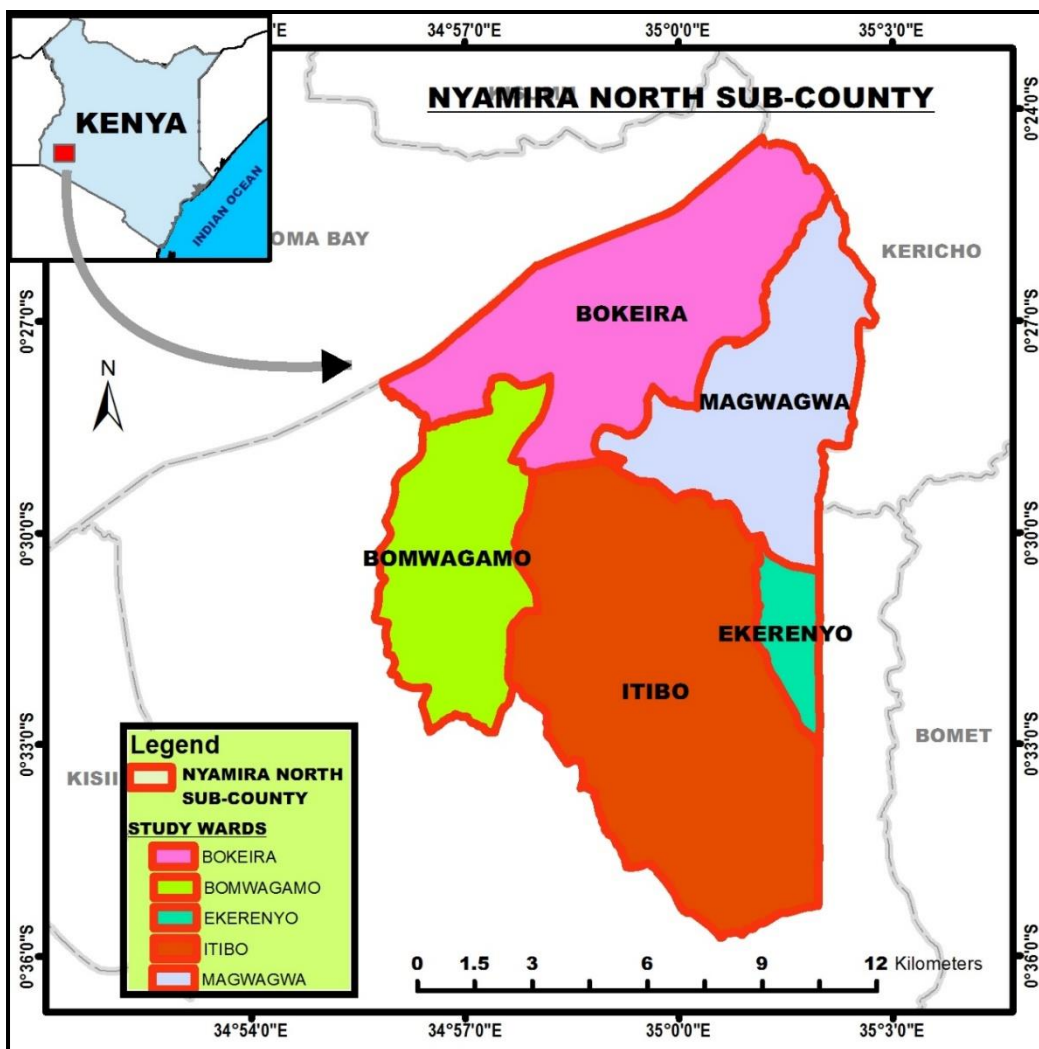
TABLE

<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>	<i>N</i>	<i>S</i>
10	10	220	140	1200	291
15	14	230	144	1300	297
20	19	240	148	1400	302
25	24	250	152	1500	306
30	28	260	155	1600	310
35	32	270	159	1700	313
40	36	280	162	1800	317
45	40	290	165	1900	320
50	44	300	169	2000	322
55	48	320	175	2200	327
60	52	340	181	2400	331
65	56	360	186	2600	335
70	59	380	191	2800	338
75	63	400	196	3000	341
80	66	420	201	3500	346
85	70	440	205	4000	351
90	73	460	210	4500	354
95	76	480	214	5000	357
100	80	500	217	6000	361
110	86	550	226	7000	364
120	92	600	234	8000	367
130	97	650	242	9000	368
140	103	700	248	10000	370
150	108	750	254	15000	375
160	113	800	260	20000	377
170	118	850	265	30000	379
180	123	900	269	40000	380
190	127	950	274	50000	381
200	132	1000	278	75000	382
210	136	1100	285	100000	384

Note.—*N* is population size. *S* is sample size.

Source: Krejcie & Morgan, 1970

APENDIX IX: A MAP OF THE STUDY AREA



Source: Cartographer (2019)

APPENDIX X: NACOSTI RESEARCH AUTHORIZATION



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
2241349, 3310571, 2219420
Fax: +254-20-318245, 318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref. No. **NACOSTI/P/19/21641/31380**

Date: **24th June, 2019.**

Samwel Auya
Moi University
P.O Box 3900-30100
ELDORET.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***“Land sub division and household food security in Nyamira North Sub County, Kenya.”*** I am pleased to inform you that you have been authorized to undertake research in **Nyamira County** for the period ending **24th June, 2020.**

You are advised to report to **the County Commissioner, and the County Director of Education, Nyamira County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.


BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Nyamira County.

The County Director of Education
Nyamira County.

APPENDIX XI: NACOSTI RESEARCH PERMIT

THE SCIENCE, TECHNOLOGY AND INNOVATION ACT, 2013
The Grant of Research Licenses is guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014.

CONDITIONS


1. The License is valid for the proposed research, location and specified period.
2. The License and any rights thereunder are non-transferable.
3. The Licensee shall inform the County Governor before commencement of the research.
4. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies.
5. The License does not give authority to transfer research materials.
6. NACOSTI may monitor and evaluate the licensed research project.
7. The Licensee shall submit one hard copy and upload a soft copy of their final report within one year of completion of the research.
8. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice.

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 Email: dg@nacosti.go.ke, registry@nacosti.go.ke
 Website: www.nacosti.go.ke

THIS IS TO CERTIFY THAT:
MR. SAMWEL AUYA
of MOI UNIVERSITY, 35818-200
NAIROBI, has been permitted to conduct
research in Nyamira County
on the topic: LAND SUB DIVISION AND
HOUSEHOLD FOOD SECURITY IN
NYAMIRA NORTH SUB COUNTY, KENYA
for the period ending:
24th June,2020

Permit No. : NACOSTI/P/19/21641/31380
Date Of Issue : 24th June,2019
Fee Received :Ksh 2000



Applicant's Signature
Director General
National Commission for Science, Technology & Innovation