Gender Role in Household Food Access in Githunguri And Mwala Sub-Counties of Kenya

Dr. Geoffrey Kinyanjui Waweru¹

Quickmind Consultants; P.O. Box 6367-00100 Nairobi; +254 - (0)722869138 E-mail of the corresponding author: mwalimujaffe@gmail.com

Dr. Fridah Wilumila Mugo²

Department of Urban and Regional Planning University of Nairobi P.O. Box 30197-00100, Nairobi. +254-(0)710806139 fridahmugo@yahoo.com; fridah.mugo@uonbi.ac.ke

Dr. Stanely Omuterema Oluchiri³

School of Disaster Management & Humanitarian Assistance, Masinde Muliro University of Science & Technology, P.O. Box 190-50100; Kakamega, Kenya: Tel. +254 - (0)722177461

Omu53@yahoo.com

ABSTRACT

Food access is a critical concern for every household, community or government as it is a basic source for human energy to do work and for survival. Access to food is an essential component of good nutrition, health and well-being. Food access risks affecting households and mainly the poor arise from many sources. Knowledge of food access risk sources and coping strategies can contribute to forward planning to avert food security hazards. This study analyzed the extent of gender role difference in household food access and established the relationship between household food access and coping strategies employed during hazards. The study was carried out in high and medium potential livelihood zones of Githunguri and Mwala Sub-Counties respectively. Multistage sampling strategy was used to get the sample of 384 households. Face to face interviews using structured questionnaires were conducted. Two Focus Group Discussions of 10 persons each with balanced gender, were conducted. Five key informants per sub-county were also interviewed using key informant schedules. Data were analyzed using SPSS Statistical data Package for Social Sciences Version 17. Chi-Square χ2 test results for variables in 24 out of 30 gender role variables indicated a p value less than the significance level (0.00 <.05). The study therefore rejected the null hypothesis and concluded that there was significant difference in gender role based food access in male and female headed households in Githunguri and Mwala Sub-Counties. The study recommended two studies that include: (i) Determination of opportunities and constraints to optimal income generation for improved food access (ii) Opportunities and constraints to increased food production by gender hence food access.

Key words: Gender role; Household food access; Food security; Githunguri; Mwala; Kenya.

1.0 Introduction

Disaster risks and losses relating to food access keep rising throughout the world due to increased climate variability and changes introduced by human activities in agricultural and food production systems. Reliance on run down natural resources and increase in population growth combined with demographic changes have resulted to unplanned urbanization and increased demand for food, making food security one of the most stubborn challenges for nations (FAO, 2008). The Hyogo Framework for disaster reduction agreed on by nations in Kobe, Hyogo, Japan in 2005 expressed the need for nations to improve in particular the reduction and management of food security risks. In the agreement, gender is considered the central organizing principle in all societies, hence its consideration in all social strategies including household food assessment (UNISDR, 2005).

Food comes first all over the world. Hungry children may not attend school or may start school late, drop out sooner and learn less when they do attend. This reduces the achievements of universal primary and secondary education (GOK, 2007). Poor nutrition for women on the other hand is one of the most damaging outcomes of gender inequality. It undermines women's health, stunts their opportunities for education and impedes employment. Further, overall individual reproduction and production processes are greatly reduced. Under the burden of chronic poverty that leads to less or no food, farmers, forest dwellers, fishermen and pastoralists may use their environments in unsustainable ways, leading to degradation of natural resources and further stressing biodiversity and livelihoods (FAO, 2005).

The above arguments clearly demonstrate the need for gender considerations in food access initiatives in households and communities. Differences in gender roles often lead to differing risk profiles for women and men in disasters. In all settings at home, at work or in the neighborhoods gender engagements and their results are often different. Gender therefore shapes the capacities and resources of individuals in communities to minimize harm, to adapt to hazards and respond to disasters. It is evident from past studies on disasters that low-income women and those who are marginalized due to marital status, physical ability or age, social stigma or caste are especially disadvantaged mainly in food access (GOK 2011). At the grassroots level women are often well positioned to manage risk due to their roles as both users and managers of environmental resources. As heads of households, economic providers, caregivers and community workers, women are more present than men. For these reasons it is necessary to identify and use gender differentiated information to ensure that risk reduction strategies are correctly targeted at the most vulnerable and are effectively implemented through the roles of both men and women (UNISDR, 2008).

It is not surprising, therefore, that particular gender economic activities largely determine the level of food access for a household. Different gender potentials imply different types and levels of food production and acquisition that directly relate to the household wellbeing. Rural incomes are often related not only to

climatic and geographical patterns but also to the number of human hours put into a given production by either gender. Gender efforts are required for a trickle-down mechanism for food access to be achieved and maintained. As noted earlier women are highly involved in all levels of food security dimensions i.e., access, availability, utilization and stability. Moreover they are involved in production, buying and selling and other access-related activities (GOK, 2008).

Lessons drawn from observed practices as well as Government initiatives on agricultural development and production especially with respect to practical implementation of agricultural programmes in Kenya place women at the vanguard. Women are important as food producers, managers of natural resources, income earners and caretakers of household food security. Researchers have noted that agricultural productivity increases by as much as 20 percent when women are given the same inputs as men (IFPRI 2002). In Kenya women are known to contribute over 80% of labour that is related to agricultural production and coordination. They are also in charge of their families' feeding schedules that most often include sourcing, transporting, preparation and serving (GOK, 2008). Acknowledgment that women's efforts are of paramount importance provides a platform for evaluating the position of gender participation and relations in households in relation to food access and by extension food security. In most instances the division of social tasks between men and women and how this affects the households is unknown, therefore the need for carrying out a gender analysis to clarify gender roles in order to provide information on political, social and economic power structures and gender relations within households. Such information will help in shaping people's attitudes towards food security access and gender equality as well as influence sustainable decisions as regards development cooperation in households and communities.

This study was carried out to examine the gender role in household food access. The study hypothesized that there was no significant difference in gender role contribution for male and female headed households in Githunguri and Mwala Sub-counties.

2.0 Materials and methods

2.1 Study area

a. Githunguri Sub-County

The study was carried out in two different livelihood zones i.e. high potential livelihood zone (Githunguri Sub-County) versus a medium potential livelihood zone (Mwala Sub-County). Among many characteristics, the two study regions have contrasting production patterns, rainfall, temperature and cultural differences.

Githunguri Sub-County was created from the former Kiambu East District in 2007. It borders Limuru Sub-County to the West, Gatundu to the North, Kiambaa to the South and Ruiru to the East. The sub-county covers an area of 173.5 square Kilometres. It consists of three administrative divisions that include Ikinu, Githunguri and Komothai. The Sub-County has six administrative locations that include Ikinu, Githiga, Githunguri, Ngewa, Komothai and Kiratina. The population is estimated at 147,763 with a density of 862

persons per square kilometer (GOK, 2009). This is high when compared to the Kiambu County population density of 638 persons/sq. km and the national population density of 70.7 persons/sq. km. (Republic of Kenya, 2009).

Githunguri has a bimodal rainfall pattern. Long rains are experienced between Mid-March to May and short rains between Mid-October to November. The amount of rainfall declines towards the east. Githiga, northern parts of Komothai and north eastern parts of Githunguri receive the highest amount of rainfall (1600-2000). The southern parts of Ngewa and Komothai receive the least amount of rainfall (600-800mm). The average for the sub-county is 1231-1428 mm (Republic of Kenya, 2008). Githunguri is generally warm with an average annual temperature of 18.8°C.

Ngewa and Githiga are the two locations in Githunguri Sub-County that were purposively sampled for research. The selection took into account the different livelihood activities undertaken, for example, while farmers in Ngewa grow coffee as a cash crop, in Githiga, they grow tea. Agricultural activities in the two locations are influenced by soil fertility and rainfall. Both Ngewa and Githiga locations have good deep soils varying in shade from red to dark reddish brown. The soils are suitable for agriculture and mainly for crop cultivation (GOK, 2009). Githiga location is located on the western side of Githunguri. It is much cooler and not suited for coffee. Farmers here grow tea bushes as a cash crop.

In addition to the cash crops, farmers in the two locations also grow food crops like irish potatoes, maize, beans, sweet potatoes, vegetables and fruits in small quantities. Farmers also keep livestock such as cattle, goats, sheep, pigs, poultry, rabbits and donkeys. Although farmers in the sub-county have for a long time depended on tea and coffee for income, keeping of dairy cattle under zero-grazing system for commercial purposes has lately overtaken coffee and tea farming. Exotic poultry is kept for commercial purposes and indigenous poultry kept for food, commercial and ornamental purposes (GOK, 2009). Because of the suitable climate, Githunguri is expected to be more food secure than Mwala.

b. Mwala Sub-county

Mwala Sub-County was curved from the former Machakos District in 2007. It borders Machakos Sub-county to the west, Kangundo Sub-County to the north-west, Kitui County to the south-east, Yatta County to the east and Mbooni sub-county to the south. Mwala sub-county lies along longitude 14⁰ 42' south and latitude 35⁰ 26' east. The sub-county covers an area of 1,017.9 square kilometers, most of which is semi-arid. The sub-county has two administrative divisions. These are Mwala Division with seven locations and Yathui Division with six locations. In 2009, the Sub-county had a population density of 160 persons per square kilometer with 64 to 74 percent of the population living below the poverty line (KNBS, 2011). This is close to the Machakos County population density of 177 persons/sq. km. and much higher than the national average of 70.7 persons/sq. km.

Mwala has two distinct rainy seasons. The long rains fall between March and May while the short rains fall between October and December. A large proportion of the studied area is semi-arid and receives very little and at times erratic rainfall. The annual mean rainfall varies from 500-1300 mm with high altitude areas receiving more rain than the low-lying areas. Rainfall, however is very unreliable and varies from year to year. Most often the available rainfall cannot support agricultural activities the whole year round. The plains which, receive less rainfall in the short rains and are flooded in the long rains are characterized by open grass lands with scattered acacia trees. High altitude areas receiving high rainfall have dense vegetation and are more suitable for rain fed agriculture (GOK, 2009).

Agriculture was found to be the main economic activity, the main source of food and employment in Mwala Sub-County (GOK, 2009). These comprised of livestock and crop farming. Livestock production involved keeping of cattle, goats, sheep, pigs, poultry, rabbits, bees and donkeys. Indigenous chicken was the most common poultry kept. The main crops grown in the study area included maize, beans, sorghum, cow peas, green peas and fruits such as mangoes, oranges, water melon and tomatoes. However, recurrent extreme drought affects both agriculture and livestock leading to low yields and perpetual food shortages.

Makutano and Wamunyu are the two locations in Mwala that were purposefully sampled for the detailed study. The two locations were identified by the local leaders as representing the diversity of the sub-county in all features such as livestock types, crops and general development of resources. Food production depends on the amount of rainfall and soil fertility. Most of the food produced is for local consumption. The surplus is sold locally while some is taken to Nairobi and Mombasa by middlemen. Marketing of farm produce is poor. This has affected agricultural productivity in the study area as most farmers are discouraged to produce more. Agricultural products' prices have remained low and dependent on middlemen who often buy at very low prices and sell at very high profits in Machakos, Nairobi and other urban centres (GOK, 2010; Karay et al, 2015).

2.2 Sampling

Multistage sampling strategy was used to get the sample. Purposive sampling was used to select two locations from each of the two sub-counties. Simple random sampling was used to sample two sub-locations from each location and two villages from each sub-location. Ninety six (96) households were then proportionately sampled from the two villages using simple random sampling technique. The list of all households in the village was used as the sampling frame. A total of 384 households were sampled and interviewed. Household data were collected within two seasons using a structured household questionnaire. In addition, focus group discussions with a group of 5 men, 5 women (including youth) were also conducted in each of the sampled locations. The key informants interviewed included government officers in charge of agriculture, livestock, gender and the location area Chief and assistant Chief of the sampled sub-location.

2.3 Data analysis

Descriptive analysis involved summarizing data into ratios and percentages showing differences and associations. Chi-square test analysis was used to determine whether there was significant difference in the considered variables.

3.0 Findings and analysis

3.1 Variables examined

Sixteen gender roles were analyzed in each site. Gender of household head variable was treated separately, while the other fifteen roles derived from the questionnaire and FGDs were grouped together. These roles were: making decisions on the farm; growing food for the family; selling of harvested food or animals for family expenditure; taking a loan on behalf of the family; fetching water for the family; household chores; looking after animals and feeding them; starting a family enterprise; getting employed so as to provide for the family; making decisions on family food requirements; running a family business; building houses and structures for the family; food preparation and portioning; asking for food help/support from friends or community; and buying a family asset. In each gender role the respondents were asked to identify who among the two or both would be involved in the identified household role. The results were presented as follows.

3.2 Gender of the household head

Data on gender of the household head in Table 4.2 indicated that in Githunguri 82.8% (159) household heads were male and 17.2% (33) of the household heads were female compared to Mwala where 66.1% (127) of household heads were male and 33.9% (65) were female. There were more male headed households in Githunguri than in Mwala. Overall, most household in the two sub-counties were headed by males at 74.5% (286). Female headed households in Mwala were twice those in Githunguri sub-county. Focus Group Discussions supported the findings adding that most of the households in the two regions were male headed. A Chi-square test on the relationship was computed. Chi-square results were 14.029 df 2 and p=0.001 indicating a significant difference in household headship role in the two sub-counties.

Table 1 - Gender of household head

			Male	Female	Total
District	Githunguri	Count	159	33	192
		% within District	82.8%	17.2%	100.0%
	N=192				
	Mwala	Count	127	65	192
		% within District	66.1%	33.9%	100.0%
	N=192				
Total		Count	286	98	384

% within District 74.5% 25.5% 100.0%

Source: Researcher (Field data, 2015))

Further analysis to compare gender household headship and food accessed in the households found that male headed households had higher food access than female headed households. These results were supported by Ghulam (2005) in his study on incorporating gender into poverty reduction strategies. The study argued that understanding gender dimensions was significant to improving both equity and efficiency in households. The study found male headed households more responsive to reducing poverty than female headed households.

3.3 Other gender roles in the households

A summary of fifteen gender roles performed in the household was drawn showing the roles that were performed either individually or shared among gender as shown in Table 6.3. Results and discussions on the roles follow here below. FGDs results were also included.

Table 2 - Summary of gender roles performed in households

Githunguri		Mwala			
Male	Female	Both	Male	Female	Both
%	%	%	%	%	%
31.3	28.1	40.6	1.6	4.7	93.8
17.7	44.7	37.5	2.1	4.7	93.2
29.7	37.0	33.3	9.4	5.7	84.9
46.9	24.5	28.6	15.1	8.3	76.6
9.4	63.5	27.1	3.1	55.2	41.7
8.3	72.4	19.3	3.1	57.8	39.1
22.4	34.9	42.7	6.3	45	47.9
38.5	25.0	36.5	25.0	29.2	45.8
29.7	23.4	46.9	31.3	17.2	51.6
16.7	29.2	54.2	28.6	9.9	61.5
43.8	19.8	36.5	31.3	7.3	61.5
47.9	22.4	29.7	26.0	9.9	64.1
12.5	62.0	25.5	17.2	21.9	60.9
9.9	51.6	38.5	13.5	20.3	66.1
43.8	17.2	39.1	23.4	6.8	69.8
	Male % 31.3 17.7 29.7 46.9 9.4 8.3 22.4 38.5 29.7 16.7 43.8 47.9 12.5 9.9	Male Female % % 31.3 28.1 17.7 44.7 29.7 37.0 46.9 24.5 9.4 63.5 8.3 72.4 22.4 34.9 38.5 25.0 29.7 23.4 16.7 29.2 43.8 19.8 47.9 22.4 12.5 62.0 9.9 51.6	Male Female Both % % % 31.3 28.1 40.6 17.7 44.7 37.5 29.7 37.0 33.3 46.9 24.5 28.6 9.4 63.5 27.1 8.3 72.4 19.3 22.4 34.9 42.7 38.5 25.0 36.5 29.7 23.4 46.9 16.7 29.2 54.2 43.8 19.8 36.5 47.9 22.4 29.7 12.5 62.0 25.5 9.9 51.6 38.5	Male Female Both Male % % % % 31.3 28.1 40.6 1.6 17.7 44.7 37.5 2.1 29.7 37.0 33.3 9.4 46.9 24.5 28.6 15.1 9.4 63.5 27.1 3.1 8.3 72.4 19.3 3.1 22.4 34.9 42.7 6.3 38.5 25.0 36.5 25.0 29.7 23.4 46.9 31.3 16.7 29.2 54.2 28.6 43.8 19.8 36.5 31.3 47.9 22.4 29.7 26.0 12.5 62.0 25.5 17.2 9.9 51.6 38.5 13.5	Male % Female % Both % Male % Female % 31.3 28.1 40.6 1.6 4.7 17.7 44.7 37.5 2.1 4.7 29.7 37.0 33.3 9.4 5.7 46.9 24.5 28.6 15.1 8.3 9.4 63.5 27.1 3.1 55.2 8.3 72.4 19.3 3.1 57.8 22.4 34.9 42.7 6.3 45 38.5 25.0 36.5 25.0 29.2 29.7 23.4 46.9 31.3 17.2 16.7 29.2 54.2 28.6 9.9 43.8 19.8 36.5 31.3 7.3 47.9 22.4 29.7 26.0 9.9 12.5 62.0 25.5 17.2 21.9 9.9 51.6 38.5 13.5 20.3

Source: Researcher (Field data, 2015)

3.3.1 Making decisions on household farm activities

Data on making decisions on the farm in Table 4.3 indicated that in Githunguri 31.3% (60) of the household decisions were made by men. Women made decisions in 28.1% (54) of the households. In Mwala 1.6% (3) of farm decisions were made by men, while women alone made 4.7% (9) of the farm decisions. The study noted that majority of farm decisions were made jointly with 40.6% (78) of the households in Githunguri compared to 93.8% (180) in Mwala. FGDs established that most households consulted on desirable farm actions so as to draw more benefits for their families. Sourcing for farm inputs required joint decisions too. The study found that household gender shared decision making in the two sub-counties, although at different levels. The results were supported by WFP report (2008) noting that rural food poverty was less challenging where household gender shared decisions mainly on food production and utilization.

3.3.2 Growing food for the household

Data on gender role "growing food for the household" in Table 4.3 indicated that in Githunguri men contributed 17.7% (34), women 44.8% (86) and jointly provided 37.5% (72) compared to Mwala where men contributed 2.1% (4) women 4.7% (9) and jointly 93.2% (179). However, FGDs noted that women were more involved in food crop production across the two sub-counties than men. The study therefore noted that women had a major contribution in growing food crops than men. The results concurred with the FAO (2005) study on the state of food security in the world which reported that women were way ahead of men in food production in the world therefore support of their responsibility would increase world food production.

3.3.3 Selling of food after harvest or animals for family expenditure

Household data on gender role "selling of food after harvest or animals for household expenditure" in Table 4.3 indicated that in Githunguri men contributed 29.7% (57) women 37% (71) and jointly provided 33.3% (64) compared to Mwala where men contributed 9.4% (18) women 5.7% (11) and jointly 84.9% (162). The FGDs argued that marketing of farm produce depended highly on who had more time to engage in the exercise. They observed that selling of animals during hazard times was done so that households could buy food. Often this exercise needed a lot of time and physical energy as such it was mostly left to men unless where middle men would source the animals from the household. These findings were supported by Sutherland et al (1999) in their study done in Eastern Kenya. The study found that for households to maintain food flow mainly during hazards they were often hard-pressed to sell some of their acquired assets. Such selling of asset in most cases was done by either gender depending on availability, accessibility and comparative duties.

3.3.4 Taking a loan on behalf of the household

Household data on gender role "taking a loan on behalf of the household" in Table 4.3 indicated that in Githunguri men contributed 46.9% (90) women 24.5% (47) and jointly provided 28.6% (55) compared to Mwala where men contributed 15.1% (29), women 8.3% (16) and jointly 76.6% (147). FGDS argued that taking a loan on behalf of the household depended on who between male and female had access to both credit facilitates as well as resources for repayment of the loans. They also noted that taking loans was not advocated in most households as they were often potential sources of household conflicts. These findings were supported by UNESCO (2006) study on women entrepreneurial characteristics among the small scale women owned enterprises in north and central Meru in Kenya. The study found that most local women enterprises were based on capital that accrued from selling household property or funds borrowed from local institutions. However, the study was categorical in that majority of women were still fearful of borrowing from financial institutions as they lacked required collateral. The study, however, went on to say that although many business women lacked financial support, those that were married were least likely to suffer as husbands would often support them through loans, ideas and work.

3.3.5 Fetching water for the household

Household data on gender role "fetching water for the household" in Table 4.3 indicated that in Githunguri men contributed 9.4% (18) of the households, women contributed 63.5% (122) and jointly they provided 27.1% (52) compared to Mwala where men contributed 3.1%, women contributed 57.8% and jointly contributed 39.1%. FGDs agreed that there was need for men to do more in serving the households. They needed to be equipped with skills that would help benefit the households. FGDs agreed that contemporary households often employed either male or female in roles different from traditional set households. They noted that where households owned water well or open borehole, drawing water was often left to men as the role required a good amount of physical energy. The study found that this role had been left to women while men did very little. The results were consistent with Ojo (2012) in a study on gender roles in Nigeria noting that although there was a move to accommodating all gender in different roles some roles had remained attached to specific gender like fetching water which was basically a female gender role in the study area.

3.3.6 Undertaking household chores

Household data on gender role "household chores/washing" in Table 4.3 indicated that in Githunguri men contributed 8.3% (16) women 72.4% (139) and jointly provided 19.3% (37) compared to Mwala where men contributed 3.1% (6) women 57.8% (111) and jointly 39.1% (75). FGDs argued that although household chores were traditionally women roles, contemporary life styles in households required different gender to be equipped with life skills that would be employed for the benefit of all. They also felt that a large number of the male gender needed to accommodate gender equity and positively get involved in diversified skill development so as to support household development for future generations. The findings

were supported by Ghulam (2005) who urged that although women have been subjected to socially imposed constraints that often limited their opportunities, their triple responsibilities of bearing and rearing children, household management and productive activities needed the support of their male gender to succeed.

3.3.7 Looking after animals and feeding them

Household data on gender role "looking after animals and feeding them" in Table 4.3 indicated that in Githunguri men contributed 22.4% (43) women 34.9% (67) and jointly provided 42.7% (82) compared to Mwala where men contributed 6.3% (12) women 45.8% (88) and jointly 47.9% (92). FGDs confirmed that animal keeping was a major occupation in most households across the two counties. They noted that gender sharing in this venture was important as no single person would afford to do it alone. In particular, animal keeping has been a major industry for most households in Githunguri. The industry has not only employed many, but has become a lifeline earner for many households. In this sub-county, both men and women have contributed almost equally to this industry. The findings were supported by Maxwell (1999) findings that household livelihood diversification in rural activities called for gender role balancing as such measures would help households find alternative food sources and by so doing solve the problem of rural food access.

3.3.8 Starting a family enterprise

Gender household data on starting a household enterprise in Table 4.3 indicated that in Githunguri men contributed 38.5% (74) women 25% (48) and jointly provided 36.5% (70) compared to Mwala where men contributed 25% (48) women 29.2% (56) and jointly 45.8% (88). Starting a family enterprise depended on sources of ideas, capital and personal interest. The FGDs saw household businesses as sources of employment as well as household assets. A household enterprise was therefore viewed as a good source of family earning, thus providing money for food expenditure and general requirements including further investment. This was supported by UNESCO (2006) study on women entrepreneurial characteristics among the small-scale women-owned enterprises in north and central Meru in Kenya, highlighting that women business experienced high competition from many male entrepreneurs. The study, however, noted that most businesses in rural areas were household based and were targeted to fulfilling the needs of the household including feeding.

3.3.9 Getting employment so as to provide for household food

Household data on gender roles "getting employment so as to provide for the family" in Table 4.3 indicated that in Githunguri men contributed 29.7% (57), women 23.4% (45) and jointly men and women provided 46.9% (90) compared to Mwala where men contributed 31.3% (60), women 17.2% (33) and jointly 51.6% (99). The study found that more men went out of the sub-county in search of employment in Mwala than in Githunguri mainly during hazard times. This was supported by GOK (2005-6) study on food security

and well-being which observed that household heads and mostly men went out to look for employment whenever household resources were at risk of not providing enough food.

3.3.10 Making decisions on household food

Household data on making decisions on household food and requirements in Table 4.3 indicated that in Githunguri men contributed 16.7% (32), women 29.2% (56) and jointly they provided 54.2% (104) compared to Mwala where men contributed 28.2% (55), women 9.9% (19) and jointly men and women contributed 61.5% (118). Household decisions made jointly by both men and women were more in Mwala than in Githunguri. FGDs observed that it was common for households with members working within the locality to share in farm decisions mainly concerning farm inputs and produce. In Githunguri, most day-to-day household activities that involved zero grazing and tea farming required continuous joint decisions. The study found that gender-sharing of household decisions on food was common although applied more in Mwala than in Githunguri. This was consistent with Gor (2008) study on an analysis of the return to adaptation of agriculture technologies in South Western Kenya. The study observed that for households to obtain the best results in food acquisition adaptations, household members had to consult extensively.

3.3.11 Running a family business

Household data on "running a household business" in Table 4.3 indicated that in Githunguri men contributed 43.8% (84), women 19.8% (38) and jointly they provided 36.5% (70) compared to Mwala where men contributed 31.3% (60), women 7.3% (14) and jointly 61.5% (118) of the household business engagement. FGDs observed that it was in order to find both men and women running a household business together. It all depended on whether it was an occupation or a hobby for either of the two or both. The results were consistent with Omosa (1998) findings that it was difficult to clearly identify the owner of a family business between husband and wife in rural areas as the businesses often involved all members and proceeds were often used for household expenditure.

3.3.12 Building family houses and other structures

Household data on building of household houses and other structures in Table 4.3 indicated that men in Githunguri contributed 47.9% (92) of the household's requirements, women alone contributed 22.4% (43) of the requirement, while men and women jointly contributed 29.7% (57) compared to Mwala where men contributed 26% (50), women 9.9% (19), and jointly 64.1% (123) of the housing requirements. Information from the households indicated that the traditions of the communities under study did not advocate for women to engage in physical building of houses. This may have been the reason for the low level of women contribution in this role. However GOK (2006) on gender equality and development emphasized the need for gender skills diversification across the gender divide so as to serve the nation better and to satisfactorily provide services.

3.3.13 Food preparation and portioning

Household data on food preparation and portioning in Table 4.3 indicated that in Githunguri men contributed 12.5% (24), women 62% (119) and jointly men and women would provide 25.5% (49) compared to Mwala where men contributed 17.2%, (33), women 21.9% (42) and jointly 60.9% (117). FGDs pointed out that although traditions of involved communities did not allow men to engage in food preparation, new challenges and concerns have occurred within households as contemporary life involved both men and women in formal employment. Thus, new adaptations have to be made so as to meet household needs. The results were consistent with Ghulam (2005) and GOK (2006) that emphasized the need for gender equality in all interventions to address the changing society. This implied that men needed to do more in roles that were initially feminine based.

3.3.14 Who between men and women asked for food help

Household data on asking for food help or support from friends or the community in Table 6.3 indicated that in Githunguri 9.9% (19) of the households men went out and asked for help. In 51.6% (99) of the households women asked for help while in 38.5% (74) of the household's both men and women jointly took action compared to Mwala where men contributed 13.5% (26), women 20.3% (39) and jointly 66.1% (127). The study found that in asking for food support both men and women were involved, although women played a higher role possibly because many were found at home. The FGDs observed that the role was often done by both gender in most cases although traditional practice codes seemed to exclude men from this role, leaving women as the major players. Ghulam (2005) in his contribution to gender equality argued that gender disparities in all social levels including household roles imposed large costs on the well-being and health of the poor, thus identifying and re-addressing of the inequalities will be profitable for the future.

3.3.15 Buying household assets

Household data on "buying a household asset to support food" in Table 4.3 indicated that in Githunguri men contributed 43.8% (84) while women contributed 17.2% (33). They jointly contributed 39.1% (75) compared to Mwala where men contributed 23.4% (45), women 6.8% (12) and jointly 69.8% (130) of the household requirement. The study found that in buying an asset to support the household both men and women were involved, although men played a more pronounced role than women. The FGDs noted that currently communities have discovered that they could jointly own assets, thus the more women have been involved in asset acquisition. The study was consistent with UNESCO (2006) study on women entrepreneurial characteristics among the small-scale women-owned enterprises in north and central Meru. Both studies agreed that the age of owning business ventures across gender was already here and many communities have embraced it.

3.4 Hypotheses testing

The findings on the hypotheses testing were established by carrying out 2 tailed chi-square tests at 0.05 significance levels shown in Table 4.4.

Ho¹There is no significant difference in food access for male and female headed households in Githunguri. Chi-Square $\chi 2$ test results for most gender roles in Githunguri indicated a p value less than the significance level (0.05). The study rejected the null hypothesis and concluded that there were significant differences in majority of gender roles contribution in Githunguri excluding "Household chores/washing etc" 4.783^adf 2, p =0.091.

Variables in Gender Roles	Githunguri-	Mwala	
	Chi-Square	Chi-Square	
Making decision on farm activities	51.390 ^a df 2 p =0.000	$14.093^{b} df 2 \qquad p = 0.000$	
Growing food for the family	$23.403^a df 2 p = 0.000$	$14.543^b \text{ df } 2 p = 0.001$	
Selling of food harvest or animals for			
household expenditure	$25.720^{a} df 2 p = 0.000$	$8.641^{b} df 2 p = 0.013$	
Taking a loan on behalf of the	$63.601^a df 2 p = 0.000$	$7.180^{b} df 2$ p = 0.028	
household			
Fetching water for the household	$6.541^{a}df 2$ p=0.038	$.081^{b}$ df 2 $p = 0.960$	
Household chores/washing etc	$4.783^{a} df 2 p = 0.091$	$1.156^{b}df 2 p = 0.561$	
Looking after animals and feeding	$30.545^{a}df 2$ p = 0.000	4.890^{b} df 2 $p = 0.087$	
them			
Starting a family enterprise	$48.439^{a} df 2 p = 0.000$	$13.786^b df 2 p = 0.001$	
Getting employment so as to provide	$54.411^a df 2 p = 0.000$	$12.850^{b} df 2$ $p = 0.002$	
for the household			
Making decisions on family food and	$31.805^{a}df 2$ p = 0.000	$15.012^{b} df 2 p = 0.001$	
requirements			
Running a family business	$55.341^a df 2 p = 0.000$	$10.201^{b} df 2 p = 0.006$	
Building houses and other structures	$39.065^a df 2 p = 0.000$	7.867^{b} df 2	
for the household			
Food preparation and portioning	$9.646^{a} df 2 p = 0.008$	$3.971^{b} df 2 p = 0.137$	
Buying a household asset	$12.972^a df 2 p = 0.002$	$3.977^{b}df 2$ p=0.137	
Asking for food help	$60.721^{a} df 2 p = 0.000$	9.832^{b} df 2 $p = 0.007$	

Source: Researcher (Field data, 2015)

Ho¹There is no significant difference in food access for male and female headed households in Mwala. Chi-Square χ^2 test results for ten (10) gender roles in Mwala indicated a p value less than the significance

level (0.05). The study rejected the null hypothesis and concluded that there were differences in ten gender role contribution in Mwala.

Five (5) gender roles in Mwala had a p value bigger than the significance level (0.05). The study accepted the null hypothesis and concluded that there were no significant differences in the five gender role contribution in Mwala for these particular variables. The five include: Fetching water for the household (p = 0.960), Household chores and washing (p = 0.560), Looking after animals and feeding them (p = 0.087), Food preparation and portioning (P = 0.137), and Buying a household asset (p = 0.137).

4.0 Conclusion

The study concluded that gender roles were more uniformly shared in Mwala Sub-county than in Githunguri Sub-county. More women produced food crops in the farms than men in the two regions. Women did more in household roles like household chores and food preparation, while men did more in employment, building and running family enterprises. However, men headed households in the two Sub-counties had better food access than women headed households with Githunguri households being generally better off when compared to Mwala.

5.0 Recommendation

The study recommends that, food access interventions in the study areas have to target male and female headed households differently. There is need to find out what makes the gender roles in Mwala to be more uniformly shared than in Githunguri.

References

Braun, J.V., Boiis., Kumar, H.S. & R.P. Lorch. (1992). *Improving food security of the poor, "concept policy, and programs"*. Washington DC: International Food Policy Research Institute.

Braun, J.V. (2007). The world food situation: New forces and required actions. Washington DC: IFPRI.

Federation of Kenya Red Cross Society. (2010). FKRCS Publications. From htt://www.ifrc.org

Food and Agriculture Organization. (2005). Gender and food security. Rome: UN.

Food and Agriculture Organization (2005). *The state of food insecurity in the world 2005:* Eradicating world hunger key to achieving the millennium development goals, Rome: UN.

Food and Agriculture Organization. (2006). The role of food and agriculture. Rome: UN.

Food and Agriculture Organization. (2008). *Integrated food security phase classification technical manual*. Rome: U.N.

Food and Agriculture Organization. (2011). The state of food insecurity in the world - How does international price volatility affect domestic economies and food security? Rome.

Food and Agriculture Organization. (2012). *The state of food insecurity in the World* Economic growth is necessary but not sufficient to accelerate reduction of hunger and malnutrition, Rome: U.N.

- Ghulam Moheyuddin (2005). Incorporating Gender into Poverty Reduction Strategies Online at http://mpra.ub.uni-muenchen.de/684/ MPRA Paper No. 684, posted 07. November 2007 / 01:12
- Gor, C.O. (2008). An analysis of the return to adaptation of agriculture technologies in South Western Kenya. Nairobi: U.O.N. An unpublished Thesis, University of Nairobi.
- Government of Kenya. (2006). Gender equality and development. Nairobi: Government Printer.
- Government of Kenya. (2007). *Millennium development goals, status report for Kenya, 2007*. Nairobi: Government Printer.
- Government of Kenya. (2008). *Ministry of agriculture, strategic plan 2008-2012*. Nairobi: Government Printer.
- Government of Kenya. (2010a). Economic review of agriculture 2010. Nairobi: Ministry of Agriculture.
- Government of Kenya. (2009). *Mwala district development plan, 2008 -2012*. Nairobi: Government Printer.
- Government of Kenya. (2010). *Kiambu district development plan 2008-2012*. Nairobi: Government Printer.
- Government of Kenya. (2012). Kenya food security steering group report KFSSG, 2012. Nairobi: Government Printer.
- International Federation of Red Cross & Red Crescent Societies (LFRCRCS). (2009). World disaster report 2009), "focus on early warning and early action," Geneva: UN.
- International Crops Research Institute for the Semi-Arid Tropics. (2012) .*Biodiversity and livelihoods*, New way forward for Africa's desert margins, Washington DC.
- International Food Policy Research Institute. (2002). Reaching sustainable food security for all by 2020: Getting the priorities and responsibilities right. Washington DC.
- Kothari, C.R. (1996). Research Methodology: Methods and Techniques, Jaipur.
- Maxwell, D. (1996). Measuring food insecurity the frequency and severity of coping strategies in food policy". Nairobi: CARE and WFP.
- Maxwell, D., & Caldwell, R. (2008). *Coping Strategies index: field methods manual* second edition, CARE, (First edition 2003), from ftp.fao.org/docrep/fao/meeting/009/ae513e.pdf
- Mugenda, O. & Mugenda, A. (2008). Research methods quantitative and qualititative approaches. Nairobi, Acts Press
- Ojo, C.O. (2012). Analysis of gender contribution to the rural household food supply: a case study of Askira urban local Government Area, Borno State. Nigeria
- Omosa, M. (1998). Re-conceptualizing food security: interlocking strategies, unfolding choices and rural life in Kisii District, Kenya. Netherlands: The Hague.
- Sutherland, A.J., Irungu, j.w., Mugo, C.R., (1997) On-farm performance of pearl miller varieties under high and low soil fertility conditions in semi-arid eastern Kenya. In Kanga'ara, j.n., Sutherland. A., Gethi (Eds), participatory Dryland Agriculture Research areas of Mount Kenya. Conference held at Izaak Walton Inn. Embu 21-24 January 1997. KARI, Kitale, pp. 230-236

- UNICEF.(2005). Assisting in emergences: A resource handbook for UNICEF staff. UNICEF, New York.
- UNISDR.(2002). *Living with Risk: A global review of disaster reduction initiatives*. Geneva: United Nations.
- UNISDR. (2004). Gender equality, environmental management and natural disaster reduction, *Report* from the On-Line Conference, Elaine, from www.unisdr.org .un
- UNISDR. (2005). *Hyogo framework for action 2005-2015; Building the resilience of nations and communities to Disaster*. Kobe: World conference on disaster Reduction. Geneva: United Nations.
- UNISDR. (2007). Words into Action: a guide into implementing the Hyogo Framework, Geneva: United Nations.

World Food Programme. (2007). Food aid flows. Rome: International food Aid Information Systems.

World Food Summit. (2007). World food summit, report. 2007. Rome.

World Food Programme. (2008). WFS report, 2008. Rome.

World Food Summit. (2009). World food summit, report, 2009. Rome.

Biography of the Authors

Dr. Geoffrey Kinyanjui Waweru: Geoffrey was born in 1955 in Kiambu District. He attended Kambui Mission School, Gathiru-ini High School, Meru Teachers College, The University of Nairiobi for a BEd course, The University of Bristol (United Kingdom) for a MEd course, Visions International University and later Masinde Muliro for University of Science and Technology (Kenya) for a PhD course. He has worked as a Primary and Secondary School Teacher and later taught at Egoji Teachers College. He worked as a Senior Schools Advisor in Nairobi City between 1986 - 2001. He was later employed as Art and Design Educator by the government of Botswana where he served as a founder member of the Botswana National Arts Exhibitions Board for three years. He is currently offering consultancy services in Education Management and Training, Disaster Risk Reduction and Humanitarian Assistance and Research Services.

Dr. Fridah Wilumila Mugo: Fridah holds a Doctorate and Master of Science Degree in Natural Resources Policy and Management from Cornell University, New York State in USA; She also has a Master of Arts Degree in Land Use Planning and a Bachelor of Science Degree in Agriculture from the University of Nairobi in Kenya (the PhD and two Masters Projects were on on-farm forestry). Fridah's areas of specialization are: Land use planning; farm forestry, environment, Research methods and Gender Studies. She has over 36 cumulative years of experience with various institutions/organizations in 11 African Countries. She has spent over 36 years working in the field of agriculture, environment, agroforestry, energy, gender and natural resources management. For 18 of the 36 years, she worked with the Ministry of Energy, Government of Kenya, 3 years with the International Centre for Research in Agroforestry (ICRAF) and 8 years as a Private Consultant. Currently, she teaches as a Senior Lecturer in the Department of Urban and Regional Planning at the University of Nairobi in Kenya.

Dr. Stanley Omuterema Oluchiri: Stanley is a holder of Doctor of Philosophy Degree in Environmental Earth Sciences and a Masters degree in Environmental Physical Sciences from Moi University. He has a Master of Public Policy and Administration degree from Kenyatta University and a Bachelor of Technology Education degree from Moi University in Kenya. He has several certifications in Environmental and Disaster Management fields, extensive experience in teaching and research in Energy Resources Management, Water, Food Security, Climate Change and Sustainable Development. He has over seventeen years teaching experience at the University, having taught at Moi University and Masinde Muliro University, supervised over twenty PhD and over thirty Masters students in the above areas. Dr. Omuterema is a consultant in Environmental Impact Assessment with over one hundred key development projects assessment undertaken. He is currently a Senior Lecturer in the Department of Disaster Management and Sustainable Development at Masinde Muliro University of Science and Technology.