

**WOMEN'S ACCESS TO AGRICULTURAL INFORMATION AND ITS IMPACT ON
HOUSEHOLD FOOD SECURITY IN KYAU VILLAGE, MAKUENI COUNTY,
KENYA**

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DECLARATION

This project paper is my original work and has not been presented to any other university for the award of a degree.

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DEDICATION

I would like to dedicate this project to the glory of our Lord and Savior Jesus Christ. Without supernatural strength and determination that could only have come from God, it would not have been possible for me to complete this project.

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LIST OF ACRONYMS

5DE	5 Domains of Empowerment
CIAT	Cali: International Centre for Tropical Agriculture
FAO	Food and Agriculture Organization
FtF	Feed the Future Initiative
GPI	Gender Parity Index
IAASTD	International Assessment of Agricultural Knowledge, Science and Technology for Development
IFPRI	International Food Policy Research Institute
IITA	International Institute for Tropical Agriculture
ILRI	International Livestock Research Institute
NACOSTI	National Commission for Science, Technology and Innovation
OECD	Organization for Economic Cooperation and Development
OPHI	Oxford Poverty and Human Development Initiative
USAID	United States Agency for International Development
WEAI	Women’s Empowerment in Agriculture Index

CHAPTER ONE

BACKGROUND OF THE STUDY

1.1 INTRODUCTION

The World Food Summit (FAO, 2006: p1) defines food security as access by all people at all times to enough food for an active and healthy life. This is not only about production of food but also about income and purchasing power for people to buy food. Makueni County is one of the places in Kenya that experience food insecurity; and remains one of Kenya's poorest areas, suffering from recurring drought and food shortages (FAO, 2003: p1).

Statistics show that about 34.8% of the rural population and 7.6% of the urban population in Kenya live in extreme poverty, such that they cannot meet their food needs even with their entire resources devoted to food (Djurfeldt et al 2010: p 217). Kenya remains a net importer of food and yet has arable land capable of producing enough to export to other countries. This food insecurity can largely be attributed to rural women's disempowerment and inability to produce enough food.

Naila Kabeer (1999: 437), defines women's empowerment as the processes through which women gained the capacity for exercising strategic forms of agency in relation to their own lives as well as in relation to the larger structures of constraint that positioned them as subordinate to men. The conceptualization of empowerment that informed this research touches on many different aspects of change in women's lives, each important in themselves, but also in their inter-relationships with other aspects. It touches on women's sense of self-worth and social-identity; their willingness and ability to question their subordinate status and identity; their capacity to exercise strategic control over their own lives and to renegotiate their relationship with others who matter to them; and their ability to participate on equal terms with men in reshaping the societies in which they live in ways that contribute to a more just and democratic distribution of power and possibilities (Kabeer, et al 2008: 27).

1.2 STATEMENT OF THE PROBLEM

Migration is largely responsible for robbing the rural communities of the male workforce. According to Nguthi (2008: 36), migration in Kenya is caused by landlessness and seasonality of the produce from the land, which forces members of the household to go in search of a better and more secure livelihood for the household. Due to Kenya's growing population, communities are exerting more pressure on land as they try to feed the members of their household using the ever decreasing resources at their disposal. One of these resources is labour, which has reduced on the farm as a result of migration and other factors. Saito, et al (1994: 10) has observed that the supply of rural labour has been affected by two main factors. First, rapid population growth which increased labour supply much faster than the growth in labour demand, exerted greater pressure on the land and reduced farm size per capita. The net result has been to induce labour, especially male labour to move to the towns. Second, the large increase in enrollment rates of children, especially females, in rural primary and secondary schools has tended to reduce overall labour supply.

This reduction in labour at the farm level resulting from migration of the male labour force means that the women members of the household are left with the burden of providing labour on the farm where they are expected to produce more food with fewer resources.

Some of the male members of the household, who remain behind in the rural areas and do not migrate or migrate for a short period and then come back to the rural areas, have resorted to substance abuse, especially alcohol. Traditionally, Africans controlled alcohol intake by having alcohol at functions which were closely monitored by the elders (Barrows and Room, 1991: 166). However, wage labour has meant that anyone with money can buy alcohol. This power to buy alcohol, however, can lead to alcohol abuse as chronic unemployment and underemployment leads to hopelessness, which contributes to alcoholism and drug abuse (Mwaura, 2005: 98).

With the absence of men as a result of migration or alcohol abuse, women are left as *de facto* heads of these rural households. These women are left with the burden of ensuring that the farms are producing enough food to feed the household as well as take care of their other household needs. This means that the women have to make critical decisions about farming, whose success

is determined by correct use of inputs, timing and access to appropriate markets. According to Bannon and Correia, (2006: 220) as women take on increasing responsibilities for household provisioning, men appear to have opted out.

The rapid changes in the agricultural sector present challenges to the women as access to information on agricultural technologies is not easily accessible to them. The design of policies, programs and even extension messages continues to wrongly assume that farmers and rural workers are mainly men and indeed calls for urgent attention to gender specific constraints in production and marketing as presented in the World Bank Report for 2008 (World Bank, 2008: 7). Extension services, for instance, are mostly provided by men and targeted at men by both the private and public sector, whereas women, who are the main source of labour in the farm, are not able to benefit from extension services.

Studies (Mbo'o-Tchouawou and Colverson, 2014:5, Mathur and Pachico, 2003:96, Pinstруп-Andersen and Pandya-Lorch, et al 2001:206) have shown that women have unequal access to information on good agricultural practices, compared to men. Particularly in rural areas where women are generally less educated (Quashigah and Okafor, 1999: 274), this lack of information puts them at a disadvantage. In situations where husbands are migrant – either to urban areas or have exported labor to other places, women who are left behind are particularly disadvantaged because they have to make urgent, critical decisions without their spouses. Further, cultural systems have disempowered the women, especially those in the rural areas, compared to those in the urban areas who are more educated.

Due to the fact that women are not empowered to make decisions on farming including on whether to use hybrid seeds and fertilizer, they are still tasked with the farm work, and therefore yields have continued to decrease. If inputs such as seeds, fertilizer and farm equipment were developed with women labourers in mind, they would be easier to procure, especially in smaller packets which cost less money than larger packets and therefore more accessible to rural women. They would also be easier to use, if for example, the companies used pictorials rather than written instructions for less literate women and this would result in better use of inputs. Similarly, if women farmers had access to extension services and were able to get all the

necessary information on good agronomic practices, they would be better equipped to manage their farms. Also unavailable to women farmers is market information, where they can access information on best prices for their produce and what the buyers or consumers are interested in. In many cases you find women producing crops where they as producers have not done any research on what the market is interested in and what the best prices are. Women farmers also lack access to markets that are safe, easily accessible as well as reliable.

This research focused on women who are the primary workers/laborers on the family farms and are therefore doing all the work on the farm but not taking all the critical decisions on where to farm, what to produce, how to produce, where to sell the produce and how to spend the income from farming. As a result, the women's disempowerment leads to food insecurity within the households. This study was, therefore, designed to answer the following questions:

- i. How has the migration or movement of men away from home affected food production in Kyau village?
- ii. Do households with women as *de jure/de facto* heads have the same access to information (extension services and/or market) and use/control of income as those with men as the household heads?

1.3 OBJECTIVES OF THE STUDY

1.3.1 General Objective

This study set out to document the effect of women's disempowerment on food security in Kyau Village, Makueni County

1.3.2 Specific Objectives

- i. Determined the effect of men's migration/movement away from home on food security.
- ii. Investigated differences in access to information (extension services and/or market) by female headed and male headed households.

1.4 JUSTIFICATION OF THE STUDY

The researcher used purposive sampling as a technique and while it may have its benefits, it is open to criticism because the selection of the sample can be perceived as biased. There is no use to assume that the units judged to be typical of the population will continue to be typical over a period of time (Ary, et.al. 2010: 137). The researcher studied women and men small-scale farmers who are organized into self-help groups and they were the key sources of information for this study. These are groups that have been formed in order to get assistance for economic as well as social reasons and their needs change with time. Some of them rely heavily on handouts from well-wishers and politicians and sometimes gave answers according to what they thought would impress the administration, rather than what is the actual case. The researcher had to probe and ensure that they were able to dig deeper than the surface answers they received so as to ensure that the quality of data collected is good.

The use of qualitative data entails subjective methods and is dependent on people's opinions, knowledge, assumptions and inferences or biases. While it is true that men who migrate face challenges and are also burdened in their roles, the study focused on the women and men farmers left behind to see how their roles disadvantage them as they try and put food on their tables.

The region being studied experiences drought and famine almost regularly. Drought can even run for three consecutive years and this means that the respondents had to rely on their memory as they answered research questions on their yields and their use of inputs. This is a

limitation because some of the respondents may struggled to recall that far back and may result in giving incorrect answers to mask the fact that they cannot remember.

1.5 ASSUMPTIONS OF THE STUDY

Food security remains a major concern for Kenya where we produce less food than we consume, and are forced to import staple foods like maize, wheat and rice. In order for this to change, women must be considered as key players in agriculture. Women in small scale farms in Kenya carry out 80% of the farming work from land preparation, to planting, to weeding and harvesting. This means that they are the ones who need to be equipped with the skills and knowledge to practice good farming techniques. This is one strategy towards ensuring food security in Kenya.

The innovation and development of technologies that improve food production in Kenya are even more important, as one looks at climate change and its impact on agriculture in Kenya. As observed by Cline (2007: 2), by late in this century, unabated global warming would have at least a modest negative impact on global agriculture in the aggregate, and the impact could be severe. In Makueni County, one of Kenya's semi-arid areas, the small-scale farmers are already faced with enough challenges as they experience frequent droughts and famine. This situation is even more difficult for small-scale female farmers as agriculture is the only way to put food on their table and for many of them is the only source of income. Although many of the households have a family member living and possibly working in the urban areas of Nairobi, Mombasa and other nearby towns, remittances are not that regular or significant to enable the family invest that money into farming. This is in part due to the high cost of living in those cities compared to the rural areas as well as the poor job market where many of these people are unemployed or under-employed. Vasco (2011: 30) argues that remittances from abroad positively affect the expenditure on agricultural inputs but have no effect on the area cultivated with subsistence crops, and that male migration is associated with a reduction in maize production.

While migration of the male members of the household would present an opportunity for women to manage the small-scale farms and work at producing more food with fewer inputs

and at less cost, food security remains a major concern in Makueni County. If these women were empowered to run the farms as enterprises, they would be able to feed themselves and their families and not have to rely on food aid. As Vaughan (2007: 17) states, populations should be 'weaned off' food handouts as soon as possible after a crisis, and encouraged to resume their own food production. This is easier said than done but can be possible if proper systems and machinery are put in place to ensure that small-scale rural farmers have the support systems to produce and sell the appropriate foods.

As argued by the World Bank (2009: xiii), it is time to take into account the role of women in agricultural production and to increase concerted efforts to enable women to move beyond production for subsistence and into higher-value, market-oriented production.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section will examine food security and the role men and women play towards ensuring food security. The section will also examine access to and control of productive resources in agriculture as well as examine gender and access to extension services. The section of the literature review will also examine access to market information in agriculture for men and women as well as gender and access to income from agriculture. The literature review section also expound on the theoretical framework to be used in this study.

2.2 Food Security

The World Bank defines food security as access by all people at all times to enough food for an active and healthy life. Ensuring food security entails meeting two conditions: that there are adequate foods available and that people have the ability to acquire food by means of their own production or by means of an income (Horenstein, 1989: 1). While Kenya's population continues to rise, and is expected to reach 46 million by 2015 according to Njonjo (2010: xvi), food production is not increasing at the same rate. Furthermore, the number of undernourished people in sub-Saharan Africa has increased from about 170 million in the period 1990 to 1992 to over 200 million in the period 2001 to 2003 (FAO, 2006: 83). Since 2007, food-related riots have occurred in 15 countries, including 7 in sub-Saharan Africa. The United Nations Food and Agriculture Organization defines 'undernourishment' as the condition of people whose food consumption is continuously below a minimum dietary energy requirement for maintaining an acceptable body size, living a healthy life, and carrying out light physical activity (Melito, 2009: 1).

According to Atehnkeng (2007: 32), over 70% of the food insecure population in Africa lives in the rural areas and, ironically, smallholder farmers, the producers of over 90% of the continent's food supply, make up the majority of the rural population. With the increase in population comes pressure on agricultural land, as it is subdivided to cater for the growing demand for housing. According to Obudho and Ojwang (2000: 76), only 12% of Kenya's land is of high agricultural potential and an additional 5.5% has medium potential. Eighty per cent of the population resides

in the 17% of the land which is suitable for agriculture, but increasing population pressure on the agricultural land has forced people to move to marginal, arid and semi-arid environments where production of adequate food to sustain increasing population growth is impossible.

In Africa, about 65% of the total labour force is employed in the agricultural sector, which contributes about 32% of the gross domestic product (Jemaneh, 2012: 1). Because the agricultural sector is the largest employer in developing countries, its growth has a large impact on poverty reduction; growth creates income opportunities for the poor in both the farm and non-farm economy while lowering food prices. When food security is increased, nutrition and health improve which in turn promotes productivity and also decreases a country's dependence on imported food. According to Kamau and Mativo (2013: 1), a total of 61,000 beneficiaries are receiving food assistance in three divisions within Kenya under the Food for Assets Programme. In addition, there are 140 schools under the Home Grown School Meals Programme with 92,638 beneficiaries.

Women have become the *de facto* heads of households as the men go in search of employment or business opportunities in the urban centers of Kenya, or remain at home but are unwilling to actively engage in farming. This was reviewed by the World Bank (Saito, et al 1994: x) in its study of Kenya, Nigeria, Burkina Faso and Zambia. In all those four countries studied, smallholders are the core of the agricultural sector, and women comprised the majority of smallholder households. Women have become the *de facto* managers of the rural household (Saito, et al 1994: x).

This has led to what is referred to as the 'feminization of agriculture' (Leichenko and O'Brien, 2008: 70), as men go in search of income-opportunities outside agriculture, left behind are female-headed households who have to carry out agricultural work that was traditionally done by men. The feminization of agriculture is most pronounced in sub-Saharan Africa but is also growing in other parts of the world.

Women are also burdened with their reproductive, productive and community roles, thus leaving insufficient time for agricultural productivity (Damtie and Misganaw, 2012: 10).

2.3 Gender and Access to and Control of Productive Resources in Agriculture

In spite of the women being the *de facto* managers of the household and the farm, they have little or no support in that role. Women are so important to African agriculture, that any efforts to raise productivity cannot ignore them. Although women have been burdened with the role of running the farms in the absence of men, their access to agricultural inputs and support services has not improved commensurately, resulting in a loss of more than 20% for Kenya (Saito, et al., 1994: 102).

Also, agricultural development strategies have not adequately focused on women as farmers. For example, Kenya's Agricultural Sector Development Strategy launched in 2010, does not look into a specific strategy to focus on rural women as the majority of Kenya's small-scale farmers. If there is to be any revitalization of the agricultural sector and therefore an improvement in food security, the women farmers must be at the center of any such strategy.

However, some scholars argue that men have been more burdened than women with all the changes taking place in their roles and relations. A study done on the Abagusii, a Bantu community of Kenya by Silberschmidt (1999: 7) contends that socio-economic change in the last century has affected men more than women and while men's roles and identities have been challenged and undermined, women's roles have been strengthened. She argues that men are not able to find employment and cannot meet their obligations as providers of the home, and so women step in to fill this gap. While this argument is generally on women's empowerment, it applies to agriculture as well where women's roles have also changed, relative to men's roles.

In the case of Makueni, which is the focus of this research, multiple challenges have indeed resulted in the shifting of power and gender roles and relations within the household. Vasan and Przybylo, (2013: 41) argue that competition for already scarce resources among the people of Makueni County has resulted in a decline in agricultural productivity. In an attempt to meet their need for fuel and income, people in Makueni have deforested much of their natural woodlands for firewood and charcoal, for which demand in the urban areas is booming. These natural woodlands acted as soil and river bank stabilizers. With their loss, the soils have eroded, rivers have dried up, and less water and fewer nutrients are retained in the ecosystem. Compounded by climate change, which manifests itself in Makueni as less overall rainfall and more rainfall

variability, agricultural productivity has declined significantly. As crop yields fall, farmers are forced to further exploit the remaining forest, and the spiral continues. Like many dry land areas in East Africa, Makueni is caught in a vicious cycle of environmental degradation and declining agricultural productivity that leaves food shortages, malnutrition and, sometimes, famine in its wake (Vasan and Przybylo, 2013: 50).

According to Khalaf (2009: 41), given women's important productive roles, they are particularly vulnerable to the effects of drought and erratic rainfall, which can further exacerbate inequalities in access to and control of resources. He further argues that providing a global overview of this complex issue is difficult, particularly because of the lack of sex-disaggregated data on ownership/control/access.

Gender dynamics come into play regarding access and control over productive resources including land, credit, labor and information, as argued by Veenhuizen (2006: 130), as well as access to and control over the benefits of production such as income. While both men and women face constraints regarding access to land, women are often further disadvantaged because they traditionally have less access to and control over land than men. She also argues that there is inequitable access between men and women regarding their agricultural inputs, labor and information. Women are less likely to benefit from research or extension services that fail to consider gender specific differences regarding methods of plant production, crop species and use of compost, manure and fertilizer (Wilbers and van Veenhuizen, 2004: 4).

2.4 Gender and Access to Extension Services

Agricultural extension services include advisory services, information and training and, according to Khalaf (2009: viii), women farmers have been largely ignored by extension services in many areas. Male extension agents tend to target male farmers and to focus information and inputs to men's needs (World Bank, 2009: 573). A study of agricultural extension services in Nigeria found that women farmers who are supported by women extension officers were more likely to access extension services (Khalaf, 2009: 49). Unfortunately, according to the World Bank (2007: 612), only 15% of the world's extension agents are women.

According to the World Bank (2011: 234), a bias in service delivery towards men has been identified as a cause of gender differences in access to extension services. This bias, often stems

from the belief that men are the decision-makers and so should be more actively targeted, combined with the assumption that educating men will ensure that they share knowledge with other household members.

Women also face cultural barriers while interacting with male strangers (Vorley et al., 2010: 24). This further restricts their access to extension services, as a majority of the extension agents are men. In Kenya, this situation is further compounded by a demand-driven government extension programme where the Ministry of Agriculture in 2003 put a ban on any new hires of extension service agents and for those that were left, farmers had to request for their services, rather than the agents visiting all the farms. The reasons for the Kenya Government making that change in its provision of extension services was because the traditional public extension system was perceived as outdated, top-down, paternalistic, one size fits all, inflexible, subject to bureaucratic inefficiencies and therefore unable to cope with the dynamic demands of modern agriculture (Muyanga and Jayne, 2006: 6).

Another important element to be considered in extension services is ensuring that the training methods being advocated for are women-friendly (Vorley et al., 2012: 24). According to Muyanga and Jayne (2006: 3), extension service is the most important element in bringing Kenya's productivity levels up. The two authors argue that ideal extension service provides feedback mechanism from the farmers to the research centers. Agricultural technologies are also rapidly changing and farmers need to keep abreast of what technologies work best as well as the knowledge on how to use them.

Companies and co-operatives also provide extension services to their clients or members and these are mostly commodity-based and deal with commercial crops such as coffee, tea and sisal. According to Muyanga and Jayne (2006: 5), smallholder farmers growing all types of crops not only require relevant advice to increase productivity, but also need information on markets, value addition and other income opportunities. However, historically women and other marginalized groups have had less access to formal information and communication systems associated with agricultural research and extension (IAASTD 2009: 211).

2.5 Gender and Access to Market Information in Agriculture

Access to local, national and international markets is essential to enable women to scale up their enterprises, either through better access to information on market and procurement opportunities or initiatives to increase their exposure to markets through trade fairs and exhibitions (OECD 2012: 107). This is again a challenge for women due to cultural barriers, where they cannot travel as easily as men to some of the forums where they are likely to access much needed market information.

Improved access to marketing groups, small-scale trader's co-operatives and expanded availability of appropriate storage in local and regional markets, market information and training in marketing, accounting and management skills, are required to eliminate the existing marketing constraints that women farmers face.

According to (Vorley et al., 2012: 24), in terms of investment in physical infrastructure and services, an important contribution that government policy can make towards gender equality in market access and benefits from investment is to improve the specific types of infrastructure and services that can help free up women's time.

The existing evidence suggests that small farmers, who are often women, are less capable of overriding hardships and take advantage of benefits of agricultural trade liberalization (Thorin 2001: 57). Studies at the household-level indicate that the shift from food crops to cash crop production in fact penalizes women, as they are more likely to grow food crops. This shift also increases household food insecurity (Thorin 2001: 57).

With the advancement of technology, information is easily accessible for those with access to the internet or the mobile phone. The role that ICT can play in enabling gender equity, however is constrained by access, low literacy and limited data for ICT usage by women (Melhem et al 2009: v). Market information is useful as it enables farmers to negotiate for better prices and make comparisons between previous seasons to make decisions on which crops to grow. In a study done in neighboring Uganda by Ferris and Robbins, (2005: 36), all respondents acknowledged that market information was a very important input in their short-term, decision-making for future planning. However, most of the market information comes through channels such as radio, newspaper, television or extension officers, both from the public and private

sector. These are not channels that are easily accessible to rural women. Although rural women may be able to access the family radio in the evenings, they are also burdened with so many household chores that they may be too tired or tied up to pay close attention to the programs being aired on radio. Nonetheless, a survey of women food producers carried out by Klysen (1996: 172) suggests that listening to the radio is the main source of entertainment and information for rural women.

2.6 Gender and Access to Income from Agriculture

Another issue to be considered is women's access and control of income from agriculture, since changes as a result of population growth, economic policies, climate change, the spread of markets and urbanization, have created new challenges as well as new opportunities in women's access to and control over land and other productive resources. According to Khalaf (2009: 41), providing a global overview of this complex issue is difficult, particularly because of the lack of sex-disaggregated data on ownership/control/access. Such data would enable the government to formulate an appropriate strategy to ensure that rural women operate from a position of empowerment which allows them to negotiate access to and control of income from farming.

Ackah and Aryeetey (2012: 204) argue that most likely household members bargain over access to income and the related allocation of expenditures between male and female. Although they bargain, where possible, the bargaining power lies with the man, due to the patriarchal systems under which the households operate.

In principal, women tend to control the income resulting from their off-farm income generating activities such as beer brewing, charcoal selling, food processing and the operating of small shops. Subsequently, because of the way women have been socialized and also because of illiteracy, the women will often have their husbands handle their accounts. Women tend to use their income on household items such as food, clothes and medicines. Men are expected to bear the cost of more expensive things like building the house, school fees and the purchase of inputs. However, several studies have shown that there is a higher marginal propensity for improvements in food consumption and child nutrition to occur from increments to women's income, compared with other sources of income as argued by Kumar (1994: 70).

2.7 Theoretical Framework

This study will be guided by the Women's Empowerment in Agriculture Index Framework (WEAI), which was launched in 2012 by the International Food Policy Research Institute (IFPRI), Feed the Future Initiative (FtF), the Oxford Poverty and Human Development Initiative (OPHI) and the US Agency for International Development (USAID). The WEAI framework aims at increasing understanding of the connections between women's empowerment, food security and agricultural growth and measures women's engagement in agriculture over five areas: decisions about agricultural production; access to and decision-making power over reproductive resources; control over use of income; leadership in the community; and time use. A woman is considered empowered if she fulfils the conditions required by the index in at least four out of five domains (IFPRI 2012: 3). The WEAI also offers insight into gender inequality within the household, which is essential to understand and analyze the gender empowerment gap in Makeni County. The framework can be used to assess the state of empowerment and gender parity in agriculture and it can also be used to identify key areas in which empowerment needs to be strengthened as well as track progress over time.

The WEAI is an aggregate index and it is based on the Alkire-Foster methodology for multi-dimensional poverty index according to Alkire and Foster (2011: 5). It can be applied at the sub-regional level, as in the case of this research, at the country level, or, at the regional level, based on individual-level data collected by interviewing men and women within the same households.

The WEAI framework comprises two sub-indexes. The first assesses the degree to which women are empowered in five domains of empowerment (5DE) in agriculture. These domains are (1) decisions about agricultural production, (2) access to and decision-making power about reproductive resources, (3) control of use of income, (4) leadership in the community, and (5) time allocation. The second is the gender parity index (GPI) which it measures gender parity within surveyed households. For those households which have not achieved gender parity, the GPI shows the empowerment gap that needs to be closed for women to reach the same level of empowerment as men according to Alkire and Foster (2012: v).

By definition, households without a primary adult male are excluded from this measure. The researcher interviewed only households with a male head of the household living on the farm or male head of the household who has migrated or is absent from the farm. The research did not cover households where the male is dead or where the head of the household is a woman.

The total WEAI score is computed as a weighted sum of the 5DE and the GPI. The 5DE sub-index contributes 90% of the weight of the WEAI, while the GPI contributes 10%. Based on both sub-indexes, the WEAI is an aggregate index that shows the degree to which women are empowered in their households and communities and the degree of inequality between men and women within the household.

The five dimensions can be defined as follows (Alkire and Foster, 2012: 7):-

- Agricultural production – sole or joint decision-making over food and cash crop farming, livestock and fisheries as well as autonomy in agricultural production.
- Resources – ownership, access to decision-making power over productive resources such as land, livestock, agricultural equipment, consumer durables and credit.
- Income – sole or joint control over income and expenditures.
- Leadership – membership in economic or social groups and comfort in speaking in public.
- Time – allocation of time to productive and domestic tasks and satisfaction with the available time for leisure activities.

CHAPTER THREE

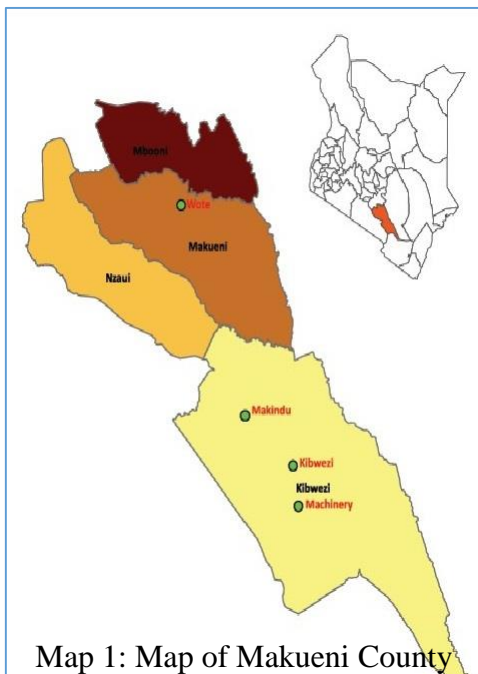
METHODOLOGY

3.1 Introduction

This section focuses on the methodology that the researcher used in the course of this study. A description of the study site is provided in the first part of this section. As well, a description of the research design, study population, methods of data collection, data management and analysis and ethical considerations are described.

3.2 Research Site

This study was carried out in Kyau Village of Makueni County in Eastern Kenya, shown in the map below. Makueni borders Kajiado to the west, Taita Taveta to the South East, Kitui to the East and Machakos to the North (Kenya County Fact Sheet 2013: 23). Makueni County has a population of 874,323 and it is dominated by young people with 70% of the population under 30 years (Population Action International 2014: 1). Kyau Village, where the study will be conducted, has a population of about 2,000 people. The County covers 7,965.8 square kilometers according to Kamau and Mativo (2013: 1).



The county has two rain seasons although climate change has led to changes in the timing. Traditionally the long rains come between March and April while the short rains are expected between November and December.

According to the 2009 Kenya Census, the population density is 110.4 people per km². The annual growth rate was estimated at 2.8% in 2009 according to the Makueni District Strategic Plan 2005-2010 (Republic of Kenya, 2005). More than half (51.1%) of the population are aged between 15-64 years, while those between 0-14 account for 43.7% of the population. The remaining 5.2% represent those above 65 years.

The economic activities of Makueni County include subsistence agriculture, cotton farming, fruit farming, bee keeping, dairy farming and small scale coffee farming in the high areas, eco-tourism, commercial businesses and sand harvesting. Agricultural produce includes fruits such as mangoes, oranges, papaws and watermelons; it also includes maize, cow peas, beans, pigeon peas, green grams, sorghum, millet, cassava and sweet potatoes.

3.3 Research Design

The study employed a cross-sectional research design, using the mixed methods approach where both qualitative and quantitative data will be gathered. Qualitative data on empowerment of rural women farmers was collected through direct interviews using a questionnaire. Data was also collected through focus group discussions with two different groups of women, those whose husbands reside with them and those whose husband live or work away from home. Qualitative data was also collected through direct observations based on visits to the field.

3.4 Study Population and Unit of Analysis

The study focused on three different Self-Help farmers groups that have an average of 30 members each and these formed the sample to be interviewed. The unit of analysis is the individual women within the household who are members of the farmer groups.

3.5 Sample Size and Sampling Procedure

Respondents were selected from Self-Help farmers groups which were identified purposively based on whether these groups have received extension services or not. The members of these groups were divided into two, those with resident husbands and those whose husbands live or work away from home. From these purposively sampled Self-Help farmers groups, 46 women were identified from the available register using simple random sampling. Twenty three of these were women whose husbands are resident, while the remaining 23 were women with husbands working and residing elsewhere.

3.6 Data Collection Methods

Quantitative data was collected through interviews with 46 women using a survey questionnaire adapted from the WEAI. The questionnaire was administered to 23 women who live with their husbands and 23 women whose husbands live or work away from home. The study focused on access and control of income from farming, whether the decision to spend the income is made by both the man and the woman of the household or whether it is made by the man alone, whether

he is physically present or not. The research also looked at how that income is spent, whether it is spent on basic household needs like food, water, medical care and clothing or whether it is spent on strategic needs like purchase of inputs for the next season.

Qualitative data was gathered through focus group discussions and key informant interviews. The focus group discussion and key informant interview questions were around empowerment and looked at decision making, access and control of productive resources. Two focus group discussions were held, one of women whose husbands reside at home and another of women whose husbands live or work away from home. The key informant interviews were carried out with six couples, three couples whose husbands live at home and three couples whose husbands live or work away from home.

The research sought to identify who within the household, decides what crops will be planted, when they will be planted, when they will be harvested and when and where they will be sold. The study also examined whether both men and women farmers have the same access to extension services.

In order to generate this data, the following methods were used:-

3.6.1 Survey

A questionnaire (Appendix 1) was administered to 46 women, 23 of whom are women whose husbands live or work out of home and 23 with resident husbands. The questions sought to generate information on the decision making roles played by men and women as well as the differences in access to agricultural information by households where the husband is present, compared to households where the husband is absent. The survey questionnaire collected information on whether these households consult on decisions concerning their agricultural production and whether those decisions are influenced by the gender roles in those households, specifically looking at the husband and wife relationship.

3.6.2 Focus Group Discussions

Two focus group discussions were held, the first focus group discussion of 10 women whose husbands are resident and the second focus group discussion of 11 women whose husbands live or work away from home. The focus group discussion sought to stimulate discussions around

who makes the decisions on agricultural production between the husband and the wife. The discussions looked at whether there is consultation between the husband and wife and what influence either partner holds in those decisions. A focus group discussion guide, which appears in Appendix 2 of this report, was used.

3.6.3 Key Informant Interviews

Key informant interviews were done with 6 couples who were interviewed separately. Three of those couples were from households where the husbands are resident, while three couples were from households where the husbands live or work away from home. The key informant interviews were carried out as face to face interviews. However, in two cases where the husband resides elsewhere and was not at home at the time of the study, a phone interview was conducted. A key informant interview guide, which appears in Appendix 3 of this report, was used.

3.6.4 Secondary Sources

The researcher also used secondary data from different sources to increase credibility of the findings rather than only relying on information only from the interviews with the farmers. Secondary data for both qualitative and quantitative data was gathered through an in depth desk review of existing literature.

3.7 Data Processing and Analysis

Data processing and analysis begun in the field, where the researcher checked for completeness of the data to ensure that all questionnaires had been filled in and to perform quality control checks to ensure that the data was entered correctly. The researcher also ensured that the required minimum number of respondents was met.

Qualitative data: Qualitative data has been analyzed thematically, around issues related to female empowerment and decision making within the farming households, as well as other emerging themes. The researcher read and re-read the notes to identify such categories. The researcher has used these themes and categories to explain the findings.

Quantitative data: Computed WEAI scores were generated as a weighted sum of the 5 Domains of Empowerment (5DE) and the Gender Parity Index (GPI). The 5DE sub-index contributes 90%

of the weight of the WEAI, while the GPI contributes 10%. Based on both sub-indexes, the WEAI is an aggregate index that shows the degree to which women are empowered in their households and communities and the degree of inequality between men and women within the household. The researcher examined the data from the WEAI score in order to understand the relationships around empowerment and food security in Makueni County.

The data was analyzed according to three broad areas, namely rural women's access to extension services compared to men, rural women's access to market information compared to men and women's access and control of income from farming.

The data is presented in the form of a report including quotes and case studies from the people interviewed. It is hoped that this research will contribute to the fields of agriculture and be useful to the Ministry of Agriculture in Kenya and other countries. The Ministry of Agriculture would use this information to strengthen the capacity of its extension services, provide support to private sector companies investing in research and extension in agriculture as well as strengthen the gender department of the Ministry of Agriculture. This research is also useful to development partners who are interested in economic development as well as those interested in food security as this research will inform their strategy.

3.8 Ethical Considerations

The researcher ensured that the respondents gave verbal consent to a request to be interviewed after the purpose of the study had been articulated. They were informed that the information they provided would be used to strengthen the agricultural sector in Kenya, and that their identity would not be revealed to others. The language of this consent form was clear and simple so as not to intimidate rural women farmers and other respondents. The researcher also explained to the respondents that their consent to participate should be voluntary, free of any coercion or promises of benefits likely to result from participation. Through observation, the researcher ensured that the participant was competent to give consent.

The researcher also ensured that the information gathered would be protected from unauthorized observation and would honor any respondents who want to remain anonymous but still be part of

the study. The researcher collected confidential information on household production and income and therefore assured the respondents of privacy and anonymity.

The researcher was also willing to share the findings of the research with the respondents who may want to know the results of the research.

It is important to ensure that any translation done conveys the original intent and meaning of the questions, so that the same concepts are measured across households. The researcher paid particular attention on how to interpret questions in the local language to convey complex concepts such as empowerment. The researcher pre-tested the tool to ensure that some of the concerns with translation were addressed before the study commenced.

Prior to the start of the field work, a research permit was sought and obtained from the National Commission for Science, Technology and Innovation (NACOSTI) (see appendix IV).

CHAPTER FOUR

WOMEN'S ACCESS TO AGRICULTURAL INFORMATION AND ITS IMPACT ON HOUSEHOLD FOOD SECURITY

4.1 INTRODUCTION

In this chapter, the demographic characteristics of the respondents as well as the research findings are presented. The data is analyzed focusing on the study objective, namely: To document the effect of women's disempowerment on food security in Kyau Village, Makueni County.

4.2 GENERAL INFORMATION

Out of a target of 46 respondents for the direct interviews, 47 were interviewed, representing a response rate of 102%. The additional respondent cited an interest in taking part in the survey and wanted to share her information in the hopes that it would help other women in a similar situation. There were three self-help groups purposively sampled as follows; Kyeni Kya Kyau Self-Help Group with 38% of the respondents, Kithito Self-Help Group with 34% of the respondents and Nguumo Self-Help Group with 28% of the respondents.

4.3 SOCIO-DEMOGRAPHIC CHARACTERISTICS OF RESPONDENTS

4.3.1 Gender Representation

The study targeted female respondents in Kyau Village. Out of these respondents, 48% have their husbands residing with them in the village while 52% have their husbands residing out of the village.

4.3.2 Age

The respondents for the direct interviews can be classified in the following age groups (Table 1):-

Age group	Percentage
20-30	19
31-40	30
41-50	28
51-60	23

Table 1: Age group of direct interview respondents

Majority of the respondents are between the ages of 31 and 40. The youngest respondent was 22 years old, while the oldest respondent was 67.

4.3.3 Level of Education

The findings indicate that majority of the direct interview respondents have attained primary level education, at 64% while 32% of the respondents have secondary education and only 4% have a college education. Literacy is a critical component in accessing agricultural information and contributes significantly to women's empowerment in agriculture.

4.3.4 Marital Status

Out of the 47 respondents, 2% were single and 98% were married. The single respondent owns her land and indicated that she has several male friends who take care of her, including one who bought her farming land.

"I am unable to bear children so I 'married' a young girl who has had four children for me. My husband is a drunkard."

Respondent ID. 0032, Kithito Group

Out of the 47 respondents interviewed, 15% indicated that though they are married, their husbands do not take any responsibility at the household level. This means that the women

bear all the costs of running these households. 15% also indicated that their husbands are either drunkards or drug addicts.

In the Kamba culture, it is common for couples that are unable to bear children to bring a young woman to the home to act as a second wife. This woman bears children who belong to the first wife, as indicated in the quote above by respondent Id. 0032.

4.3.5 Main Economic Activity

The research findings indicate that 10% of the direct interview respondents rely on teaching, while 12% rely on small businesses such as shops or bars as a source of income. The majority (78%) have farming as their main economic activity. Therefore, majority of the respondents rely on farming although 52% of them have their husbands living out of the village.

4.3.6 Household Size

Table 2 below illustrates the respondents' household size:-

Household size	Number of Respondents
3 - 4	5
5 - 6	20
7 - 8	16
9 - 10	5
11 - 15	1
Total respondents	47

Table 2: Household size of direct interview respondents

The average household size for the respondents interviewed is 7, with some of the women living with their extended family including the elderly relatives.

The following are the main themes that evolved as a result of the study:-

4.4 The effect of men's migration/movement away from home on food security

4.4.1 Access to and control of productive resources in agriculture

From the data, 78% of the respondents indicated that farming is their main economic activity. The other main economic activities cited by respondents was running small businesses – 13% of the respondents, as well as teaching – 9% of the respondents. However, the respondents who indicated that they had other economic activities still relied on farming and provided data relevant to this study. This reliance on agriculture as a main economic activity is in keeping with the findings of Prah (2013; 245) where she states that two thirds of the households in Sub Saharan Africa depend on farm work and sale of farm produce for their income.

Decision making on crops grown for household consumption

Out of those interviewed, 72% indicated that they had input into all decisions on food crop farming for crops grown primarily for household food consumption. The respondents also indicated that 61% had input into all decisions on livestock raising.

“My husband had abandoned me for many years and I was the one making all decisions on the farm. He came back recently when he was bedridden with sickness.”

Respondent ID. 0033, Kyeni Group

Respondents were asked who amongst the members of the household makes the decisions:

With regard to agricultural production, 46% of the respondents indicated that the main female¹ or wife in the household makes the decisions. Only 25% of the respondents indicated that the main

male² or husband makes the decisions in agricultural production. However, 29% of the respondents indicated that the husband and wife jointly make decisions on agricultural production. As per the above quote from respondent No. 0033, she is one of the females who was making the decisions in the household for a long time.

Considering which inputs to buy for agricultural production, 48% of the respondents indicated that the main female or wife in the household makes the decision. However, 27% of the respondents indicated that the husband and wife jointly make decisions on what inputs to buy for agricultural production, while 25% indicated that the main male or husband makes the decisions on what inputs to buy.

Almost half of the respondents (48%) indicated that the main female or wife in the household makes the decisions on who makes the decisions on what types of crops to grow. A further 35% indicated that this decision is made jointly between the husband and the wife, while 17% indicated that the main male or husband decides what crops will be planted for household consumption.

Extent to which respondents can make decisions if they wanted to

In agricultural production, 69% of the respondents indicated that if they wanted to, they could participate in decision making to a high extent – meaning that they were not constrained in decision making. Of the other respondents, 21% indicated that if they wanted to, they could participate in decision making to a medium extent, while 10% indicated that if they wanted to, they could participate in decision making to a small extent – meaning that they felt constrained. In agricultural production generally, 34% of the respondents indicated that they felt they did not have an option on how the decisions were made. Additionally, 50% said that it was not a fear of

¹ Main female can be defined as a female member of the household held in higher regard than the wife, such as the mother in law (husband’s mother)

² Main male can be defined as a male member of the household held in higher regard than the husband such as the father in law (husband’s father)

getting in trouble that caused them to make decisions that way. Majority of the respondents, 63%, indicated that they made those decisions regardless of what others thought of them. Generally, 65% of the respondents indicated that they made those decisions because they personally felt that it was the right thing to do.

Out of all the respondents, 67% of the respondents indicated that if they wanted to, they could participate in decision making, to a high extent, on what inputs to buy. Of the other respondents, 23% indicated that if they wanted to, they could participate in decision making to a medium extent, while 10% indicated that if they wanted to, they could participate in decision making to a small extent. In decisions concerning which inputs to use, 34% of the respondents indicated that they felt they did not have an option on how the decisions were made. In addition, 59% said that

“My husband works in Emali and he never comes home or sends any money. He has another wife there and he sends her children here to me in Kyau saying that since the land is his, it should feed all his children.”

Respondent ID. 0042, Kithito Group

it was not a fear of getting in trouble that caused them to make decisions that way. Majority of the respondents, 72%, indicated that they made those decisions regardless of what others thought of them. Generally, 65% of the respondents indicated that they made those decisions because they personally felt that it was the right thing to do.

Out of all the respondents, three quarters (75%) indicated that if they wanted to, they could participate in decision making on what crops to grow for agricultural production - to a high extent. Of the other respondents, 19% indicated that if they wanted to, they could participate in decision making to a medium extent, while only 6% indicated that if they wanted to, they could participate in decision making to a small extent. In deciding which types of crops to plant, 32% of the respondents indicated that they felt they did not have an option on how the decisions were made. Additionally, 50% said that it was not a fear of getting in trouble that caused them to make decisions that way. Majority of the respondents, 72%, indicated that they made those decisions regardless of what others thought of them. Generally, 63% of the respondents indicated that they made those decisions because they personally felt that it was the right thing to do. In the example of respondent No. 0042, she has no say on how the food is used as she has to feed the children from her husband's second wife.

The fact that majority of the respondents make decisions or believe that they can make decisions related to agricultural production is significant towards their empowerment. This indicates that, to a large extent they are in control of what they plant, where they plant and what they do with the harvest. This finding is contrary to a World Bank finding (2010; 385), which believes that despite doing a large share of the work in the agricultural sector, rural women in Africa often lack control over key farm inputs and decisions. However, according to IFPRI (2013; 4) even when a man makes the major decisions, a woman may make the decisions for specific crops or activities, which is similar to the findings in this research where majority of the women are making the decisions on the food crops..

Participation in groups

The findings show that 94% of the respondents are members of an agricultural or livestock producer's group. However, only 51% are active members of their group. Of those who are active, 45% do not provide input in decisions made within the group. Additionally, 77% of those interviewed belong to a credit or micro finance group, including savings and credit associations or merry go rounds. Again, only 55% are active members of these credit groups. Of those who are active, 41% do not provide input in decisions made within the group. However, 100% of the respondents belong to a religious group, and 98% of those are active members of those religious groups. Of those who are active, 52% provide input into all decisions made within the group.

The above findings illustrate that though the respondents are members of groups, they are not active in the groups related to agriculture and livestock production. This means they are not benefiting as much as they should be from these kinds of groups. This finding is similar to Quisumbing and McClafferty (2003; 42) when they make the case on the importance of meeting the needs of women in these groups. A first step involves the definition of membership rules: instead of allowing one member per household, both male and female members of households could be considered eligible for membership. Attention needs to be paid to such details as the timing, location and structure of formal meetings which should reflect the importance of women's participation and allow for their opinions to be taken seriously.

Participation in groups contributes to women's empowerment as it contributes directly to food security as argued by Badu-Apraku et al, (2007; 329) in an analysis of informal women's groups, which stated that the majority of members reported that, as a result of their participation in group activities, they had increased the use of improved varieties, diversified economic activities and increased maize production. These changes have resulted into increased income, better food security, increased literacy, and improved hygiene in members' households. The results led to the conclusion that informal women's groups are potential channels for communicating information to rural women for enhanced maize production.

4.4.2 Access to income from agriculture

Regarding the input respondents had on income generated from food crop farming, 44% indicated that they had input into all decisions, while 28% indicated that they had into most decisions. On how much input the respondents had on income generated from livestock raising, 43% indicated that they had input into all decisions. These findings show that majority of the respondents have a say in the use of income from agriculture.

Decisions on minor household expenditure

Out of all those interviewed on decisions concerning minor household expenditure, such as food for daily consumption or other household needs, 36% of the respondents indicated that they felt they did not have an option on how the decisions were made. Majority of the respondents, 69%, indicated that they made those decisions regardless of what others thought of them. Generally, 70% of the respondents indicated that they made those decisions because they personally felt that

it was the right thing to do. These findings show that majority of the respondents have a say in how the income from agriculture will be used. These findings correlate with Saito (1994; 14) when she states that exchanges of goods and services among households or compound members are common and elaborate arrangements determine the extent to which individuals can decide on the disposition of their produce – how much to sell, retain, consume, process or store.

4.5 The differences in access to information (extension/market) by female and male headed households

4.5.1 Access to extension services

Out of those interviewed, both those with resident husbands and those whose husbands have migrated, 81% indicated that they have not met with an agricultural extension worker or livestock extension worker in the past 12 months. Of the 19% who had met with an extension worker in the last 12 months, 22% had met the extension worker only once, 67% had met an extension worker twice, while 11% had met an extension worker three times. It is important to point out that 90% of the extension workers were male, while only 10% were female. Therefore both those respondents whose husbands reside at home and those whose husbands reside out of the village, do not have access to extension services. Extension services are useful in empowering farming households with information on the best practices to enable them to have optimal yields from their farms. These findings are similar to Rwomire's (2001; 99) where he states that rural African women's production in agriculture has been hampered by inadequate extension services.

4.5.2 Access to market information for agriculture

Out of all those interviewed, 44% of the respondents indicated that the main female or wife in the household makes the decisions regarding when and who will take crops to the market. An additional 28% indicated that the husband and wife jointly make the decisions regarding when and who will take crops to market, while 28% of the respondents indicated that the main male or husband is responsible for making the decisions regarding when and who will take the crops to the market.

The findings indicated that 83% of the respondents stated that if they wanted to, they could participate in decision making to a high extent. Of the other respondents, 10% indicated that if they wanted to, they could participate in decision making to a medium extent, while only 4% indicated that if they wanted to, they could participate in decision making to a small extent. In terms of decisions on taking the food crops to market, 40% of the respondents indicated that they felt they did not have an option on how the decisions were made. Additionally, 56% said that it was not a fear of getting in trouble that caused them to make decisions that way. Majority of the respondents, 70%, indicated that they made those decisions regardless of what others thought of them. Generally, 60% of the respondents indicated that they made those decisions because they personally felt that it was the right thing to do. Therefore both those respondents whose husbands reside at home and those whose husbands reside out of the village, do not have access to market information.

4.5.3 Individual leadership and influence in the community

The questions on leadership focused on the respondent's ability or willingness to speak in public. On whether the respondent felt comfortable speaking up in public to help make decisions on infrastructure, like small wells, roads, schools to be built in their community, 34% indicated that they did not at all feel comfortable only 15% indicated that they feel very comfortable speaking in public on those issues. Nearly one third of the respondents (34%) indicated that they did not at all feel comfortable, while only 11% indicated that they feel very comfortable speaking in public on those issues around proper payment of wages for public works or other similar programs. Almost half of the respondents (47%) indicated that they did not at all feel comfortable, while only 6% indicated that they feel very comfortable speaking in public on those issues around the misbehavior of authorities or elected officials.

These findings illustrate women's unwillingness to challenge those in leadership positions and therefore an inability to drive their own agenda in group settings. This is also argued by Baden (2000; 15) whose evidence suggests that formal producer collectives in Sub Saharan Africa have low percentages of women members. Even when women are more numerous as members, this is often not reflected in the leadership and decision making in producer organizations.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This research was designed to document the effect of women's disempowerment on food security in Kyau Village, Makueni County. The study specifically sought to determine the effects of men's migration/movement away from home on food security as well as investigate the differences in access to information by female headed households and male headed households. This chapter provides the summary of the findings from chapter four. This chapter also provides recommendations that would result in women's empowerment as well as increased food security.

5.2 Summary of Major Findings

The following are the major findings of the research:

5.2.1 The effect of men's migration/movement on food security

Decision making on crops grown for household consumption; Majority of the respondents had a say in the decision making on food crop farming for crops grown primarily for household consumption, at 72% of the respondents. This finding tallies with the premise that African rural women are primarily responsible for putting food on the table and would therefore be the ones to decide what food crops will be planted. The findings also show that 29% of the respondents indicated that they are practicing intra household decision making, where the husband and the wife jointly make decisions on agricultural production. Only 17% of the respondents indicated that the main male or husband decides what crops will be planted for household consumption.

Purchase of inputs; Out of the respondents interviewed, only 25% indicated that the male or husband makes the decision on which inputs to buy. This implies that the women are somewhat empowered to make decisions on how to spend on inputs and which inputs to buy, whether their husbands are resident or not. However, they do not have a good enough income to purchase the recommended inputs and therefore still struggle with low yields and food insecurity.

Participation in groups and leadership in the community; The study found that although 94% of the respondents are members of an agricultural or livestock producer's group, only 51% are active members in those groups. Of those who are active, 45% do not provide input in decisions made within the groups. The women interviewed do not have confidence to participate in the decision making at the groups, and yet this would contribute greatly to their empowerment as at the groups is where information and access to credit would be available for them.

Surprisingly, the study found that 100% of the respondents belong to a religious group, and 95% of them are active members of these religious groups. This means that there is a way that religious groups have created a safe space for women to feel free to participate and to believe

that they are benefiting from being members of these groups. Interestingly, even in the religious groups only 52% provide input into all decisions made in the groups. This means that there still remains a gap between participation and decision making, and herein lies some opportunities for the government as well as development and private sector partners, that will be addressed in the recommendations section.

These findings tally with the findings on leadership in the community, when the respondents were asked questions around their ability or willingness to speak in public. In terms of comfort in speaking in public to make decisions on infrastructure, like small wells, roads, schools to be built in their community, 34% did not feel at all comfortable speaking up. Only 11% indicated that they felt comfortable speaking up. This means that any decisions on rural infrastructure which will directly affect rural women, such as location of wells or roads that enable them access markets, is not made by the women who need and use this infrastructure.

Another finding on leadership in the community focused on comfort in speaking up in public to protest the misbehavior of authorities or elected officials, where 47% of the respondents did not feel at all comfortable. This speaks to the ability to confront corruption or poor decisions made at the community or group level and directly affects the provision of services in the rural areas. It also means that women who are not comfortable speaking up in public to protest misbehavior of authorities cannot speak up to articulate their issues and drive their own agenda in those groups. Only 6% of the respondents felt comfortable speaking up to protest the behavior of officials.

These findings illustrate that for women whose husbands are not in those groups and able to articulate issues on their behalf, such women are not benefiting from these groups and the empowerment they should get in agriculture and food security.

5.2.2 Access to information by female headed and male headed households

The research focused on finding out whether there were differences in access to information, both market and extension information, by female headed and male headed households. This is presented below:-

Access to extension services; The research found that majority of the respondents – 81% have not interacted with an extension worker in the last 12 months, whether in agriculture or in livestock production. This means that the rural women are producing food for household consumption with very little support on the right information and the recommended inputs for their agro-ecological zone. Of the 19% who interacted with an extension worker, 90% of the extension workers that they met with were male workers. This means that though the female farmers are not empowered to engage or question authorities such as extension workers, they are forced to interact with male extension agents, making it that much harder for them to interact or learn from them. The demographics of the respondents indicated that 64% of the respondents have attained primary education, 32% have attained secondary education and only 4% have college education. This means that any information that they rural women receive should be

transmitted in a manner that they are comfortable with and this will be explained in more detail in the recommendations section.

The key informant interviews with both the private sector as well as the government extension agents, found that they do not view the farmers as either male or female. They view them as more of a homogenous group, with similar needs and interests. As they develop their products, messages or interventions, they do not tailor them to the specific needs of either men or women.

These findings illustrate that the rural female farmers, whether their husbands reside at home or not, are not being reached with information on agriculture in a timely manner. It also means that when private and public sector develop extension services, they are not targeting the women and their needs and concerns.

Access to market information for agriculture; Once again, the main female or wife in the household makes the decisions regarding when and who will take crops to the market, at 44% of the respondents. This in itself is a form of empowerment as the households do not have a surplus as such, but only sell food so that they can meet other household needs.

Use of income from agriculture; 44% indicated that they have input into all decisions on the use of income generated from food crop farming. Therefore the women largely decide what will be sold, when it will be sold and how the money from that sale will be used. However, this level of empowerment is not very great for these women as they do not have surplus produce to sell and actually sell from the deficit that they have.

5.3 Conclusion

In conclusion, the study found that men's movement or migration from home affects food security as the women are not getting the support they need in food production. This is in terms of access to adequate resources such as appropriate inputs and market information. However, these women are still largely responsible for making decisions regarding what food crops to grow and whether to sell what they have grown, and even, how to spend that income. Although what the women harvest is not much, and when they sell what they are forced to sell to meet their household needs they do not get much money, the ability to make the decision on what to plant and when to sell contributes a great deal to their empowerment. These are small but significant strides towards women's empowerment and food security, which can be strengthened and applied to livestock and cash crop farming. Although the women are able to make those small decisions on food crops and use of income, they are still struggling to put food on their table. This is tied to an inability to access the relevant, timely information they need, that would empower them to know what to plant and how to plant it for optimal yield.

The research also found that the rural women are willing to participate in groups and in the community development, but only to a certain extent. They do not contribute in decision making in those groups, and therefore do not drive the development agenda to address or suit their needs. Working through groups is one of the best ways to reach large numbers of rural women as well as a great way to assess performance. These women need to tap into their social capital much more than they are doing at the moment so that these groups can work for them rather than being seen as an activity that takes them away from their other household chores.

The women feel burdened with the responsibility of putting food on their table, with little or no support from their husbands. Those with husbands residing at home, indicated substance abuse and domestic violence as key contributors to their husbands' inability or unwillingness to help out in the farm. Here help means labor in the farm, support with productive resources such as access to prime agricultural land and information on best farming practices. Those with husbands residing away from home indicated little or no support in terms of information and purchase of inputs.

The study also shows that those respondents whose husbands reside at home and those whose husbands reside out of the village, do not have access to extension services. Majority of the rural women interviewed have not interacted with extension agents. The study also found that those who had interacted with extension agents were mostly male extension agents, making it that much harder for the women to freely interact with them.

5.4 Recommendations

The researcher recommends certain best practices that can be adopted by development partners, the private sector or government agencies such as the Ministry of Agriculture that would contribute to women's empowerment in agriculture. These recommendations would ensure that those women who are *de facto* or *de jure* heads of households are better equipped to handle food insecurity and have more access to extension services and agricultural information.

To address the effect of men's migration/movement away from home on food security:-

1. **Work through religious groups** – as the rural women are so active and committed to the religious groups, partners should look at ways to build the women's confidence to speak in public as well as hold leadership positions through these groups. They should also use these groups to provide agricultural information in the rural areas.
2. **Strengthen existing groups** – there is a need to move from participation to decision making for the rural women who are in groups. This is possible if it involves a concerted effort by development partners to ensure that when they work with the groups, women are encouraged to take part in the decision making and that they understand that they have a right to influence the outcome of group activities. The groups also need to be empowered to encourage women to take up leadership positions and learn to articulate their issues clearly as well as come up with solutions that can work for them.
3. **Strengthen partnerships** – The above cannot be done in a successful, sustainable manner, without development partners working together. There is need for the government, the relevant private sector and the development agencies to hold community consultations, where they specifically ensure that women articulate themselves and are heard on issues related to food security.

To address the differences in access to information by female headed and male headed households:-

4. **Passing on of information** – the rural women may not be highly educated but they are still the key players in terms of food security. Therefore, any information on agriculture should be presented in a clear manner which the women can access and benefit from. This includes use of the local language in packaging and sharing of information. It also includes using pictures and cartoons, rather than words to describe inputs or any related instructions.
5. **Don't think of farmers as homogenous** – The extension service providers, both the private sector and government indicated that they do not really think about the farmers as either male or female. This needs to change so that they can address the needs differently and tailor their interventions to suit the appropriate target market.

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APPENDIX I: QUESTIONNAIRE FOR HOUSEHOLD SURVEY

Household ID: _____ Respondents ID: _____

Group Name: _____ Gender: _____

Date: _____ Location: _____

Introduction

My name is Lydia Mbevi. I am a student pursuing a master’s degree course at the University of Nairobi. As part of my degree course, it is a requirement that I undertake a study for my thesis. I am therefore carrying out a study on how gender empowerment is linked to food security in Kyau village. You have been selected to participate in this study because you are a member of group. Your participation in this study is voluntary and you will gain or lose nothing by participating. Your participation will remain anonymous and the content of our discussion will remain confidential. Can I spend about 20 minutes with you so that you can help me with this research?

Education Level: _____ Age/Age Group: _____

Marital Status: _____ Main Economic Activity: _____

Household Size: _____ Sex of respondent: _____

Relationship with the household head: _____

Role in household decision-making around production and income generation

	Activity	Did you (singular) participate in the past 12 months (that is during the last [one/two] cropping seasons)? Yes 1 No 2 >> next activity	How much input did you have in making decisions about [ACTIVITY]?	How much input did you have in decisions on the use of income generated from [ACTIVITY]?
1	Food crop farming: crops that are grown primarily for household food consumption			
2	Cash crop farming: crops that are grown primarily for sale in the market			

3	Livestock raising			
4	Non-farm economic activities: Small business, self-employment, kiosk			
5	Wage and salary employment: in-kind or monetary work both agriculture and other wage work			

Code 1: Input into decision making

- No input1
- Input into very few decisions2
- Input into some decisions3
- Input into most decisions4
- Input into all decisions5
- No decision made6

Decision making within households

<p>Ask G01 for all categories of activities before asking G02</p> <p>If household does not engage in that particular activity, enter code for “Decision not made” and proceed to next activity.</p>	<p>When decisions are made regarding the following aspects of household life, who is it that normally takes the decision?</p> <p>If 1 and respondent is male OR</p> <p>If 2 and respondent is female (>> next domain) otherwise >>G02</p> <p>Code 1</p>	<p>To what extent do you feel you can make your own personal decisions regarding these aspects of household life if you wanted to?</p> <p>Code 2</p>
Agricultural production		
What inputs to buy for agricultural production		
What types of crops to grow for agricultural production		
When or who would take crops to the market		
Livestock raising		
Non-farm business activity		
Your own (singular) wage or salary employment		

Major household expenditures (such as a large appliance like a TV)		
Minor household expenditures (such as food for daily consumption or other household needs)		
Whether or not to use family planning to space or limit births		

CODE 1: (G01) Decision Making	CODE 2: (G02) Extent of participation in decision making
Main male or husband1	Not at all1
Main female or wife2	Small extent2
Husband and wife jointly3	Medium extent3
Someone else in the household4	To a high extent4
Jointly with someone else inside the household5	
Jointly with someone else outside the household6	
Someone outside the household/other7	
Decision not made98	

<p>This set of questions is very important. I am going to give you some reasons why you act as you do in the activities I just mentioned. You might have several reasons for doing what you do and there is no right or wrong answer. Please tell me how true it would be to say:</p> <p>If household does not engage in that particular activity, enter code for "Decision not made" and proceed to the next activity</p>	<p>My actions in [DOMAIN] are determined by the situation. I don't really have an option.</p> <p>[READ OPTIONS]</p> <p>CODE 1</p>	<p>My actions in [DOMAIN] are partly because I will get in trouble with someone if I act differently.</p> <p>[READ OPTIONS]</p> <p>CODE 1</p>	<p>Regarding [DOMAIN] I do what I do so others don't think poorly of me.</p> <p>[READ OPTIONS]</p> <p>CODE 1</p>	<p>Regarding [DOMAIN] I do what I do because I personally think it is the right thing to do.</p> <p>[READ OPTIONS]</p> <p>CODE 1</p>
Agricultural production				
Getting inputs for agricultural production				
The types of crops to grow for agricultural production				
Taking crops to the market (or not)				
Livestock raising				
Non-farm business activity				
Your own (singular) wage or salary employment				
Major household expenditures (such as a large appliance like a TV)				
Minor household expenditures (such as food for daily consumption or other household needs)				
What to do if you have a serious health problem				
How to protect yourself from violence				
Whether and how to express religious faith				
What kind of tasks you will do on a particular day				
Whether or not to use family planning to space or limit births				

CODE 1: Motivation for activity	
Never true	1
Not very true	2
Somewhat true	3
Always true	4
Decision not made	98

Access to agriculture extension

	Question	Response	Response Options
6	Have you (yourself) ever met with an agricultural extension worker or livestock extension worker in the past 12 months?		Yes1 No2 >>next section
7	How many times did you meet with the extension worker in the past 12 months?		[Enter number of visits]
8	The last time you met with an extension worker, were they a male or female?		Male1 Female2 Both male and female....3

Individual leadership and influence in the community

	Question	Response	Response options
9	Do you feel comfortable speaking up in public to help decide on infrastructure (like small wells, roads, schools) to be built in your community?		No, not at all comfortable1 Yes, but with a great deal of difficulty..2
10	Do you feel comfortable speaking up in public to ensure proper payment of wages for public works or other similar programs?		Yes, but with a little difficulty3 Yes, fairly comfortable4
11	Do you feel comfortable speaking up in public to protest the misbehavior of authorities or elected officials?		Yes, very comfortable5

Group membership		Is there a [GROUP] in your community? Yes1 No2 >> next group	Are you an active member of this [GROUP]? Yes1 No2 >> next group	How much input do you have in making decisions in this [GROUP]? (>> next group)	Why are you not a member of this [GROUP]?	Control over decisions No input1 Input into very few decisions2 Input into some decisions3 Input into most decisions4 Input into all decisions5
	Group Categories	E06A	E06	E09	E09A	
12	Agricultural/livestock producer's group					
13	Water users' group					Code 2: (E09A) Why not member of group
14	Forest users' group					
15	Credit or microfinance group (including SACCO/merry-go-round/VSLAs)					Not interested1 No time2 Unable to raise entrance fees3 Unable to raise reoccurring fees4
16	Mutual help or insurance group (including burial societies)					Group meeting location not convenient5 Family dispute/unable to join6
17	Trade and business association					Not allowed because of sex7
18	Civic groups (improving community) or charitable group (helping others)					Not allowed because of other reason8
19	Local government					Other, specify9
20	Religious group					
21	Other women's group (only if it does not fit into one of the other categories)					
22	Other (specify)					

APPENDIX II: FOCUS GROUP DISCUSSION GUIDE

Introduction

My name is Lydia Mbevi. I am a student pursuing a master's degree course at the University of Nairobi. As part of my degree course, it is a requirement that I undertake a study for my thesis. I am therefore carrying out a study on how gender empowerment is linked to food security in Kyau village. You have been selected to participate in this study because you are a member of group. Your participation in this study is voluntary and you will gain or lose nothing by participating. Your participation will remain anonymous and the content of our discussion will remain confidential. Can I spend about one hour with you so that you can help me with this research?

Number of participants: _____

Decision Making on Productivity

1. In your household, how are decisions made on access to agricultural land?
 - 1.1 Who has more decision making power between you and your significant other?
 - 1.2 What is the cause of this difference in decision making power?
2. In your household, who has control of the agricultural land?
 - 2.1 Who has more decision making power over control of the agricultural land between you and your significant other?
 - 2.2 What is the cause of this difference in decision making power?
3. In your household, how are decisions made on what will be planted?
 - 1.1 Who has more decision making power on what will be planted between you and your significant other?
 - 1.2 What is the cause of this difference in decision making power?
4. In your household, how are decisions made on use of labor for agriculture (hiring of casuals, what tasks they perform)?
 - 4.1 Who has more decision making power on use of labor for agriculture between you and your significant other?
 - 4.2 What is the cause of this difference in decision making power?
5. In your household, how are decisions made on use of inputs for agriculture?
 - 5.1 Who has more decision making power on use of inputs between you and your significant other?
 - 5.2 What is the cause of this difference in decision making power?

6. In your household, how do you access agricultural information (prices of food produce in the market, new technologies in the market)?
 - 6.1 Who has more access to agricultural information between you and your significant other?
 - 6.2 What is the cause of this difference in access to agricultural information?
7. In your household, how do you decide where to sell the produce?
 - 7.1 Who has more decision making power on where to sell the produce between you and your significant other?
 - 7.2 What is the cause of this difference in decision making power?
8. In your household, how do you decide how income from agriculture will be spent?
 - 8.1 Who has more decision making power on use of use of income from agriculture between you and your significant other?
 - 8.2 What is the cause of this difference in decision making power?
9. Is there anything else you would like to tell me?

APPENDIX III: KEY INFORMANT INTERVIEW GUIDE

Introduction

My name is Lydia Mbevi. I am a student pursuing a master's degree course at the University of Nairobi. As part of my degree course, it is a requirement that I undertake a study for my thesis. I am therefore carrying out a study on how gender empowerment is linked to food security in Kyau village. You have been selected to participate in this study because you are a member of group. Your participation in this study is voluntary and you will gain or lose nothing by participating. Your participation will remain anonymous and the content of our discussion will remain confidential. Can I spend about 20 minutes with you so that you can help me with this research? (a) Yes b) No

Institution: _____ Position in institution: _____

Sex: _____

If No ask for the reason why and note down the reason and end the interview.

1. What type of farmers do you work with?
 - 1.1 What are the reasons why you work with these types of farmers?
2. Among the farmers you work with, what channels of communication do you use (probe on how they pass messages to farmers)?
 - 2.1 What are the advantages of using these channels (probe access to men and women)?
3. Are there farmers you specifically target in your passing of messages?
 - 3.1 Of the people mentioned, why are they targeted (probe for difference in male and female targeting)?
 - 3.2 Of the people not mentioned, why are they not targeted?
4. What kind of interventions do you provide to these farmers?
 - 4.1 How do you decide which intervention to provide (probe for a difference between male and female needs)?
5. What challenges do farmers face in food production?
 - 5.1 Do women farmers face the same challenges?
6. Is there anything else you would like to tell me?

APPENDIX IV: NACOSTI PERMIT

**THIS IS TO CERTIFY THAT:
MS. LYDIA MUENI MBEVI
of UNIVERSITY OF NAIROBI, 0-505
NAIROBI, has been permitted to conduct
research in *Makueni County***

**on the topic: *WOMENS ACCESS TO
AGRICULTURAL INFORMATION AND ITS
IMPACT ON HOUSEHOLD FOOD
SECURITY IN KYAU VILLAGE MAKUENI
COUNTY KENYA***

**for the period ending:
1st November, 2016**

Atibotti
.....
**Applicant's
Signature**

**Permit No : NACOSTI/P/15/95629/8341
Date Of Issue : 3rd November, 2015
Fee Received :Ksh 1000**



Atiusen
.....
**Dir. Director General
National Commission for Science,
Technology & Innovation**