

**INFLUENCE OF WOMEN EMPOWERMENT PROJECTS ON
ENHANCEMENT OF FOOD SECURITY IN MBEERE
SUB-COUNTIES, EMBU COUNTY, KENYA**

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**A Research Project Report Submitted in Partial Fulfilment of the
Requirements for the Award of the Degree of Master of Arts in Project
Planning and Management of the University of Nairobi**

2020

DECLARATION

I declare that this research project report is my original work and has not been presented in any other university or institution for any academic award.

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DEDICATION

In the vast space and time, this work is dedicated to my parent Mr. and Mrs. Inyasio Nyaki for their support, my employer, the Consolata missionaries in Kenya, the representative of women; Ms. Annita Karimi and Mrs. Pennina Mutinda. They have been relentless in offering moral support, reassurance and inspiration throughout the process of undertaking this research. This work is likewise devoted to the individuals who value the place of a woman in modern society among communities within Mbeere Sub-Counties in Embu County. Finally, I bestow this work to God. I am thankful for the leadership, power, thoughtfulness, security, abilities and above all my health.

ACKNOWLEDGEMENT

First, I would like to acknowledge university of Nairobi for provision this programme, secondly, my gratitude goes to Dr. Lillian Omutoko for her supervision, insight and professional criticism devoid of which this research would not be complete. Moreover, my appreciations are extended to my lectures notably Prof. Christopher Gakuu for taking me through the unit on research methods course, Prof. Charles Mallans Rambo for taking me through the course on projects process and procedures and financing and Prof. Harriet J. Kidombo for taking me through the course on project management. Further, I would like to appreciate contributions in research towards women empowerment by International bodies such as The Food and Agriculture Organization, United Nations, Economic Community of West African States, and scholars who include Paolo Freire and Hohenberger. I am also grateful to the National Commission for Science Technology and Innovation for granting a permit to conduct this research.

I also acknowledge my colleagues especially group two members Mr. Philip Mwangi, Mr. Shem Kenneth Nguta, Ms. Irene Wairimu and entire class for teamwork and support to get the materials necessary to carry out this research. Next, my gratefulness extends to Mr. Paul Kimita a librarian staff member for providing me with different resources materials important for writing the project report.

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ABBREVIATION AND ACRONYMS

CEO:	Chief Executive Officer
CT:	Cash Transfer
FAO:	Food and Agricultural Organizations
FGM:	Female Genital Mutilation
GDP:	Gross Domestic Product
INIs:	Institutes of National Importance
KWFT:	Kenya Women Financial Trust
NGOs:	Non-Governmental Organizations
NLRF:	National Land reforms Forum of Nepal
SHC:	Self-Help Group.
UK:	United Kingdom
UNDP:	United Nations Development Programs
WEF:	Women Economic Funds
WHO:	World Health Organizations

ABSTRACT

Women empowerment is a primary component in the Sustainable Development Goals (SDGs) that has received massive attention in international development. Globally, it is also a crucial aspect of the third Millennium Development Goal that emphasizes on promoting gender equality and the empowerment of women. To enhance food security within any society, economic participation and empowerment of women remain fundamental to strengthening their rights and enabling them to have control over productive resources. Whereas academicians agree that steps leading to empowering women have been studied, the rate and enhancement of food security have fallen short of expectations in the developing world. This study, therefore, aimed to address the influence of women empowerment projects on the enhancement of food security in Mbeere Sub-Counties, Embu County. The study was anchored on the following objectives: level of women education influence on the enhancement of food security in Mbeere Sub-Counties, Embu County, and the credit availability influence on the enhancement of food security in Mbeere Sub-Counties, Embu County, and the building capacity of women influence on the enhancement of food security in Mbeere Sub-Counties. The theories that were adopted include the Theory of Change and the Critical Social Theory. A descriptive survey research design was adopted across a target population of 8,000 women comprising of women in the socio-economic empowerment program and women in administration in eight wards in Mbeere Sub-Counties, Embu County. A sample of 400 women was sampled to take part in the study. Questionnaires and interview guides were used as crucial data collection tools in the study. Both quantitative and qualitative data analysis approaches were used to analyse the collected data as per the research questions. Coding data and data analysis was done using Version 21 of the Statistical Package for the Social Sciences (SPSS). Quantitative data was summarized and results were presented in percentages and frequencies. Analysis of Qualitative data entailed categorizing them into themes and discussion of responses as per each item of study objectives. The study found the level of women education, credit availability, and building capacity has a significant influence on the enhancement of food security in Mbeere Sub-County, Mbeere County. The study concluded that the level of women's education, credit availability, and building capacity of women influence the enhancement of food security.

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study

The concept of women empowerment with a specific objective to enhance food security is critical to achieving the developmental needs of women for gender equality. Any effort to empower women must be characterized by allowing women's economic participation, ensuring that their rights are empowered, and providing opportunities for them to take control of their affairs as well as be influential in their immediate environment. Additionally, women empowerment must integrate their ability to own and control productive resources. Conclusively, this will improve the economy out and the holistic development of a community. Ideally, equality empowers women and advances development in society.

Theoretically, the attempt to raise gender equality in any society can be affected by the policies laid concerning women's suffrage policy. As the elites and dominant political categories open the system of former politically constructed out-groups, this will be an instant representation of suffragist policy. The countries with earlier suffragist policies that reform official political exclusion of women are more likely to strengthen the institutional legacy of formal political women inclusion (Inglehart & Welzel 2005; Inglehart, Norris & Welzel, 2002). Additionally, a welfare policy will alleviate these barriers to women empowerment through the expansion of the extent of the state's involvement in providing everyday household necessities for example; state-supported childcare. Any investment in coercive state power will involve actions that are male-dominated. However, in welfare policy, all investments favor activities where women play a prominent role. Thus, the empowerment that modernization brings to women through the ruling legacies concerning welfare policies is an additional form of historical institutionalism (Inglehart & Welzel, 2005; Inglehart, Norris & Welzel, 2002).

Philosophically, it is known that when you educate a man you are just focusing on imparting knowledge to an individual but educating a woman implies that the entire nation is being trained (Beaman, Duflo, Pande, and Topalova, 2012). It is, therefore, important to acknowledge the fact that women are at the forefront in terms of food production, resource

utility, and management, bread-winners, caretakers of household food and nutrition security. If women would be given equal access to physical and human resources as men do, there could be an increase in agricultural productivity (FAO, 2018). Therefore, women's emancipation is vital for achieving food security.

The Hunger Project which was established in 1977 is one of the major projects initiated to empower women as a vulnerable group (Watuleke, 2015). The major focus of the group is to improve generatively in food provision and deal with hunger globally within a century (Watuleke, 2015). It is currently active in regions dominated by people affected by hunger such as Sub-Saharan Africa, South Asia, and Latin America training to reinforce farm production and income-generating activities. Further, it reinforces the stakeholders to control their food storages; as strategies for the advancement of food security. The income-generating activities that are a result of this project have enabled women in the concern communities to revive their incomes to the level of purchasing sufficient food.

According to FAO (2018), women empowerment has born fruits in many parts of the world and resulted in various programs that bring women together to enhance food security. For example, in Guatemala, there was a project of encouraging gender equality to enhance food security and proper nourishment. FAO, together with other UN bodies backed up the Guatemalan Ministry of Agriculture, Livestock, and Food production of Guatemala to develop a policy on quality. Advanced in 2015, it is a policy that ascertains that women have an equal voice regarding development in the rural areas as well as accessibility to agricultural resources. In coming up with this policy, FAO supported the participation of various stakeholders as well as the civil society. Regarding gender quality, there has been an approach that was friendly utilized together with the national Programme to uplift Farming at the Family level (PAFFEC) thus enabling collaboration and coordination. To support greater accountability towards gender equality, FAO instituted a gender-inclusive framework for PAFFEC as well as the training of agents on aspects that included monitoring and planning.

Historically, in Africa, most social structures are strongly patriarchal such that every aspect of community life is tied to the authority of men (Flowers, 2018). Therefore, the authority with

regards to the management of family resources belonged to the men as household heads. This scenario leaves the women with few responsibilities and no voice. Women are faced with many challenges to contribute to food production (Atekyereza, 2014). These gender dynamics pose a great challenge to women's empowerment for reaching food security in most parts of Africa.

To exemplify the historical, philosophical, and theoretical perspectives, research by Torres and Knaepen (2016) established that empowering women is the only way to achieve food security in Africa since women and girls represent a significant part of the labor force in the developing world. Women are of great significance as food producers, managers of natural resources, income earners, and caregivers of their societies. Though women are observed as breadwinners in most cases, the aspect of discrimination in rural areas denies women equal chances to own land, data and resources, employment opportunities, learning, health, and the ability to be engaged in decision-making.

According to the World Bank, gender recognition and emancipation regarding women implies good economic growth. The two regions where women recognition and empowerment is being initiated in Eastern, Western and Southern parts of Africa are the Economic Community of West African States (ECOWAS) and the Common Market for Eastern and Southern Africa (COMESA). They have appreciated this admirable role of women. In the agricultural sector and food production, there is a need for mainstreaming to enhance improved productivity and food security. This is an impressive attempt in dealing with food insecurity. As a whole, gender relations entail recognizing the existence and role of each sex towards development and family nourishment. Gender sensitization is all about understanding individuals, their roles, and their resource distribution. Both boys and girls/women and men ought to be treated in terms of resource utilization and, social and political views.

In the context of this study, raising the level of women education, credit accesses and building of women capacity is the aspect of women's empowerment projects studied. Empowerment enables individuals to acquire the capacity for self-determination, that is, of living the life that she or he has reason to value' (Galiè et al., 2017). Scholars and development practitioners

continue to strive to understand what governs such capacity for self-determination and to identify the key domains of empowerment to allow for its assessment. Raising the level of education or skills enables women to secure employment opportunities providing them with increased income; when women earn an income in the household, child and household nutrition are more likely to improve than when men earn an income (Smith et al., 2003; United Nations Children's Fund, 2011).

The project of women empowerment on raising voices for women cross border traders in West Africa that aims to identify the potential of women in the Eastern, Western and Southern parts of Africa in terms of building capacity, decision-making, and development across border traders (World Food Programme, 2016). This project acts as a platform to raise women's issues and give them a chance to utilize their abilities (WFP, 2016). Generally, it is a project that aims to inform stakeholders, including the ECOWAS, National Governments, and Development Partners the purpose of planning for further strategies to back up women across multi-national trade in West Africa. This women group forms a significant group of women engaged in informal trade across West Africa. Further, it is important to note that the group was not homogenous rather a large group of small-scale traders with little operating capital and low literacy levels.

Women's low level of education, credit unavailability, and lack of building capacity of women are part of the challenges, contributing to poor agricultural growth and poor nutrition (Hohenberger, 2017). A program is known as Feed the Future Zambia Mawa Project (2012-2017), initiated by Catholic Relief Services (CRS) targeting to improve the health and nutritional status by improving food security. The project incorporated rural families through health and nutrition services, agricultural services, and community-based savings that tackle problems associated with gender equality thus resulting in poor nutrition. Hohenberger (2017) asserts that this project has been successful with 37,000 families and the leaders in the community hence supporting changes in gender dynamics as well as economic security.

In Ghana, there have been various investments in food security to empower women according (Flowers, 2018). An assessment was done in various sites in 2018 within Ghana by the CSIS

Global Food Security Project and the CSIS Africa Program on the impact of the feed the future program. In a small village known as Zinindo, women representatives highlighted how the project's savings and loan programs aim to develop women and their financial independence through their savings (Flowers, 2018). Further, the women indicated that these programs represented opportunities that come with interventions that support women for future development.

Locally, CARE Kenya's Women and Girls Economic Empowerment program has created chances for positive change according to report (CARE, 2019). This has been achieved by providing a pathway for women to access and control of productive assets. Specifically, women are provided with channels where they become financially included, build assets, and a sustainable livelihood. As noted by (CARE 2019), empowering vulnerable rural communities to enhance their livelihoods through multiple strategies including food security is what is being focused to address. Women in Mbeere Sub-Counties of Embu County have not been marginalized about food security. In Embu County, the local authority has set up a gender and social development program to empower and provide services that improve the wellbeing to the vulnerable members of the society who include women according to (Embu County Government, 2016). Specifically, under this program, there is a social protection intervention fund that is targeting the provision of income or consumption transfers to women and protects them against livelihood risks including food security. Although various studies have been conducted about food security, there seems to be inadequate literature on the issue of women empowerment and food security. This necessitated the need to conduct a study on the influence of women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County.

1.2 Statement of the Problem

Universally, women are discriminated from participating in the social, economic and political sphere. This occurs in terms of mismatch between level of women education, credit availability and building capacity of women. In a similar vein, there is a gap between having a common goal and vision that is necessary for women empowerment for enhancement of food security. Since women have so many roles, recognition of their roles in agricultural production

remains limited by level of women education, credit availability and capacity building (Alkire, et al, 2015). According to the World Bank (2018), women partaking in the guarantee of food security are usually under estimated for various reasons, such as their duty to be wives and mothers and forsaking formal employment to be counted for in the economy of both at the level of their family or the national level. Whereas academicians agree that steps were undertaken to look at women empowerment, the rate of women empowerment and enhancement of food security has fallen short of expectations in the developing world.

Mbeere, which is classified as Semi-arid area, is frequently affected by drought, which affects the food production (National Drought management Authority [NDMA], 2020). The region receives low and unreliable rainfall, low harvest and limited food varieties. The area relies mainly on mixed production where animals and crop production is practiced at low scale; which has been deteriorating with time. The empowerment project being carried by the County government of Embu, CDF and donors aimed at helping women address the food insecurity in the region. However, no evidence available to how women empowering influenced the food production. Specifically, no known research provides evidence as to how these chances have been transformed into food security for these women and their families in Mbeere Sub-Counties of Embu County creating the need for this study.

Brazilian study has established how women naturally invest a larger proportion of their income on their families in comparison to men. Moreover, the research indicated that a child's survival could increase by 20% if the mother took care of the household (Sardenberg, 2010). Despite these findings, it was found that women in Brazil lack capacity to make decisions as well as control productive resources. Additionally, in Brazil and Bangladesh the belief in family care is viewed as a barrier to empowerment of women. Elsewhere, in Uganda, the Karamojong women who are responsible for the sustainability of the home still do not have access to the major resources of the community since it is a highly patriarchal society (Atekyereza, 2014). It is evident in the developing world that there is a lot to be done to promote the status of women to enhance food security.

Ideally, women from Mbeere Sub-Counties, Embu County cannot support the community since they cannot access resources and authority on resources use belongs to the men (MoALF, 2016). Further, the women who are responsible for the food sustainability still do not have access to the major resources of the community in this highly patriarchal society. Thus, the community generally is not able to satisfy its very basic needs like feeding themselves. This has increased the workload on women and girls without any expansion of decision-making power or right of ownership on community resources. Consequently, there is a gap between having a common goal and vision that is necessary for enterprise ownership and investment with regards to women empowerment for food sustainability. The commitment to their welfare poses a glaring gap, yet it is necessary to align to the knowledge and required skills. Therefore, this study sought to find out how the effort of the County Government through the local authority in setting up a gender and social development program to empower and provide services and donor projects have affected the availability, accessibility, utilization and household food security in Mbeere Sub County. This research motivation is to analyse how women empowerment projects in Mbeere Sub County has influenced the enhancement of food security. Evidently, there is a way through which women can be empowered to enhance food security in Mbeere Sub-Counties. While other studies (MoALF, 2016; Islam & Islam, 2015; Atekyereza, 2014; Sardenberg, 2010) generally looked at enhancement of food security and women empowerment from other places globally, there is no study focusing on the women empowerment and food security in Mbeere Sub-Counties. Therefore, this study intended to examine the influence of women empowerment aspects on enhancement of food security in Mbeere Sub-Counties of Embu County.

1.3 Purpose of the Study

The purpose of the study was to examine the influence of women empowerment aspects on the enhancement of food security in Mbeere Sub-Counties, Embu County.

1.4 Objectives of the Study

The following objectives guided the study.

1. To examine the influence of the level of women education on the enhancement of food security in Mbeere Sub-Counties, Embu County.

2. To assess the influence of credit availability on the enhancement of food security in Mbeere Sub-Counties, Embu County.
3. To evaluate the influence of building capacity of women on the enhancement of food security in Mbeere Sub-Counties, Embu County.

1.5 Research Questions

To address the objectives, the study was guided by the following questions.

1. How does the level of women education influence the enhancement of food security in Mbeere Sub-Counties, Embu County?
2. How does credit availability influence the enhancement of food security in Mbeere Sub-Counties, Embu County?
3. In what way does the building capacity of women influence the enhancement of food security in Mbeere Sub-Counties, Embu County?

1.6 Research Hypotheses

The following research hypotheses were tested in the study.

H0: There is no significant relationship between the level of women's education and the enhancement of food security.

H1: There is a significant relationship between the level of women's education and the enhancement of food security.

H0: There is no significant relationship between credit availability and the enhancement of food security.

H1: There is a significant relationship between credit availability and the enhancement of food security.

H0: There is no significant relationship between the building capacity of women and the enhancement of food security.

H1: There is a significant relationship between the building capacity of women and the enhancement of food security.

1.7 Significance of the Study

The study's importance lies in the fact that it will greatly contribute to identifying opportunities for growth and progress of women through interventions meant to address the potential and existing gender equality challenges in Kenya and other developing economies globally. Further, the study is important because it will benefit both the Embu County Government and the National Government in obtaining accurate data on what specific problems impact women empowerment as a factor of enhancing food security. This would in turn assist both centers of power in drafting a practical framework that may incorporate policies meant to look into women's predicament towards sustainable food security. The study is also important as it will fill the existing knowledge gaps on key facets of women empowerment for enhancing food security in developing economies such as Kenya and the specific strategies that can be applied to achieve this. Finally, addressing women empowerment and enhancement of food security requires a multidimensional approach including gender equality, ownerships and decision-making rights, education, and patriarchal dominance among others. This study is important in understanding the effect of the level of women education, credit availability, and building capacity of women and their contribution towards the holistic empowerment of women for enhancement of food security in Mbeere Sub-Counties of Embu County.

1.8 Basic Assumptions of the Study

In conducting the study, there were three assumptions. First, the empowerment of women in Mbeere Sub-Counties of Embu County will lead to food security that is vital to any human society. Women being the main providers of food for the homestead will have a healthy population empowered to use their faculties and resources for a sustainable life.

Secondly, the empowerment of the women will enable them to prioritize the nutritional development of their families in general, also with special emphasis on the girl child who has been disadvantaged for ages. Lastly, women empowerment will enable them to manage their resources well and develop them into small enterprises thus improving gender equality in Mbeere Sub-Counties. This will lead to a natural healthy differentiation process for community development according to the capacities and opportunities of the individuals. It

will subtly but surely change the status quo of the position of women in Mbeere Sub-Counties of Embu County.

1.9 Limitations of the study

The first limit in this research was the fact that some women in the women empowerment program had different operational procedures making it difficult to conduct the study within a shorter period across the entire sub-counties. To counter this challenge, individual visits were planned to the various women groups on different days. The other limitation faced during the study was the language barrier where some respondents could not respond to questionnaires due to lack of understanding. Overcoming this challenge required the utilization of a translator where necessary whose other duty entailed explanations on the importance of the research to the participants.

The study also faced transport and time limitations. This was because most of the areas in Mbeere Sub-Counties have rough roads that were not passable especially during the rain period due to flooding and this limited the movement of the study. To control these challenges while conducting the research, the available means of transport to reach the place of study was utilized. The study was conducted during the holidays, weekends, and any free time. The fact that women groups in Mbeere Sub-Counties were spread throughout the rural areas of the Sub-county, level of women education, credit availability and building capacity of women varies from one area to another hence the generalization of the study findings to the entire region of the Sub-counties was made with caution to get the required information.

1.10 Delimitation of the Study

This research was conducted in Mbeere Sub-Counties of Embu County, Kenya on the influence of women empowerment aspects on the enhancement of food security. Embu County lies in the Eastern Kenya region and borders Kitui and Machakos Counties to the south, Nyeri County to the North, Tharaka Nithi County to the East, and Kirinyaga County to the South West. It comprises five sub counties namely; Embu East, Embu West, Embu North, Mbeere North, and Mbeere South. Mbeere Sub-Counties (North and South) have an estimated population of 219,220 persons¹ and covers an approximate area of 2,099.5 square kilometers

(Reliefweb, 2015). There are two main livelihood zones namely Mixed Farming and Marginal Mixed Farming with 51 and 49 percent of the total population respectively. The area experiences a bimodal rainfall with the long rain being experienced on March, April and May and the short rains on October, November and December.

The study sought to examine various issues affecting women empowerment. The study considered the following issues: to examine the influence of level of women education enhancement of food security in Mbeere Sub-Counties, Embu County; to assess the influence of credit availability on the enhancement of food security in Mbeere Sub-Counties, Embu County; and to evaluate the influence of building capacity of women on the enhancement of food security in Mbeere Sub-Counties, Embu County. The study involved the representatives from women groups in Mbeere Sub-Counties. Some barriers were encountered as the study was being conducted which included poor response. Furthermore, research tools also faced some errors and biases. This was overcome by addressing the respondents on the purpose for which the study was being conducted and they were also reminded that it was confined to various ethical considerations.

1.11 Definition of significant terms used in the study

Level of Women Education: The level of women education was defined as a key role in empowering women since it can reduce poverty in the long-term since women in such a society can achieve the best economically as they can participate in both the formal and entrepreneurial sectors.

Credit Availability: Capability of women or women groups to acquire financial services such as credit, insurance, and additional risk management facilities for boosting their activities as pertains to food security.

Building Capacity of Women: Building capacity of women was defined as a procedure by which women improve on their skills, knowledge, and resources that can contribute to achieving food security.

Women Empowerment: Enhancement of the capacity of the women to enable them to utilize knowledge and skills to respond to personal, family, and community needs such as enhancement of food security.

Food Security: Food security was defined as a condition that exists when “all people, at all times have physical and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life.

1.12 Organization of the Study

This project report has five chapters. The Chapter one is introduction covers of the background, problem statement, study purpose, research objectives and questions, hypotheses and significance, assumptions, limitations, and delimitation of the study as well as the definition of significant terms that the study utilized. Chapter two is comprehensive of the literature review, a conceptual framework about the influence of women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County, summary, and knowledge gaps.

The third chapter introduces the methodology that covers introduction, design, the population of the study, sampling, procedure through which data was collected, data analysis, ethics, and operationalization of variables. The fourth chapter constitutes analysis, presentation, interpretation, and discussions of the findings. Finally, the fifth chapter presents a summary of the findings, conclusions, and recommendations.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section presents the review of relevant empirical to the subject of this study. The study reviewed scholarly work in the level of women education and enhancement of food security, credit availability, and the enhancement of food security and building capacity of women and the enhancement of food security. Further, there is a presentation of the theories that support the study as well as the conceptual framework while recognizing the existing gaps.

2.2 Enhancement of Food Security

Food security is a state of existence where everyone eats all times, gets access to a sufficient diet that keeps them healthy and active (UBOS, 2018). Regarding women empowerment, women play an important role in ensuring food security as is evident in most countries such as Uganda where they account for 60% of the labour force and contribute to 80% of the production of food (Boyd & Wang, 2011). Essentially, women are the backbone of the economy even though the gender gap in land ownership in many nations within Sub-Saharan Africa limits their empowerment. By the mid-1990s food, security was recognized as a significant concern, spanning a spectrum from the individual to the global level. However, access now involved sufficient food, indicating continuing concern with protein-energy malnutrition. However, the definition was broadened to incorporate food safety and also nutritional balance, reflecting concerns about food composition and minor nutrient requirements for an active and healthy life. Food preferences, socially or culturally determined, now became a consideration. The potentially high degree of context specificity implies that the concept had both lost its simplicity and was not itself a goal, but an intermediating set of actions that contribute to an active and healthy life(Cabanilla, 2006).

In terms of agricultural sustainability, food production in Mbeere Sub-Counties of Embu County is inadequate and therefore the people rely heavily on external support for food security due to excessive dependence on natural resources in an arid land for agriculture. Generally, women who contribute greatly to the production of food face discriminatory laws on access to land need access to community resources including land, capital, human resource,

and other productive resources to produce enough food for sustaining their families. Women often respond to food insecurity by reducing their portions, which in turn makes them weak and less able to cope up with the heavy unpaid job of the family. This state of affairs also reduces their time for income-generating activities or other productive works.

The other term that is used interchangeably with control is access. Access to resources can only empower women if they can control these resources in some definitive way. The only definitive way women can use resources is through investment. Otherwise, women can have access to resources without control over them. In enterprise ownership, the investments held by women should be regulated by themselves in a manner that they are productive. Not only should they be productive, but also their substantial returns will raise their status in society. About CFS (2017), control over economic resources and other means of production are strategic to women's empowerment and food security.

2.3 Level of Women Education and Enhancement of Food Security

Education plays a key role in empowering women since it can reduce poverty in the long-term since women in such a society can achieve the best economically as they can participate in both the formal and entrepreneurial sectors. She must be empowered with the ability to succeed and advance economically, and she must have the power to make and act on economic decisions. Education, therefore, remains the most powerful agent of development. Based on this fact, women should receive an education that improves their knowledge in a way that they can exploit opportunities around them according to (Koech, 2014). While, John Dewey defines education as the power by which man can control his environment and fulfil his possibilities (Dewey, 2015). From this definition, education is meant to transform the society into an egalitarian one that observes justice and humanity to all. Even though Dewey was reflecting on child education, he emphasizes that education should be tailored to the capacity and need of the subject or learner is essentially applicable to women empowerment. In this broader approach of education as the expansion of the life of an individual in the universe, formal, non-formal, and informal education shall be considered valid to enhance women empowerment hence improve the status of food security. This concurs with a study by

Paolo Freire (1970) in which education is viewed as a means of the emancipation of the people to become builders of their civilization and destiny.

In essence, women have various responsibilities ranging from being housewives, social mobilization, and leadership. Education, therefore, is a broad concept encompassing life skills training, school curriculum, adult education, and most importantly food security of a society. Accordingly, besides self-confidence, education improves literacy levels. An educated woman thinks and perceives ideas outside her environment, which in turn exposes her to a world outside hers. Koech (2014) observes that this has led to women taking on responsibilities that were considered to be male-oriented such as nurses, teaching, and other occupations.

The observation by Koech indicates that educated women are a sign of high literacy levels. When women in society have high literacy levels, they are more likely to be innovative and improve on many aspects such as food production, which is critical to food security. Additionally, high literacy levels of women education is an important factor for participation in the labour market. A study by Schaner and Das (2016) established women who had a higher level of education would engage in formal paid employment. Essentially, the true meaning of education is not only giving systematic instructions at a school or university but it is an enlightening experience for those who are in the dark and require guidance on many aspects of life. After this experience, one among the many benefits women engage in is searching for meaningful employment or enterprise ownership.

Therefore, the level of women's education is the reason behind women's capabilities to handle the outside world in a better way, engaging women in authorities and service provision of diverse kinds. Level of women's education results in intellectual difference and ability, which vital in women's development and productivity. Intellectual ability reflects on the capability to judge through questioning and acting upon matters concerning one's life (Drigas and Papoutsis, 2018). Further, intellectual ability refers to access to knowledge, information, and new ideas that will help women provide the required change (Drigas and Papoutsis, 2018).

In research conducted in India, it was revealed that better-educated women have greater negotiating power, can be mobile which allows for easier access to information and productive resources (Van den Bold, Quisumbing and Gillespie, 2013). Negotiating power, physical mobility, and proper resource allocation are all based on an individual's intellectual ability. To demonstrate the power of intellectual abilities, there was a program in India called *Mahila Samakya*. This program aimed at improving the socio-economic empowerment of women in established that through women's adult learning, they were now aware of the numerous disadvantages they undergo, and would now point out their rights as well as chart ways to shape their own lives (Pereznieto, 2016). The significance of this study is that education empowers a woman from the inside by improving on their intellect, it familiarizes them with their value to society and strategies to impact change, this negotiating power hence facilitates the socio-economic status of a country.

Bischof and Chutel (2017) state how South Africa despite having equality observed in its constitution, faces hostility towards any feministic perspective in politics. This, of course, comes in the aftermath of the ruling party the African National Congress (ANC) pledging to have 50% female representation (Bischof and Chutel, 2017). As a result, women in the Sub-Saharan nation continue to face discrimination in the office, home, and society in general. Among the key areas identified are; women's rights, the appointment of women to key leadership positions, and violence against women (Bischof and Chutel, 2017). Women themselves discourage girls from pursuing formal education because of stereotypes based on traditional gender roles. These include; procreation, taking care of their husbands, and pleasing their husbands' families (Atekyereza, 2014). In such an environment boys access education more than girls. This often plays out clearly during times of hardships; the boy child is the cultural champion, therefore must go to school (Atekyereza, 2014). In such a setting, there is a need for self-help groups' methodology that assists people in quickly transit to self-supporting systems.

Concerning formal education, the literacy levels in Uganda are much lower among females (64%) and males (74%) in rural areas than in the urban areas (85% and 89%) respectively (UBOS, 2018). In Karamoja, the literacy of females is lowest at 21% (UBOS, 2018). Besides,

adult literacy rates for males and females are lowest in Karamoja at 37% and 20% respectively (UBOS, 2018). The educational level of the females in a population affects economic development. Families give educational priority to boys for various reasons including the fact that the girl child will eventually join another family in marriage. They fail to realize that they too will need girls from other families (Atekyereza, 2014). This demeaning attitude of women in Uganda needs to be challenged systematically from the grassroots by making them see the importance of the level of women education through their own experience in the villages.

Girls with little or no education are more vulnerable to early marriages, domestic violence, poverty, lack a say in household spending or their health care than their educated peers. Consequently, this hurts them, their children, and communities (Washington, 2014). In a UN report, it was indicated that women's education resulted in a 43 percent reduction in hunger between 1970 and 1995 across the globe (Alias Tang, 2013). Further, the United Nations also stated that improving women's education can result in a dramatic reduction in hunger in developing countries. De Schutterin his report on *Gender and the Rights to Food* indicated that if women are allowed to have equal rights to access education, the problems related to food security will fall into place. According to a FAO report, a society that has no education is bound to face a lack of productivity, formal job opportunities as well as the ability of its people to earn a living which can result in higher poverty levels and eventually hunger. In rural areas, education leads to improvement in agricultural production resulting in food security (Agidew and Singh, 2018). Ensuring food security demands the observation of women's rights since they account for 43% of the labor force in the agricultural sector within developing nations (FAO, 2013).

Despite the prevailing knowledge in the world media and numerous supports by many organizations, food insecurity is still experienced among households since the majority of the battle with daily hunger and starvation (FAO, 2018). Statistics taken from Sudan found that 60% to 70% of food production within its rural sector is accounted for by women (Liru, 2014). An investigation by Liru (2014), found that improving household nourishment in Africa implies checking on to the women engagement in food production for their families. Ensuring food security in Africa, therefore there is a need to check on women's productivity

and food production. This can be done through resource accessibility and solving the challenges women face at their work.

For women to be supportive of both their families and the nation, they need to be given a chance to play an active role in decision making and getting access to resources. A lot of labour required that is women back a necessity for food production. An estimation in Kenya states that 27% of small-scale businesses belong to women (Liru, 2014). In this case, the power of women in agricultural activities promoting food security cannot be underestimated. Specifically, they have a major stake in animal husbandry, food processing, marketing, crop preservation, and sales activities. Recently, the World Food Programme publication on Hunger and Learning in 2006 supported systematization in the fields of education and food security. Further, it acknowledges the results of education on food security.

The impact of the level of women's education varies in terms of the stage. In the early childhood stage, food security plays an important role since the child's development is affected by the availability of a proper diet. There are no instant, prompt effects on his or her food security (Chinnakali, et al, 2014). In schooling age, it is important to regard both present and future dimensions of balanced diets. At this stage, the children learn subjects on diet, well-being, and cleanliness (utilization dimension). Further, they obtain life-skills, that will be of use in their future working experiences. Specific programs focusing on agricultural production are taught in adulthood. Such programs include extension services that aim at diversification in farming by households thus improving productivity. Furthermore, they can also learn behaviours on how to utilize food and avoiding shortage and starvation.

The influence of food security by the level of women's education is diverse and dynamic, as per the context, including urban and rural setup. With the rural setup, the level of women education influences food productivity and security through enlightening women on access to informative data on best agricultural practices that enhance sufficient food production, hence becoming effective decision-makers (Mutisya, Ngware, Kabiru & Kandala, 2016). The acquisition on the level of women's education allows people to solve societal challenges including hunger through innovation and the creation of technology, which enhances

efficiency in productivity thus reducing the threat of hunger among populations. According to Reij and Waters-Bayer (2014), African farmers both men and women are creative and innovative. Their small- and large-scale farmers entail a lot of creativity, which needs to be enhanced through training as external support. Training of farmers, extension officers, and other agricultural stakeholders is an essential element in agricultural development. It involves sharing and putting in practical new and emerging agricultural technologies and information that are developed and sourced from the research station, institutions, and other stakeholders. Embu County has an Agricultural Training Centre and it provides residential and non-residential training on relevant farming technologies.

Apart from the conventional and traditional agriculture, many households have shifted to the production of agricultural products using modern technologies such as a greenhouse, water harvesting, and drip irrigation for high-value crop production. The benefits attained from these new technologies will go a long way in increasing farm incomes hence food security and improving the livelihoods of the County citizens. The scholarly works reviewed suggest that women who are educated have the choice of participating in various sectors of life. They influence their households, community, and participation at the national level. Thus, the level of women's education influences all circles of development from cultural norms, social, economic, and environmental that has a positive impact on a nation. Non-formal education appears to be very important for women who have already many responsibilities as parents to boost their support system and reinforce their conceptual capability on matters affecting their lives. Neglect of education will strongly affect the extent of women empowerment as they will not in near future be able to build strong arguments of questioning any of the injustices imposed on them by their families, community, and society at large. Embu County is well placed to allow for surgical measures to mitigate food insecurity due to its diverse zones of agro-ecology that gives the room the growth of multiple crops that entails sorghum, potatoes, yams, arrow roots, beans, maize, and horticulture crops such as wheat, tea, and macadamia.

2.4 Credit Availability and Enhancement of Food Security

Credit Availability in the context of this study reflects upon the capability of women to obtain financial facilities such as loans, credit services, insurance, or other facilities associated with

risk management to facilitate food security. Another important aspect of socio-economic empowerment is the accessibility to financial services by women since it is necessary for the reduction of poverty and economic growth (Holloway Niazi & Rouse, 2017). Research has proven that individuals who partake in a financial system develop their entrepreneurial skills. As a result, they can handle risks by investing in businesses or funding large expenses such as education or home improvement (IPA, 2017). The importance of the financial inclusion of women stems from the fact that they are disproportionately impoverished. Moreover, they face discrimination when it comes to the division of labor or the sharing of economic resources (United Nations Women, 2015).

Microfinance is an important means of empowering women financially although it is erroneous to assume it is the only solution (United Nations Women, 2015). Women also need access to savings, insurance, and financial services. A major barrier to empowering women socio-economically is accessibility to microcredit services such as savings accounts. To improve women's savings power, microcredit companies can remove costs associated with opening and maintaining savings accounts. Results on the impact of having low-cost, no-frill accounts are however mixed.

From a study in Chile, women who were allocated free savings accounts were found to decrease short-term debt by 20% as well as decreasing utility cutbacks that result from negative income shock (Kast and Pomeranz, 2014). From another study in Nepal, out of 84% of women opening low-cost savings accounts, 80% made at least 2 deposits per year and their asset ownership remained stagnant while expenditures increased (Prina, 2015). In both cases, it is evident women become more empowered socio-economically since their children had access to education. From both cases, it is clear that low-cost savings accounts have positive downstream effects. The results from Chile and Nepal conflict with another study in Uganda and Malawi that established simplified accounts do not necessarily result in positive downstream effects (Dupas et. al, 2016). The study suggested that there is a need to look into the specific barriers to women's socio-economic empowerment.

It will be significant in determining products and formulating policies that are necessary for women's socio-economic empowerment (Holloway, Niazi & Rouse, 2017). Women need access to more assets, to grow their monetary exercises and procure more cash to help their families. On the off chance that there is a well-working credit advertise, speculation can be financed through acquiring. At the point when monetary markets are simple, be that as it may, there will be less intermediation, and an individual should set aside the cash required for the venture. Since women generally have less pay than men, it will be more diligently for them to spare enough for specific speculation (Tyson & Parker, 2019). According to a Food and Agriculture Organization (2018) research conducted in Asia, Africa, and Latin America, it was discovered that enhancements in family nourishment security and sustenance are related with women's payments and their job in family choices on use as women will, in general, spend a fundamentally higher extent of their salary than men on nourishment for the family. Women's compensation wages from the ranch and non-ranch work and other pay producing openings are of specific significance for landless and close landless provincial family units.

Women's acquiring force may not exclusively be utilized to purchase nourishment and other essential resources for themselves and their families yet, besides, to pay for the data sources utilized in sustenance generation. Since sustenance yields are expended, the contributions for these must be given from salary earned in other horticultural endeavours or non-ranch pay producing exercises (FAO, 2018). Therefore, to upgrade sustenance creation for the family unit, more significant need must be given to expanding women's cooperation in market items just as other pay producing adventures. Along these lines, the underlying move towards women's fortifying and full participation in the national improvement and sustenance security frameworks is the aggregation and examination of sexual direction coordinated data to appreciate employment differentiates in sustenance and cash crop age similarly as individuals' differential managerial and money related specialist over creation, amassing and displaying of cultivating things (FAO, 2018).

Lumumba (2016), reporting from a study undertaken in the Sangwa region in China, indicated financial services provided to low-income earners and women groups in China including local women entrepreneurs and those in informal employment that usually face a challenge in

accessing microcredit facilities, was being considered by the growing number of microfinance institutions. The study further noted that readiness to give credit facilities to clients by lending to institutions, as well as the amount of loan advanced were determined by the value of collaterals, credit repayment records, the prevailing interest rates, and the level of equity held in the accounts in the form of savings (Lumumba, 2016).

According to Edwardo (2015), the SME sector has been vital in the accelerated growth of the American GDP through the creation of employment opportunities to several people unable to be absorbed in the formal employment sector. This milestone was achieved through government financial policies that enhanced access to affordable finance from lending institutions, giving budding business entrepreneurs the much-needed start-up capital. In her observation, while studying factors influencing access to financial services by low-income women business holders in Lometa, South Korea, Andra (2014), reported that access to loaning facilities from financial institutions had never been a walk in the park, as great attention was on obtaining maximum returns from any business transaction, given that banks are in the money business. Because loans are advanced against certain lending terms of reference such as security, cost of credit, amount of savings, and ability to repay, she noted that women in small enterprises were unable to obtain adequate funds from the banks. In his focus on factors, influencing access to business funds among women entrepreneurs in Slovan in Venezuela, Rhamilan (2013), noted that despite high awareness of the existence of credit facilities on offer for business investments from various lending institutions, most entrepreneurs were less inclined to seek such funds. He attributed this phenomenon to the high cost of credit, poor credit management history, and fluctuating bank lending rates.

While working with World Vision in Zambia in the poverty eradication program packaged in small and medium enterprises targeting the rural poor Shamala (2013), noted that improving the well-being of disadvantaged community members may not be effective through quick-fix economic measures but by way of long-term economic strategies. She observed that local women entrepreneurs in Zambia faced difficulties in accessing business funds from banks as a result of tough lending requirements and hence were unable to engage in sustainable business ventures. Based on the variance determining access to business funds from microfinance

organizations in Daom, Guinea Bissau, no lending institution can advance its hard-earned funds to people without credible credit repayment history, sufficient surety to repay, and the capacity to manage the funds (Lumumba, 2016). Results from a survey undertaken in Egypt to in examining the effect of credit facilities on SME growth, access to a bank loan is determined by the availability of commensurate collaterals, economic times, a track record of the lender, as well as the amount and terms of engagements. In Uganda, the government through the treasury's special fund for the youth and women was created to advance business funds to enhance the growth of the informal sector for job creation, but much of these funds remained in the intermediary banks and those borrowed registered poor servicing. The reasons for this phenomenon include lending procedures, low awareness of the intended beneficiaries about the existence of the funds, and poor microeconomic business environment Adonita (2014), noted that with limited security against the loan and poor reflection of the lender's creditworthy, bank loans were hard to secure.

Entrepreneurs in the SME sector encounter serious financial challenges to invest in their business ventures and commercial lending institutions promise to close this gap (Ramelio, 2014). Besides, to improve the facilitation of credit services to the MSME (Micro, Small, and Medium Enterprises) subsector, the Kenyan Government previously initiated some programs and policies directed at the MSMEs, Women Enterprise Development (WEDF), and the Uwezo Fund (Nyabilo, 2014). Since the search for this economic prosperity changed to focus on SMEs following their economic growth in Asian countries, however, small business enterprises in Kenya, particularly those run by women, more so the rural women, still find it difficult to access formal credit facilities. SME owners often turned to informal local lenders, popularly known as Shylocks for business funds, which are given at exorbitant rates beyond the reach of the majority of the businesspersons.

From the encounters of Njoroge (2013), in his survey of the growth indicators registered by women-owned SMEs in Kiambu County, noted that exponential business growth could not be realized, as funds for investment were available in banks, yet could hardly be accessed due to strict lending requirements that many could hardly meet. According to Anyumba (2013), in a study done in Rongo Constituency based on factors influencing the accessibility of

microfinance products by small business holders, the number of lending institutions available is an indicator of accessibility, cost of credit is vital and the ability to repay is equally crucial in accessing loans from the lending institutions. Presenting the findings of a study done in Kasipul Constituency focusing on factors influencing access to financial services by SMEs owned by women entrepreneurs Opiyo (2014), noted that bank loans were pegged on the amount of personal savings, interest rates, a pool of assets offered as security and previous repayment history.

According to USAID (2016), standard guidelines and lawful guidelines frequently limit ladies' entrance to power over legacy for instance land or domesticated animals. Women are not at risk to have titled-land under their name, despite when their families have land; they are more amazing than men to have ordered over, despite when they do honestly have it. Inheritance rights are consistently uneven present inland to male relatives, leaving the two widows and young women frustrated (Ndlovu, 2015). In nations where guidelines monitor the land privileges of women, laws will in general be controlled and actualized (FAO, 2018). Conclusively, in settings where men are depicted and seen as the primary provider, ladies' capacity to offer family resources as a guarantee and their motivations to put resources into profitable exercises are affected by relational intricacies that are probably going to organize men's speculations.

In Kenya about 86% of the women respondents depended on rainwater to grow their crops. Only 4% cited boreholes as the source of water while 3% indicated tank or rainwater harvested and another 3% got their water supplies from a dam(The African Women's Studies Centre, 2014). Kassie, Ndiritu, and Stage (2014) in their study on Kenya found that the distance from water sources and food safety were inversely related with a greater marginal impact on women-headed households, implying the further the distance to a water source, the lower the probability of food security, in female households. Residential water supply programs often overlook the beneficial use of women's water supply systems, house gardens, pets, and various activities.

To improve food security at the family unit level, water systems and other water supply projects need to endeavor more grounded strategies to incorporate women and to guarantee that they have basic leadership rights over water. According to FAO (2013), women have economic access to food production and are enhanced when they can access land, cattle, and other productive assets. Food can be purchased also with income from wages as farm workers or as non-farm workers or self-employed. They may also use government or NGO remittances, family, friends, or other informal means to acquire the food. Nevertheless, even though they do the same job, those women who work in the agricultural sector in Kenya earn less wages than their husbands. Where the male workers ought to get a daily wage of KES.150 on a farm, the women most likely may be paid KES.100 yet they face the same food prices in the market. Women workers are less involved in trade unions and often cannot demand better pay because they are afraid of losing their employment and persevere. Thus, women's households are stuck in food insecurity with less pay and increasing household needs (USAID, 2016).

A study was conducted in rural Kenya where married couples were offered the opportunity to open three accounts in the names of husband and wife, wife, and husband (Holloway Niazi & Rouse, 2017). Each account was assigned different interest rates to incentivize savings. Results from the study established that large interest subsidies on the individual accounts led to increased income via entrepreneurial investments. On the other hand, subsidies on the joint accounts led to investments in household assets (Holloway Niazi & Rouse, 2017). The study identifies the fact that in co-owned accounts women have lesser bargaining power in comparison to when they operate their individually owned accounts. For this reason, they can participate in entrepreneurial activities if they operate their accounts hence empowering them financially. Subsequently, the returns from investments contribute to their security that also includes the provision of adequate nutrition to their families.

2.5 Building Capacity of Women and Enhancement of Food Security

Building capacity of women in the context of this study reflects upon procedures by which women improve on their skills, knowledge, and resources that can contribute to achieving food security. According to Oganga (2014), Building capacity entails training and equipping

people with the relevant skills and material for effective operation. Furthermore, it is the process of enhancing the abilities to evaluate and solve an existing problem efficiently using the available resources. From the perspective of the world economic crisis, it was revealed in a panel that substantial progress had been made to empower women in terms of education and employment (Domingo et al, 2015). However, the same panel in further analysis noted that despite this progress, women were still marginalized globally due to unfair customs. Furthermore, opportunities for women even when observing equality always have unfavourable outcomes. In Europe for instance, amid economic bailouts, the unemployment rates for women remain high. WEF (2018) asserts that although there may be higher educational enhancement and labour force participation among women a wide gender gap exists since women remain unrepresented in high-status jobs and political positions. It is for this reason that efforts should be made towards building their capacity in terms of skills, knowledge, and resources for them to engage in productivity that leads to the enhancement of food security.

Large populations across the globe are affected by the scarcity of food (Hilary, Anderson & Williams, 2019). Further, the United Nations now considers it a priority. This study found established in Nova Scotia (NS), Canada, that many children live in families affected by food insecurity (Hillary et. al, 2019). Therefore, building capacity of women as a parameter of women empowerment for enhancement of food security entails a woman's ability and performance. Through building capacity productivity, revenue, and working conditions improve. This is achieved by effecting changes to women's' privileges, remuneration, and social welfare. More precisely, for the total elimination of any form of discrimination against women, they must have a platform. Without an effective voice in communal matters, there exists a serious impediment to women empowerment for enhancement of food security. It is appropriate to allow women to actively participate in decision-making, which builds their capacity to be productive, hence achieve food security targets.

Regarding decision-making, women have become more visible than at any other time in history (Domingo et al, 2015). Domingo et al, further assert that more than ever women have access to very powerful positions within the judiciary, parliament, and boardrooms. However,

the trend is not uniform across the globe. Women's social influence varies across countries and regions, within countries and between socio-economic groups and sectors. In terms of decision making as an aspect of building capacity of women, there are several challenges which Domingo and co-authors provide solutions to counter. According to Domingo and co-authors, three main factors affect decision making among women and their eventual rise to leadership. They include institutions, structures, and capabilities.

The first issue is the creation of institutions that favour women in voicing out matters that can contribute to the enhancement of food security. Institutions are rules and practices that govern how people should behave and interact socially, politically as well as economically. Historically, there are four major changes in written rules that have been instrumental in increasing opportunities for women in decision-making (Domingo et al, 2015). Firstly, changes made to civil rights have ensured women participate in equal measures as their male counterparts in the public and economic sectors (Domingo et al, 2015). Secondly, change is the progress with which many countries are abolishing laws that specifically discriminate against women. Another major change is democratization, which has given rise to women in the political sphere including impoverished women in countries with an elected local government. Lastly, there are positive measures such as communal or public sector quotas, which have been beneficial in closing the gender gap in many countries (Domingo et al, 2015).

Practically, however, it is a combination of various rules and practices that create structures to improve on building the capacity of women. An example would be the incorporation of quotas into the political system using the electoral systems, internal party mechanisms, and differences in presidential and legislative systems (Domingo et al, 2015). It helps define which women are capable of holding political office. Further, it ensures that a larger number of women participate in the political system which is vital for empowering women into enhancing food security. Analytically, the nature of how formal rules work will depend on how they are incorporated with informal rules. Informal rules in this sense are customary and religious laws and familiar political norms, such as patronage-based or 'big man' politics. These norms are however hidden that nobody can recognize their negative aspects in society

such as patriarchy, sexism, or racism (Chappell and Waylen, 2013). With women firmly participating in decision-making on the bigger stage of politics, it will be easier for them to create rules that eliminate other rules and practices that are not considered to be gender inclusive.

As the second factor affecting women's capacity building, structures are deeper economic, political, and social endowments, alignments, and trends that shape a society (Domingo et al, 2015). Structures never change for example categories such as ethnicity or class have been persistent over centuries. The important structures are those that are key to closing the gender gap. Modernization, changes in gender distribution of labour and economic diversification are slowly adapting to current social expectations in developing nations. In Zambia for instance, women are moving into employment opportunities that were considered masculine hence dissipating cultural stereotypes in regards to women's abilities and the roles played by both men and women. There is a similar situation in Bangladesh more women participating in the labour industry have challenged restrictions on their mobility (Domingo et al, 2015). If women can voice out their concerns, it would create an opportunity for them to create structures that supports their active participation in productivity that contributes to the enhancement of food security. Such structures include employment opportunities in the labour and economic sector of the nation.

Additional examples of structures that build the capacity of women towards enhancement of food security include constitutional reforms and reconciliatory efforts, which have created opportunities for women to advocate for their rights on not only paper but also inaction that has led to large-scale reforms in terms of women representation in decision-making. Although opportunities for decision making for women are limited, they have been active in effecting outcomes, through strategic interactions and pushing for key decisions (Waylen, 2014). Ideally, building the capacity of women through the creation of structures as defined by Domingo et al (2015) will go a long way in ensuring women participate in decision-making that empowers them to achieve food security within the communities they live in.

Building capacity of women through the utilization of constitutional reforms for statutory achievements is important during catastrophic periods such as oppressive regimes or conflicts. During periods of conflict or regime change, for instance, the political elites usually backslide on formal commitments to women's rights. This was the case in Latin America during the 80s and the recent Arab spring. Most importantly though, there has been building the capacity of women through statutory achievements. These include; the primacy of statutory over customary law, criminalization of violence against women, equality and non-discrimination provisions, and leadership position quotas. These gains are significant in increasing the opportunities for women to participate in a household, communal, and political decision-making. Domingo et al, (2015) point out the fact that out of 44 African countries that amended their constitutions since the 90s, 75% of them had come out of conflict. In their amendments, the building capacity of women was achieved through quota provisions, in comparison to the other 25% that did not experience conflict, and generally, these post-conflict nations have doubled the number of women legislators (Tripp, 2014).

Lastly, the building capacity of women entails the possession of certain capabilities for them to utilize the opportunities made available by the institutions and structures existing. To build the capacity of women in terms of capabilities, they can be educated or trained. Therefore, a girl's future power in terms of decision making depends on the socio-economic background of her family and the support she gets from her family particularly attitudes towards education. Essentially, families play a critical role in building the capacity of women through shaping up a girl's leadership qualities, which include decision-making. If a girl grows up in a politically active household where members are involved in activism, unionism, or national office, it will familiarize her with the network and connections to be an effective decision-maker at any level. This is what Cornwall and Goetz (2005) refer to as 'political apprenticeship' or some form of informal training in political skills. Conclusively, the private sphere within which women operate and it is necessary to focus on them if there is a need to build their capacity (Domingo et al, 2015) affects certain capabilities women possess.

Building capacity of women also involves their accessibility to productive resources such as health facilities or capital. Tadros (2014) states that women may be facing hindrances of

labour and reproduction which deems the financial support from their husbands and close relatives instrumental to their careers. Moreover, accessibility to capital renders women to have more decision-making power both at home and at work especially if this capital is combined with some economic or social and cultural capital such as education (Klugman et al., 2014). Building capacity is therefore critical to enhancing food security. Ideally, building the capacity of women through the creation of strong independent institutions with effective structures and developing their capabilities is instrumental to achieving food security within the communities they live in (Domingo et al, 2015).

Building capacity of women for the enhancement of food security from the perspective of O'Neill and Domingo's ideology can be exemplified by the Grassroots Development Initiatives Foundation –Kenya (GADIF-K) (GRADIF-KENYA, 2019). For the past three years, a structure has been created through this Foundation and has been operating in Embu County under a project that enhances the capacity of Farmers Organizations of whom include women farmers. Specifically, the main aim of this project was to improve household income and food security among the targeted farmers (GRADIF-KENYA, 2019). Building capacity of women here involved the farming organizations acquiring training on how to grow drought-resistant crops, was given farm inputs, and were linked to loan services (GRADIF-KENYA, 2019). These enhanced their farming activities thus high yields whereby the target farmers got extra to sell.

In terms of institutions, the project that enhances the capacity of Farmers Organizations in Embu County has been able to hold meetings, seminars and make financial accessibility to farmers to operate effectively in farming projects (GRADIF-KENYA, 2019). Specifically the practice of meetings, seminars is one where there is an application of an operational and integrated approach that supports the planning and implementation of programs associated with climate resilience (GRADIF-KENYA, 2019). Building capacity here as indicated by O'Neill and Domingo has created institutions, which are the practices that are programs informing women on the climate itself as well as the risks posed by climate. Conclusively it does not overlook underlying causes of vulnerability that if ignored can prevent the achievement of resilient programs. Building capacity here has empowered women in Embu

County under which Mbeere Sub-Counties fall under to be aware of climate change and specifically how they should farm during the different periods to attain food security.

Building capacity of women through the creation of institutions and structures by GRADIF-KENYA has also been implemented through the community Adaptation Action Plans (CAAPs) (GRADIF-KENYA, 2019). Specifically, it incorporates a procedure that entails taking steps towards helping a community understand its situation, challenges, plans, and developments over time. In the case of Embu County, building the capacity of vulnerable groups among who are women has involved sensitization on climate changes and food productivity. The Gender-sensitive Climate Vulnerability and Capacity Assessment (GCVCA) is part of the CAAPs and entails active participation on clarifying the purpose and process of the community adaptation action planning based on active participation and analysis of taking into consideration gender equality in regards to adaptability to adapt to climate change (GRADIF-KENYA, 2019). It is an interactive procedure that involves seeking the community's knowledge, perceptions, experience, and scientific views on the different groups within the community and how they are susceptible to climate changes as well as how gender dynamics can be incorporated to cope with climate change and improve on food productivity, which is essential in enhancement of food security. Women are among the most vulnerable thus becoming the most targeted group in this process that is part of building their capacity.

2.6 Theoretical Framework

In this research, the Theory of change was adopted to guide the study. This theory is attributed to the 1960s in the works of Paolo Freire whose main purpose was to enable the poor and the oppressed to have a voice of their own in terms of development (Fokus, 2015). According to Fokus (2015), Paolo Freire advocates for community-led development through dialogue while being supported by development actors. Level of women education, credit availability, and building capacity of women in Mbeere Sub-Counties. Laing and Todd (2015), assert that the theory of change expresses openly how an initiative is to achieve expected outcomes through actions by a clear indication on how various stakeholders will be involved towards effecting the changes required.

In application towards this study, the theory gave room for on-going questioning of what might influence change during implementation (Valters, 2015). Mediations for instance were identified as a process that could be instituted in liaison with a community impeded in common goals so that the stakeholders could take appropriate actions to achieve that goal. In this study, various institutions, government, and stakeholders could be involved in the empowerment of women to enhance food security in Mbeere Sub-Counties of Embu County since it is an area still considered to be among the poorest in Kenya. The theory of change hence provided a wakeup call to all stakeholders to cross-examine and transform the approaches in terms of the level of women education, credit availability and building capacity of women could be used as a tool to effect change in the communities living within these regions.

The theory continuously reflected on change and how it happens in a particular context or group of persons (Taplin, Clark, Collins, & Colby, 2013). The theory applied to this study as it reflected on change within the communities living in Mbeere Sub-Counties. Specifically, the implementation of change, which in this study was women empowerment to enhance food security, the role of participants, and how they interact to affect this change, were identified. Further, the theory of change was applicable as it identified gaps in terms of women empowerment and the change that was required in terms of the level of women education, credit availability, and building capacity of women for enhancement of food security in Mbeere Sub-Counties. Additionally, the theory was flexible and recommended a consensus approach among the relevant stakeholders to incorporate change in terms of continuous assessments that guarantee women are empowered to enhance food security.

The application of this theory in this study emanates from the fact that the area of research, which was the empowerment of women and the enhancement of food security, was complex. Therefore, this theory helped to systematically think through the main underlying issues and root causes associated with women's empowerment and enhancement of food security. Moreover, the theory of change was applicable in this study since outlined how changes in the level of women education, credit availability, and building capacity of women were to be implemented in addition to translating those changes into sustainable ideas that can contribute

to enhancing food security (Fagligt Fokus, 2015). Subsequently, the theory helped provide direction on how to bring about change in communities within Mbeere Sub-Counties of Embu County.

Incidentally, the theory of change alone could not address fully the problem of women empowerment and enhancement of food security in Mbeere Sub-Counties of Embu County. The study adopted the Critical Social Theory to enhance it. Critical Social Theory was traced back to Marxist theory and emphasizes on the elevation of human emancipation by trying to uncover power and oppression as they occur in various forms. These oppressions and inequalities were occurring within the communities in Mbeere Sub-Counties. Critical Social Theory was applicable for this study as it focuses on the social relationships between various stakeholders with a particular matter, which in this study was women empowerment for enhancement of food security (Bohman, 2016). This theory, therefore, provided a critical approach to the social analysis of existing social problems within the communities in Mbeere Sub-Counties thus contributing to solutions that can bring about a transformation in terms of the level of women education, credit availability, and building capacity of women (Kellner, 2018).

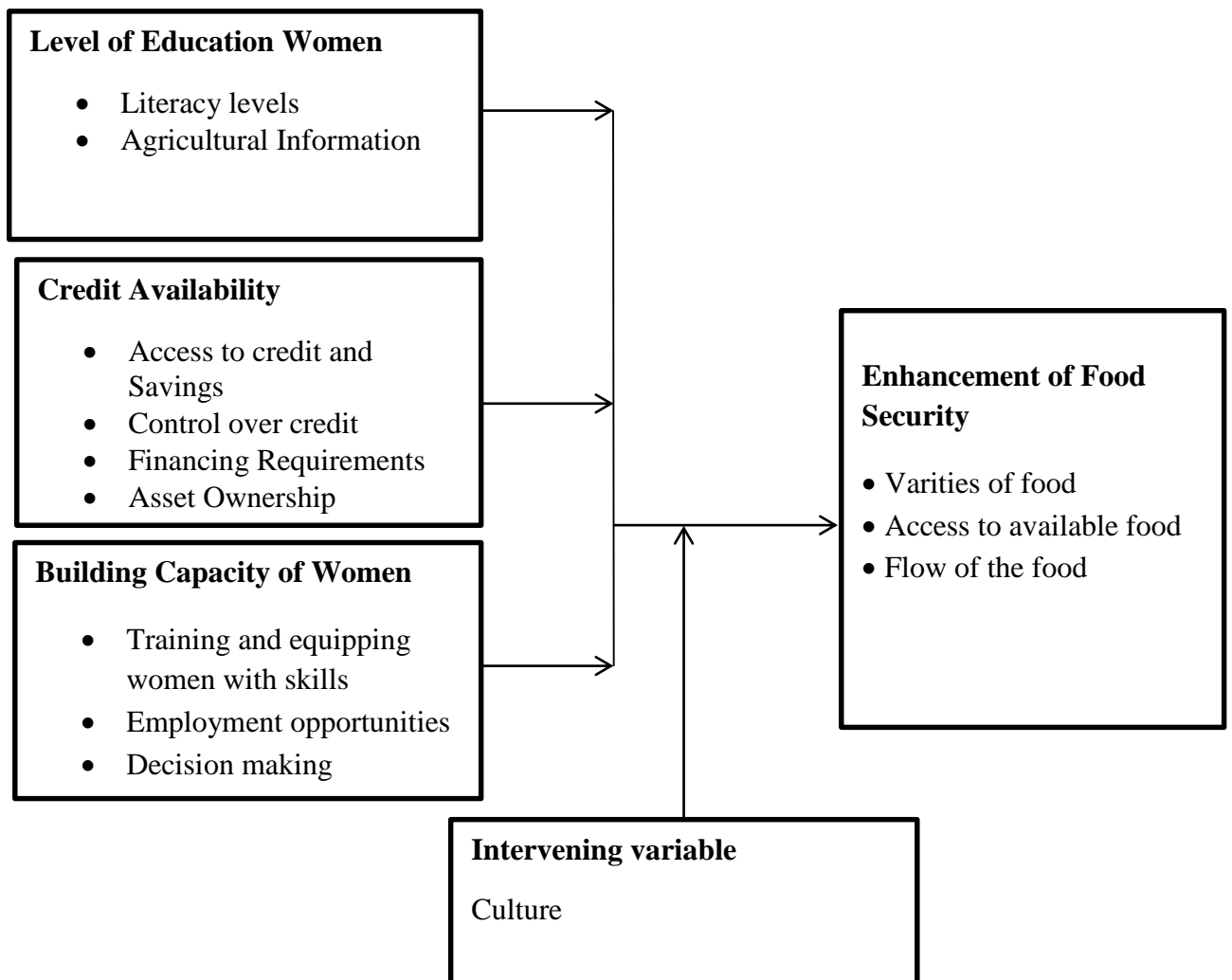
From past empirical studies, various stakeholders involved in women empowerment for enhancement of food security with women in Mbeere Sub-Counties of Embu County have not had much success. Therefore, the Critical Social Theory was applicable in this study as it provided an in-depth reflection on the specific women empowerment parameters within the level of women education, credit availability, and building capacity of women that require a critical analysis for social transformation to occur. The study hence applied this theory to critically identify with the women in Mbeere Sub-Counties, the root cause of the challenges they face concerning food security, and engage with them to provide possible and sustainable solutions.

2.7 Conceptual Framework

In a conceptual framework, the relationship between dependent variables and independent variables are illustrated. Independent variables include the Level of women education, credit availability and building capacity of women. The dependent variable include is the enhancement of food security with food availability, food accessibility, food utilization, food stability and household food security as the indicators. Culture act as an intervening variable between independent and dependent variables.

Independent Variables **Intervening Variable** **Dependent Variables**

Figure 2. 1: Factors influencing women empowerment and enhancement of food security.



2.8 Summary of the Literature Review

Generally, food security will be enhanced in Mbeere Sub-Counties of Embu County if everyone can access social and economic resources in a sufficient manner and in a way that can improve their health and nutrition over a long period. As indicated in the literature review, women across the globe provide labour force in the agriculture sector, which accounts for food production hence the enhancement of food security. Essentially, they form the economic backbone of a country even though they remain marginalized in accessing productive resources that contribute to food security. A literature review has shown that women's empowerment and enhancement of food security does not refer to a few family-friendly practices instituted by the government and the private sector. Enhancing food security is a complicated task since impediments exist in terms of the level of women's education, credit availability and building capacity of women.

Regarding the level of women's education, skills, and knowledge provided to women concerning women empowerment and food security. Furthermore, these skills are passed on to their children since educated mothers have the intellectual ability to guide their children in academic work, sustain by purchasing education resources and correct them when they fare well in class. This ensures that the society is food secure over several generations. In the long term, education helps women escape poverty through the development of their intellect and skills. The literature review has also shown that credit availability is another important aspect of women's empowerment and enhancement of food security. Ideally, when women in Mbeere Sub-Counties partake in any financial system, they will develop their entrepreneurial skills thus are able to handle risks by investing in resources or funding large expenses that contribute to enhancing food security. Further, the literature suggests that it is important for a financial system to be inclusive of since they are disproportionately impoverished. With an improved financial base, women can be innovative enough to achieve food security within the Mbeere Sub-Counties of Embu County.

Regarding the building capacity of women, the literature review noted that it starts with abolishing gender inequality. Building capacity of women must be measurable otherwise; it will not be taken seriously. To ascertain that women empowerment and enhancement of food

security, active participation of women in decision making needs to be fully realized through the creation of institutions, structures and equipping them with capabilities that are vital for the enhancement of food security. This is achieved by ensuring women in Mbeere Sub-Counties are offered a platform to push their agenda.

Theories that were used in the study were the theory of change and critical social theory. The Theory of change was used because it is a systematic process of planning, learning, reflecting, and documenting changes that community developers have created that supports the development of a consequent comprehensive action plan. It was applicable in the study because it has helped systematically think through the main underlying issues and root causes of challenges associated with women empowerment and enhancement of food security in Mbeere Sub-Counties and how these challenges can be overcome to bring change that is women empowerment that can guarantee food security. The other theory adopted that was critical social theory emphasized the social relationships between various stakeholders concerning woman empowerment for enhancement of food security. The theory was adopted to analyse the root causes of challenges that are faced by women and enabled the study to provide possible long-term solutions to women empowerment and enhancement of food security.

2.9 Knowledge Gaps

Table 2.1 provides details of previous studies conducted in the subject of this study, their findings and arising gap that informed this study.

Table 2. 1: Knowledge Gaps

Variable	Title of the study	Author & (Year)	Methodology	Findings	Knowledge Gaps
Level of women education and enhancement of food security.	Contribution of Women Groups in the Economic Empowerment of Rural Women: A Case of Women Groups in Bureti Constituency, Kericho County, Kenya.	Koech (2014)	In its design, the study adopted a survey research design, use of random sampling and purposive sampling of cases. Data was collected using interview schedule and key informant interviews. Qualitative data was analysed through content analysis whereas quantitative data was analysed using figures and tables.	Women should receive education that improves their knowledge in a way that they can exploit opportunities around them	The study concentrated on evaluation of women groups on economic empowerment while. This study assessed our the empowerment in terms of education, capacity building and access to credit influence enhancement of food security
	Female Labor Force Participation in ASIA: Indonesia Country Study	Schaner and Das (2016)	Qualitative Research approach. This paper uses over 20 years of data from Indonesia's labour force survey to study trends in female labour force participation (FLFP).	Women with a higher level of education will engage in formal paid employment.	The study looked at labour force women representation while this study will look at variety empowerment approaches and their influence on enhancement of food security

Variable	Title of the study	Author & (Year)	Methodology	Findings	Knowledge Gaps
	Women's Empowerment and Nutrition	Van den Bold, Quisumbing and Gillespie, (2013)	Qualitative research approach. Electronic databases were searched and screened, including Google Scholar, 3ie, EconLit, ELDIS	A better educated woman has greater negotiating power, as measured by physical mobility and say in household resource allocation, through the channel of increased information	No link between levels of women education and enhancement of food security. This study will use Chi-square test to determine the association between level of education and enhancement of food security
	The education of girls and women in Uganda	Atekyereza (2014)	Mixed Methods research design using both primary and secondary sources of data.	Boys access education more than girls. This often plays out clearly during times of hardships; the boy child is the cultural champion, therefore must go to school.	No link between level of women education and enhancement of food security. This study will use Chi-square test to determine the association between level of education and enhancement of food security
	The Contributions of Women towards Food Security in Malava Constituency, Kakamega County, Kenya	Liru (2014)	The study used a descriptive survey methodology across a sample of 45 women. Simple random sampling procedure was used. Data collected through Focus Group Discussions, interviews and secondary data.	Improving household food security in Africa means paying attention to the roles played by women as food producers and income earners for their families.	No link between levels of women education and enhancement of food security. This study will show if level of women educations associated with enhancement of food security

Variable	Title of the study	Author & (Year)	Methodology	Findings	Knowledge Gaps
Credit availability of Women Empowerment and enhancement of Food Security	Saving More to Borrow Less: Experimental Evidence from Access to Formal Savings Accounts in Chile	Kast and Promenanz (2014)	Survey Research Design using Questionnaires and Focus Group Discussions	Women who were allocated free savings accounts were found to decrease short term debt by 20% as well as decreasing utility cutbacks that result from negative income shock	Study did not link credit availability to women and enhancement of food security. This study attempted to draw relationship between credit availability and enhancement of food security
	An economist explains why women are paid less	Tyson and Parker (2019)	Qualitative Research Approach using secondary data.	Since women generally have less pay than men, it will be more diligently for them to spare enough for a specific speculation	Study did not link credit availability to women and enhancement of food security. This study attempted to draw relationship between credit availability and enhancement of food security
	Factors Influencing Credit availability Facilities by Women Entrepreneurs in Kisii County	Lumumba (2016)	Survey research design was used to collect data from the target population. Validity and reliability of the instruments was ensured by test, retest techniques, while permission to collect data was granted by the Ministry of Higher Education, Science and Technology. Data was analysed by use of percentages and frequencies.	Based on the variance determining access to business funds from microfinance organizations in Daom, Guinea Bissau, no lending institution can advance its hard-earned funds to people without credible credit repayment history, sufficient surety to repay and the capacity to manage the funds	Study did not link credit availability to women and enhancement of food security. This study will use Chi-square test to determine the association between credit availability and enhancement of food security
Building Capacity of Women empowerment and enhancement of Food Security	Knowledge & Skills Transfer in Capacity Development	Oganga (2014)	Qualitative Research Approach using secondary sources of data.	Capacity building of women entails training and equipping people with the relevant skills and information in order for them to operate effectively	Does not show relationship between building capacity of women empowerment and enhancement of food security.

Variable	Title of the study	Author & (Year)	Methodology	Findings	Knowledge Gaps
	Women's voice and leadership: assessing the evidence	O'Neill, Domingo and Valters (2014)	Qualitative research approach based on a review of 400 secondary sources.	Strong independent institutions with effective structures and women who possess the capabilities are instrumental to achieving gender laws and practices that are non-discriminatory	Does not show relationship between building capacity of women empowerment and enhancement of food security.
	Voice and Agency: Empowering Women and Girls for Shared Prosperity	Klugman et. al (2014)	Qualitative research design based on review of secondary sources of data.	Women who have access to capital and ownership of productive resources have more decision-making power both at home and at work especially if this capital is combined with some economic or social and cultural capital such as education	Does not show relationship between building capacity of women empowerment and enhancement of food security.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This study describes the methodology used in the execution of this study. this section presents the research design, target population, sample size and sampling procedure, research instrument, pilot study, the validity of the instrument, reliability of the instrument, data collection procedure, data analysis techniques, ethical considerations, and the operationalization of the variables.

3.2 Research Design

A descriptive survey research design was employed. In line with Mugenda and Mugenda (2003), descriptive studies obtain data that describes existing phenomena through inquisition into people's perceptions, outlooks, activities, or values. Further, the design was ideal for this study since data could be collected from a big population. Elsewhere, Gay (1996) asserts that descriptive studies collect data in testing hypotheses and answer on the current state of the subjects under study, which is applicable in this research. The implication in line with Mugenda and Mugenda (1999) is that this specific design studies an enormous population to reveal the distribution and interventions of sociological and psychological variables. Surveys, therefore, are concerned with existing relationships, ongoing processes, and developing trends. Data collection methods are observation, interviews, or questionnaires.

3.3 Target Population

The population of study is the basis upon which its validity was built (Gall, Borg & Gall, 2003). Barton (2001) noted that any study has a population in which study instruments are administered to generate data that is required. According to the Embu County Government (2014), among the ongoing projects in the County is the women's socio-economic empowerment program that targets 1000 women in each ward within Mbeere Sub-counties. Further, Embu County has ensured that Millennium Development Goal that specifically promotes gender equality and empowerment of women through an increase of the proportion of women in all public appointments has been implemented in Embu County (Embu County Government, 2014). At each Sub-County administrative office, women have been appointed

thereby having at least one woman involved in Sub-County administration. The study, therefore, targeted 8,000 women participating in the women's socio-economic empowerment program and women who were involved in Sub-County administration in the eight wards in Mbeere Sub-Counties namely: Mwea, Makima, Mbeti South, Mavuria, Kiambere, Nthawa, Muminji and Evurore. The study participants included women who were selected from the population of study. Table 3.1 below presents the distribution of the target population. The “Name of wad” shows the administrative subsections in Mbeere sub-County while the other two columns indicate the number of women and the number of women administrators charged with women empowerment programs in each ward.

Table 3. 1: Target Population by Administrative Units

Name of Sub-County	Name of Ward	Number of Women Socio-economic empowerment programme members	Number of Women in Sub-County Administration
MBEERE	Mwea	1000	1
	Makima	1000	1
	Mbeti South	1000	1
	Mavuria	1000	1
	Kiambere	1000	1
	Nthawa	1000	1
	Muminji	1000	1
	Evurore	1000	1
TOTAL		8000	8

Source: Embu County Government (2014)

3.4 Sample Size and Sampling Procedure

Sampling is defined as the process of selecting several individuals for a study in such a way that they represent the larger group from which they are selected (Bulmberg, Cooper and Schindler, 2011). The following subsections explaining the sample size and sampling technique.

3.4.1 Sample Size

Mugenda and Mugenda (1999) state that a sample is a portion of respondents gathered from the targeted population. It has been carefully selected and is characteristic of the entire population that is relevant to the study. In the study, the total number of women who were subjected to interviews and filling in questionnaires formed the sample size. The study utilized the Slovin's formula to arrive at the sample of the respondents that participated in this study. The study adopted the formula developed by Slovin (1960) as follows:

It is computed as

$$n = N /$$

$$(1 + Ne^2).$$

Whereas:

n = no. of

samples N = total

population

e = error margin / margin of error

$$n = 8,000 / [1 + 8,000$$

$$(0.05^2)]$$

$$n = 8,000 / [1 + 8,000$$

$$(0.0025)]$$

$$n = 8,000 / [20.0025]$$

$$n = 399.95 \sim \mathbf{400}$$

The 399.95 was rounded off to 400 women who are in the women socio-economic empowerment programme that was the sample size of respondents because the population of study was known.

3.4.2 Sampling Procedure

In the research, sampling of wards was done by employing probability and non-probability sampling procedures as well as the women socio-economic empowerment programme members, and women in administration in Mbeere Sub-Counties, Embu County. From the

target population of 8000, a sample size of 400 was arrived at using Slovin's formula to be studied across Mbeere Sub-Counties. A cluster sampling procedure was then adopted in selecting the wards from Mbeere Sub-Counties from which the study participants were selected. The eight wards were Mwea, Makima, Mbeti South, Mavuria, Kiambere, Nthawa, Muminji, and Evurore. Proportionate sampling procedure was used in selecting the women in the women socio-economic empowerment program from the eight wards in Mbeere Sub-counties. Purposive sampling procedure was then utilized to select the women in administration in each of the eight wards in the Sub-counties. Table 3.2 shows the sample size of the respondents.

Table 3. 2: Sample Size of Respondents from each Cluster

Name of Sub County	Name of Ward	Number of Women Socio economic empowerment programme members	Number of Women in Administration
MBEERE	Mwea	50	1
	Makima	50	1
	Mbeti South	50	1
	Mavuria	50	1
	Kiambere	50	1
	Nthawa	50	1
	Muminji	50	1
	Evurore	50	1
TOTAL		400	8

3.5 Research Instruments

Questionnaires and interviews were adopted as a means of acquiring data from the study participants. Questionnaires were used because they had the capacity to obtain data from a large population in a short period. Further, they could be administered directly or through representatives where the people are educated (Sahaya, 2017). Questionnaires also generated information that was both quantitative and qualitative since they contained both open-ended and close-ended questions. Specifically, questionnaires were administered to the women

participating in the women's socio-economic empowerment programmes while interviews were conducted with 8 women in the local administration from the 8 wards within Mbeere Sub-Counties. An interview guide was used to probe and clarify some of the insights given by the respondents in the questionnaires that were not clear. This helped them to be more objective and detailed. Interviews were to be conducted face to face for a better understanding of the situations.

The questionnaires for women participating in the women's socio-economic empowerment programme were organized into five main sections. Section one obtained data pertaining to the socio-demographic characteristics of the participants. Section two obtained data on the influence of the level of women education on the enhancement of food security in Mbeere Sub-Counties. Section three solicited data on the influence of credit availability on the enhancement of food security in Mbeere Sub-Counties. The third section examined the influence of building capacity of women enhancement of food security in Mbeere Sub-Counties. The fourth section obtained data on the enhancement of food security in Mbeere Sub-Counties. The interviews were organized into thematic areas under the main objectives of the study some of which will include: Level of women education challenges, the role of credit facilities, and operational strategies on capacity building of women.

3.5.1 Pilot Study

A pilot study was carried out to test the validity of the questionnaires and interview guides. Specifically, the pilot study involved administering research instruments to pilot subjects in a similar way as in the main study. The study adopted 10% of the sample size of the final study in piloting. For purposes of undertaking a pilot study, Mugenda (2003) asserts that a sample of 10% is adequate. Hence, in this research, a sample of 40 respondents was identified from Makima ward for the pilot study. Piloting was conducted in the ward since it falls within the study area and has similar characteristics to the areas under study. Questionnaires were administered to women participating in the socio-economic empowerment programme and interviews with women in administration in Makima ward who were selected randomly. Piloting enabled the research to establish that the questions asked were matching the reality on

the ground. In conducting a pilot test, the study helped to confirm if the variables under study could easily be processed and analyzed.

3.5.2 Validity of the Instruments

Validity reflected on the extent to which findings gathered represented the phenomena being researched. In other words, to confirm if the level of what was being measured had been met as intended to be measured (Gall & Borg, 1989). The first test to be utilized was content validity, which measured whether the information collected through the questionnaires and interview guides represented what was contained in the phenomena under study. In this study, the questionnaires and interview guides were prepared to solicit information on the influence of women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County. To test for content validity, these questionnaires and interview guides were subjected to scrutiny by the supervisors. This was done to ensure that the questions in the tools covered all the areas under study. The purpose of testing for their validity was to ensure that their content covers all the variables under study. Further validity tests confirmed whether primary data obtained from the participants matched the reality of the situation. Conclusively, the piloting of tools tested the validity of the questionnaires and interview guides and errors found were amended. The study further applied triangulation to improve on the validity of tools, where the semi-structured interview, open and closed-ended questions in the questionnaire was subjected upon respondents from the pilot study. The data collected during the pilot study was analysed and used to develop dummy results, which were used to find out if there is a correlation of 0.9 or higher.

3.5.3 Reliability of the Instruments

Cronchbar Alpha is appropriate procedure for hypothesis testing and estimation of internal consistency (Bonett & Wright, 2015). Reliability was conducted to confirm if the questionnaires and interview guides could generate similar findings over repetitive trials. Specifically, the procedure entailed administering the questionnaire to the same group of respondents twice. In this study, tools were subjected to the respondents from the pilot study, and the same instruments were again administered to the same respondents. There was a coefficient of 0.7 from the test-retest technique and the instruments were confirmed to be

reliable (Mugenda and Mugenda, 2003). Due to the fact that the Alpha coefficients obtained in this study were greater than 0.7, it was concluded that the tool was reliable hence appropriate for the study. The Cronbach's alpha values obtained for respective variables are found in the table below.

Table 3. 3: Reliability of study variables

	Factor	Cronbach's alpha
1	Level of women education	0.823
2	Credit availability	0.876
3	Building capacity of women	0.921
4	Enhancement of food security	0.812

3.6 Data Collection Procedure

Research data was gathered from 8 regions selected in Mbeere Sub-Counties of Embu County and there were two research assistants to assist respondents who were having difficulties in understanding some items in the questionnaires and interviews. This was conducted between October 2019 and December 2019. To ensure the competency of the assistants, they were trained on the various aspects of handling the respondents in the process of administering the questionnaire and on the ethical procedures of conducting the research. A cover letter was used to accompany the questionnaire in introducing the research and its purpose. The women who are participating in the socio-economic empowerment program had their consent sought before engaging them in the study. Further, they received instructions on how questionnaires were to be filled. In this study, a follow-up was also done to ensure the filling of questionnaires was done appropriately, and thereafter all the questionnaires were collected.

Interviews were conducted with the 8 key informants picked from 8 regions in Mbeere Sub-Counties of Embu County. The interviews were done during the weekends between the months of October 2019 and December 2019. An appointment was sought with the targeted respondents through a letter addressed to their offices which was done some two weeks in advance. The researcher confirmed the appointment by making a phone call to the specific respondent to be interviewed. On the material day of the appointment, the researcher

accompanied by the research assistant visited the venue agreed for the interview and on time. The purpose of the interview was explained, the ground rules and procedure for data collection included note taking during the interview.

3.7 Data Analysis Techniques

This study employed a descriptive survey research design. The study was descriptive since it involved obtaining data describing existing phenomena through inquisition into people's perceptions, outlooks, activities, or values as regards women empowerment for enhancement of food security in Mbeere Sub-Counties. Further, the study design was adopted since the population under study was large. Additionally, the data collected in a descriptive study can be used for inferential statistics that determine whether one variable influences another. Once data collection was complete, the questionnaires and interview guides were verified and then screened to identify any inconsistencies. Thereafter, the data was coded and edited for the purposes of ensuring that they were accurate and comprehensive. Computer Software Statistical Package for Social Sciences (SPSS) was then used to evaluate the data. Qualitative information from questionnaires and interview guides were analysed using thematic and content analysis. Thereafter, descriptive statistics were utilized to explore and compare data.

The study utilized inferential statistics to establish whether an observed pattern between variables existed. Specifically, Pearson's chi-square test for independence for hypotheses was employed in examining the association between variables. It is conducted through an assumption that the variables are not dependent on each other. Chi-square tests were conducted using the SPSS program. Once the survey data was entered into the program, the software-generated cross-classification tables hence obtain the tests for independence from the tables. Additionally, the software was able to calculate the expected values (χ^2 statistic) and the Chi-Square critical value. The computed tests were then used to interpret the results in chapter four.

Qualitative data were analysed using thematic analysis before merging them with the quantitative data. To begin with, the transcripts were put into a form. The transcripts were then re-read for familiarization and to finally categorize them into different types of

information. The categorized data was based on the objectives of this research. Interviews were transcribed and qualitatively analysed through themes. Specifically, it involved unravelling themes in the interview responses before confirming and qualifying them by probing the data. Further, the procedure was repeated to identify additional themes, categorize, and report them in verbatim to the quantitative data findings. Once all the data had been analysed, tables were utilized to present the results.

3.8 Ethical Considerations

In this study, ethical considerations that were made included the right to self-determination of the study participants. To comply with this right as indicated by Burns and Grove (2001) the study participants were accorded respect by ensuring that adequate information was provided to them on how the research shall be undertaken. This was done so as to enable them to be capable of comprehending and deciding on whether to consent voluntarily to participate in the study or decline participation.

Additionally, the study observed ethical considerations with regard to the principle of the right to the confidentiality of the respondents. To comply with this ethical consideration, the study guaranteed privacy in reference to the handling of any information that the respondents would share with or without their consent (Capron,1999). Furthermore, the study complied with this ethical consideration by ensuring that the respondents' identities or any information about them was kept private during the data collection process. This would avoid any unnecessary disclosure of their information.

Finally, in complying with ethical considerations, any form of data provided by the respondents was kept private. This would be any information given by the respondents and could have been in the form of perceptions, views or approaches, and sentiments. Unauthorized persons were not allowed to have any access to raw data and neither did the data have any names linked to them. The information obtained was strictly utilized for the study's purpose. Finally, the study was conducted after obtaining letter from University of Nairobi and the National Commission for Science, Technology & Innovation.

3.9 Operationalization of the variables

Table 3. 4: Operationalization Table

Objectives	Variables	Indicators	Measurements	Measurement scale	Data Analysis Techniques	Tools of Data Analysis
1. To examine the influence of level of women education on enhancement of food security in Mbeere Sub-Counties, Embu County.	Independent Variable Level of Women Education	Literacy levels Agricultural Information Agricultural Development Training	Education level Agricultural literacy levels Nature of agricultural training	Interval Interval Interval	Descriptive statistics Inferential statistics	χ^2 statistic and exact significance level of the statistic. Chi-square tests.
2. To assess the influence of credit availability on enhancement of food security in Mbeere Sub-Counties, Embu County.	Independent Variable Credit availability	Access to credit and Savings Control over credit Financing Requirements Asset Ownership	Levels of credit availability and savings Levels of control over credit Nature of Financing Requirements Levels of asset Ownership	Interval Interval Interval Interval	Descriptive statistics Inferential statistics	χ^2 statistic and exact significance level of the statistic. Chi-square tests.
3. To evaluate the influence of building capacity of women on enhancement of food security in Mbeere Sub-Counties, Embu County.	Independent Variable Building capacity of women.	Training and equipping women with skills Employment opportunities Decision making	Training levels Level of unemployment Number of women in decision making positions	Interval Interval Interval	Descriptive statistics Inferential statistics	χ^2 statistic and exact significance level of the statistic. Chi-square tests.
	Dependent Variable Enhancement of Food security	Food availability Food accessibility Food utilization Food stability Household food security	Level of agricultural output	Interval	Descriptive statistics Inferential statistics	χ^2 statistic and exact significance level of the statistic. Chi-square tests.

CHAPTER FOUR: DATA ANALYSIS, PRESENTATION, INTERPRETATION AND DISCUSSION OF THE FINDINGS

4.1 Introduction

In this chapter, findings of the study on the influence of women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County are presented and discussed. The first section of this chapter presents the general study characteristics followed by study objectives; the level of women education and enhancement of food security, credit availability of women and enhancement of food security, building capacity of women, and enhancement of food security.

4.2 Questionnaires Return Rate

Out of the 400 questionnaires administered to the respondents, 290 were returned making a questionnaire successful return rate of 72.5%. Babbie (2003) suggested that a return rate of 50% is adequate, 60% good, and 70% very good for analysis. Chen (1996) argued that the larger the return rate, the smaller the non-response error. This implies that the 72.5% return rate was appropriate for data analysis. The researcher was able to achieve this by administering questionnaires to the respondents directly and waited for them to be filled up. In situations where the respondents were busy, an appointment was made and the questionnaires were picked later after they were filled up.

4.3 Demographic Data

The background information of the respondents that were considered in this study included gender, age bracket and educational level. The results are as discussed in subsequent Sections 4.3.1 to 4.3.2.

4.3.1 Respondents by Age

The respondents were asked to indicate their age bracket. This was categorized into the following: below 30 years, 31-40 years, 41-50 years, and 50 years and above. Table 4.1 shows the distribution of women by age bracket.

Table 4. 1: Age distribution

Age	Percentage	Frequency
Below 30 years	22.1 %	64
31 – 40 years	58.6 %	170
41 – 50 years	6.2 %	18
51 years and above	13.1 %	38

As shown in Table 4.1, when asked to indicate their age bracket, slightly over half (58.6%) of the respondents were aged between 31-40 years of age. This was followed by 22.1% and 13.1% who were aged below 30 years of age and 51 years and above respectively. Only a small percentage (6.2%) of the respondents was aged 41 – 50 years.

Age is an important indicator in this study as it as younger women are expected to be more innovative and easy to learn and practice large-scale food production. Age is an important factor in facilitating women empowerment since it enhances performance. A population of women who are diverse by age shows a number of different values, preferences, and experiences, making it extremely likely that all their activities create scope for different opinions to be expressed and different approaches to problems. This diversity improves the flexibility and creativity of the company, leading eventually to more innovation, quicker and flexible problem-solving processes with better results, and better employee performance.

4.3.2 Respondents' highest education attained

The study also sought to establish the education level of the respondents. The categories included primary, secondary, college, and university levels. The distribution of the respondents by education level is presented in Table 4.2:

Table 4. 2: Education level

Level of Education	Percentage	Frequency
Primary	24.1 %	70
Secondary	37.9 %	110
College	29.7 %	86
University	8.3 %	24

The level of education affects women's ability to acquire information during the empowerment process. It is assumed that women with a high level of education are more likely to acquire training with ease. Table 4.2 shows that 37.9% of the respondents had secondary level of education. Another 29.7% of them indicated that they had attained college education level while 24.1% of them had primary education. Only 8.3% of them had a university level of education. Arguably, it can be deduced that a good percentage of the women in Mbeere Sub-Counties have attained basic education.

The level of education affects productivity. Intellectual capital is a vital element responsible for the economic development of any organization. Heathfield (2007) observed that tertiary education enhances the broadening of knowledge and expertise of employees within an organization. Additionally, MacDougall and Hurst (2005) believed that the main motive of the modern business is intellectual awareness and more trained employees, to maintain its competitive advantage on the global market, the more an enterprise becomes more positioned and developed. Therefore, when women are well trained, they will know the scope expectations and depth of their jobs and would be able to attach building blocks to their professionalism that will improve on their progress as a factor of empowerment.

Previous scholarly work has drawn the association between performance and level education. For instance, McBey and Karakowsky (2001) found that the causal relationship between the level of education and working performance is likely to exist. Ariss and Timmins (2009)

indicated that education at some point influences the performance of the job. The lower the level of education, the less likely that people would perform better. In as much as research shows that performance exhibited by the members of an organization may vary according to the educational qualifications, Kotur & Anbazhagan (2015) found a contradicting trend within an organization opining that increasing academic qualification among the employees reduces performance. This scholarly evidence stresses the importance of high education attainment among the women and the benefits associated when undertaking an empowerment program.

4.4 Level of Women Education and Enhancement of Food Security

This study sought to establish how education influenced women's empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County. The quantitative results were also affirmed by responses from the qualitative survey where a respondent was captured saying;

“... a lot of positive changes can be experienced if there are implementations of women empowerment projects. Our mothers and daughters are burdened with the duty of spending the whole day fetching water and other chores in their houses instead of spending that energy on the farms or in a business where they can produce goods and services that will help to improve the wellbeing of our families” (Key Informant 2, Makima Ward).

4.4.2 Influence of Level of women education on Enhancement of Food Security

One of the main issues investigated in this was was the effect of the level of women's education on food enhancement. Women were requested to indicate the level of agreement with the following statements regarding the influence of the level of education for women on the enhancement of food security. The study sought to establish the influence on the level of women education empowerment and enhancement of food security. Respondents were asked to indicate whether they agreed, strongly agreed, were undecided, disagreed or strongly disagreed with various statements regarding the influence on the level of women education empowerment and enhancement of food security in Mbeere Sub-Counties, Embu county. The responses are presented in Table 4.3.

Table 4. 3: Influence of Level of Women Education on Enhancement of Food Security

	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	Mean	STD_Dev
Statement	F (%)	F (%)	F (%)	F (%)	F (%)		
Level of women education is the most powerful agent of women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu county	108 (37.2)	124 (42.8)	44 (15.2)	10 (3.4)	4(1.4)	1.890	0.774
Formal, non-formal and informal education is considered valid to influence women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County.	68 (23.4)	122 (42.1)	70 (24.1)	18 (6.2)	12 (4.1)	2.255	0.044
Level of women education encompasses life skills, which helps influencing women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County.	126 (43.4)	94 (32.4)	28 (9.7)	42 (14.5)	0	1.952	0.053
Women with high level of education are able to have land ownership, equal employment opportunities, and increased accessibility to technology in order to provide food security in Mbeere Sub-Counties, Embu County.	134 (46.2)	70 (24.1)	18 (6.2)	20 (6.9)	48 (16.6)	2.234	0.045
To enhance food security in Mbeere Sub-Counties, Embu county, women need to be trained in order to be literate and highly innovative to know high quality of seeds.	120 (41.4)	152 (52.4)	16 (5.5)	2 (0.7)	0	1.655	0.066
Access to high-level education by women appears to increase women's intellectual capacity to deal with food insecurity in Mbeere Sub-Counties, Embu county.	94 (32.4)	130 (44.8)	58 (20.0)	4 (1.4)	4 (1.4)	1.945	0.054

Improving level of women education can result in reduction in food insecurity.	94 (32.4)	108 (37.2)	74 (25.5)	8 (2.8)	6 (2.1)	2.048	0.050
Lack or low level of education among women undermines effort generatively among women in fighting food insecurity in Mbeere Sub-Counties, Embu county.	120 (41.4)	112 (38.6)	14 (4.8)	40 (13.8)	4 (1.4)	1.952	0.053
High level of education among women education lead to increased household food security in Mbeere Sub-Counties, Embu County.	96 (33.1)	122 (42.1)	32 (11.0)	26 (9.0)	14 (4.8)	2.103	0.048

Most women strongly (42.8%) felt that level of women education is the most powerful agent of women empowerment and enhancement of food security in Mbeere Sub-Counties as implied by a mean of 1.890 and a standard deviation of 0.774, Further, 23.4 % and 42.1% of the respondents strongly agreed and agreed respectively that formal, non-formal and informal education is considered valid to influence women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County, which is confirmed by a mean of 2.255 and a standard deviation of 0.044. These results concur with research by Agidew and Singh (2018) which established that in rural areas, education led to an improvement in agricultural production resulting in food security. Additionally, research by FAO (2013) established that since women account for 43% of agricultural labour in most developing countries, it is important to secure their rights as a key strategy of ensuring food security. Ideally, in Mbeere Sub-Counties ensuring women have both formal and non-formal education is key to enhancing food security.

Level of women education encompasses life skills which help to influence women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County as implied by 43.4 % of respondents who strongly agreed, 32.4 % who agreed. Likewise, 46.2 % and 24.1% of the respondents strongly agreed and agreed respectively that through high levels of education among women, women gain knowledge on how to have land ownership, equal opportunities, increased accessibility to technology and market opportunities, and in order to provide food security in Mbeere Sub-Counties, Embu County. This is in line with a study by Koech (2014) which found that education has led to women taking on responsibilities that

were considered male-oriented such as nurses, teaching, and other occupations. The study attributed this fact to the high literacy levels that come as a result of better education among women (Koech, 2014). In a society where literacy levels of women are high, they are likely to be more innovative thus develop numerous aspects of food production, which is critical to food security. Additionally, high literacy levels of women education is an important factor for the involvement of women in the labor market in Mbeere Sub-Counties. To enhance food security in Mbeere Sub-Counties, Embu County, women need to be trained in order to be literate and highly innovative to know the high quality of seeds is a statement (41.4 % strongly agreed, 52.4 % agreed). Likewise, 32.4 % and 44.8% of the respondents strongly agreed and agreed respectively that access to a good level of education among women appears to increase women's intellectual capacity to deal with food insecurity in Mbeere Sub-Counties, Embu County. These findings which indicate a majority in agreement concurs with a study by Van den Bold, Quisumbing, and Gillespie (2013) that was conducted in India and found that a better-educated woman has greater negotiating power, as measured by physical mobility and say in household resource allocation, through the channel of increased information. Greater negotiating power, physical mobility, and resource allocation are all aspects of intellectual capacity and innovative nature that are vital in dealing with food security in Mbeere Sub-Counties.

Most women felt that improving women's education can result in a reduction in food insecurity (32.4 % strongly agreed, 37.2 % agreed). Findings further showed that 41.4 % and 38.6% of the respondents strongly agreed and agreed respectively that lack of women education undermines generatively among women in the fight against food insecurity in Mbeere Sub-Counties, Embu County. This collaborates with research by Perezniето (2016) which demonstrated the power of intellectual abilities in India through analysis of a programme called *Mahila Samakya*. This program which targeted the socio-economic empowerment of women established that through women's adult learning, they were now aware of the numerous disadvantages they undergo, and would now point out their rights as well as chart ways to shape their own lives (Perezniето, 2016). The research by Perezniето (2016) is significant as it highlights that education empowers a woman from the inside by improving on their intellect, it familiarizes them with their value to society and strategies to

impact change, this negotiating power hence facilitates the improvement of various issues affecting the society they live in including food security. Conclusively high level of education among women can improve food security in Mbeere Sub-Counties. These findings are also observed from the qualitative data that associated women socio-economic empowerment programme members with a high level of project control, open project management with more project benefits; that made them be more satisfied due to their exposure to training. Responses from a key informant indicated that.

“...The conflicts and suspicions that existed before disappeared immediately members were engaged in training on socio-economic empowerment. Since then the affairs of various women groups have been run transparently as they have been trained on various agricultural technologies that can help women produce efficiently”(Key Informant 5, Kiambere Ward)

4.5. Credit Availability and Enhancement of Food Security

This study sought to establish how credit availability influenced women's empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County.

4.5.1 Influence of Credit Availability on Enhancement of Food Security

The study sought to establish the influence of credit availability of women on women empowerment and enhancement of food security. Respondents were asked to indicate whether they agreed, strongly agreed, were undecided, disagreed or strongly disagreed with various statements regarding the influence of credit availability of women on women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu county. The distribution of responses is shown in Table 4.4.

Table 4. 4: Influence of Credit Availability on Enhancement of Food Security

Statement	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	Mean	STD_Dev
	F (%)	F (%)	F (%)	F (%)	F (%)		
Credit availability services empowers women socio-economic status in Mbeere Sub-Counties, Embu County.	68 (23.4)	140 (48.3)	38 (13.1)	40 (13.8)	4 (1.4)	2.214	0.996
Microfinance is an important means of empowering women financially in Mbeere Sub-Counties, Embu County.	40 (13.8)	122 (42.1)	76 (26.2)	48 (16.6)	4 (1.4)	2.497	0.940
Women use credit services to enhance food security in Mbeere Sub-Counties, Embu County	24 (8.3)	150 (51.7)	58 (20.0)	20 (6.9)	38 (13.1)	2.648	1.318
Credit services enable women improve family nourishment through entrepreneurships in Mbeere Sub-Counties, Embu County.	102 (35.2)	128 (44.1)	18 (6.2)	36 (12.4)	6 (2.1)	2.021	1.096
Women use credit services to purchase farm inputs and improve food production in Mbeere Sub-Counties, Embu County.	100 (34.5)	96 (33.1)	36 (12.4)	58 (20.0)		2.179	1.237
Access to microcredit products and services by women has facilitated them to undertake business ventures in Mbeere Sub-Counties, Embu County.	24 (8.3)	188 (64.8)	46 (15.9)	32 (11.0)		2.297	0.595
Access to microcredit can empower women in terms of owning productive assets or income and to have cash savings in Mbeere Sub-Counties, Embu County.	102 (35.2)	76 (26.2)	58 (20.0)	32 (11.0)	22 (7.6)	2.297	1.588
Access to loans has enabled women to have the ability and capacity to purchase foodstuffs in Mbeere Sub-Counties, Embu County.	32 (11.0)	124 (42.8)	46 (15.9)	88 (30.3)		2.655	1.054

The study found that credit availability services empowered women socio-economic status in Mbeere Sub-Counties, Embu County as implied by 23.4% of respondents who strongly agreed and 48.3% agreed). Likewise, 13.8% and 42.1% strongly agreed and agreed respectively that microfinance is an important means of empowering women financially in Mbeere Sub-Counties, Embu County. These results agree with research by Holloway Niazi & Rouse (2017) which found that another important aspect of socio-economic empowerment is the accessibility to financial services by women since it is necessary for the reduction of poverty and economic growth. As the findings indicate, it can be summarily stated that credit facilities and their availability is key to empowering women financially in Mbeere Sub-Counties.

In regard to women use credit services to enhance food security in Mbeere Sub-Counties, respondents agreed that credit services to women improved food security as implied by 8.3% of the respondents who strongly agreed and 51.7% agreed. Further, findings credit services enabled women to improve family nourishment through entrepreneurship in Mbeere Sub-Counties, Embu County (35.2% strongly agreed, 44.1% agreed). This aligns with research by FAO (2018) which was conducted in Africa, Asia, and Latin America and found that enhancements in food security for families were related with women's payments and their role in family choices since women spend a fundamentally higher sum of their salary than men on nutrition for the family do. Ideally, it can be concluded that payments made to women which include credit facilities affect the enhancement of food security in Mbeere Sub-Counties since they have been confirmed to improve family nourishments.

Extension of credit to women to purchase farm inputs and improve food production in Mbeere Sub-Counties, Embu County, slightly was regarded as important in increasing food security (34.5% =strongly agreed and 33.1%= agreed). Access to microcredit products and services by women has facilitated them to undertake business ventures in Mbeere Sub-Counties, Embu County, as implied by 8.3 % of the respondents who strongly agreed and 64.8% agreed. The findings concur with research by FAO (2018) in which it was revealed that women's socio-economic empowerment is not specifically used for food security rather it is used to also acquire other essential resources that may be agricultural activities or business ventures.

Findings on the statement that access to microcredit can empower women in terms of owning productive assets or income and to have cash savings in Mbeere Sub-Counties, Embu County, show that slightly more than two thirds (35.2%) of the respondents strongly agreed, 26.2%. Likewise, the statement regarding access to loans has enabled women to have the ability and capacity to purchase foodstuffs in Mbeere Sub-Counties, Embu County, 11%, and 42.8% of the respondents strongly agreed and agreed respectively. The findings are in line with a study by Holloway Niazi and Rouse (2017) which was conducted in rural Kenya where married couples were offered the opportunity to open three accounts in the names of husband and wife, wife, and husband. Each account was assigned different interest rates to incentivize savings. Results from the study established that large interest subsidies on the individual accounts led to increased income via entrepreneurial investments (Holloway Niazi & Rouse 2017). On the other hand, subsidies on the joint accounts led to investments in household assets (Holloway Niazi & Rouse 2017). In general, when women in both scenarios had access to credit facilities, they invested in both entrepreneurial investments and nutritional needs, and in Mbeere Sub-Counties, microcredit access has been confirmed to empower women in terms of owning productive assets and purchasing foodstuffs.

4.5.2 Efficiency of Credit Availability

Respondents were asked to rate how efficient credit availability was in Mbeere Sub-Counties, Embu County for enhancement of food security through women empowerment.

Table 4. 5: Efficiency of credit availability

Credit Availability Ratings	Percentage	Frequency
Excellent	18.6 %	54
Good	20 %	58
Average	49 %	142
Poor	12.4 %	36

Table 4.5 shows that nearly half (49%) of the respondents stated that credit availability as an effect on women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County was average. Another 20% indicated it was good while 18.6% stated that it was

excellent. The remaining 12.4% indicated that it was poor. A study in Uganda and Malawi found that offering simplified accounts does not necessarily result in positive downstream effects (Dupas et. al, 2016). It suggests that there is a need for more research to understand the specific barriers to women empowerment. This is for the purposes of designing products and formulating policies that will be successful (Holloway Niazi & Rouse, 2017). Therefore, there is a need to impact women with education and skills to empower them and not necessarily focusing on credit availability.

The opinions captured in the quantitative data were also validated by responses captured in the interviews with key informants. Respondents in the interviews revealed that they need to be informed prior to any project initiation and given a hand to decide where to place the project infrastructure due to challenges associated with accessing credit financing.

“...We must be informed about when a project is to start and this gives us ample time to organize for money from the banks as it is based on how much savings you have” (Key Informant 7, Muminji Ward).

4.5.4 Improvement of Credit Availability

The study sought to establish what can be done to improve credit availability towards empowering women and enhancement of food security in Mbeere Sub-Counties, Embu. Table 4.6 shows the distribution of responses.

Table 4. 6: Improvement of Credit Availability

	Frequency	Percent
Mobilization and sensitization on the available funding agents	90	31.0
Reduction of interest rates	174	60.0
Modification of both standard and lawful guidelines	26	9.0
Total	290	100.0

Table 4.6 shows that 60% of the respondents stated that the reduction of interest rates could improve credit availability towards women empowerment and enhancement of food security.

31% stated that mobilization and sensitization on the available funding agents would improve credit availability while 9% indicated that modification of both standard and lawful guidelines would improve credit availability. Another barrier to women's socio-economic empowerment is accessibility to financial services such as savings accounts. One way that can improve women's savings power is removing costs associated with opening and maintaining of these accounts. In Chile, for instance, women who were assigned free savings account were found to reduce short term debt by 20% as well as reducing consumption cutbacks that result from negative income shock (Kast and Pomeranz, 2014). In Nepal, of the 84% of women opening these low-cost accounts, 80% made at least 2 deposits per year and although their asset ownership did not increase, their expenditures did (Prina, 2015). In both cases, women become more empowered since there was an increase in schooling levels of their children and there was a minor drop in income after an income shock. Both cases suggest that low cost, no-frill accounts lead to positive downstream effects (Holloway Niazi & Rouse, 2017).

4.6 Building Capacity of Women and Enhancement of Food Security

This study sought to establish how the building capacity of women influenced women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County.

4.6.1 Influence of Building Capacity of Women on Enhancement of Food Security

Building capacity is one of the approaches used by most organizations and programs to enhance the skills of their teams. While the capacity building could have a significant effect on the enhancement of food security in Mbeere sub-county in Embu county, no scholarly evidence existed as ta the time of this study. Therefore, this study sought to establish the influence of building capacity of women and enhancement of food security. Respondents were asked to indicate whether they agreed, strongly agreed, were undecided, disagreed or strongly disagreed with various statements regarding the influence of building capacity of women and enhancement of food security in Mbeere Sub-Counties, Embu county. Table 4.7 presents the distribution of responses.

Table 4. 7: Influence of Building Capacity on Women Empowerment for Enhancement of Food Security

Statement	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	Mean	STD_Dev
	F (%)	F (%)	F (%)	F (%)	F (%)		
Building capacity of women equips women with knowledge and skills to operate effectively towards enhancing food security in Mbeere Sub-Countries, Embu County.	174 (60.0)	88 (30.3)	18 (6.2)	10 (3.4)		1.531	0.580
Building capacity of women improves knowledge on land ownership, equal employment opportunities, increased accessibility to technology in Mbeere Sub-Countries, Embu County	86 (29.7)	160 (55.2)	18 (6.2)	26 (9.0)		1.945	0.714
In building capacity of women, women get opportunity to take part in decision making on socio-economic issues in Mbeere Sub-Countries, Embu County.	116 (40.0)	90 (31.0)	70 (24.1)	14 (4.8)		1.938	0.831
Gender gaps and discrimination are exposed and closed in building capacity of women in Mbeere Sub-Countries of Embu County.	72 (24.8)	114 (39.3)	36 (12.4)	50 (17.2)	18 (6.2)	2.407	1.455
Through building capacity of women, women explore their abilities and roles in enhancing food security in Mbeere Sub-Countries, Embu County.	70 (24.1)	124 (42.8)	38 (13.1)	16 (5.5)	42 (14.5)	2.434	1.708
Building capacity of women is a platform used to claim for women rights and position in the community and household in Mbeere Sub-Countries, Embu County.	120 (41.4)	144 (49.7)	18 (6.2)	8 (2.8)		1.703	0.498
Building capacity of women plays a fundamental role in enhancing food security in Mbeere Sub-Countries, Embu County.	66 (22.8)	172 (59.3)	44 (15.2)	8 (2.8)		1.979	0.489

Building capacity of women have knowledge of land ownership, increased accessibility to technology and market opportunities in Mbeere Sub-Counties, Embu county.	106 (36.6)	114 (39.3)	62 (21.4)	8 (2.8)		1.903	0.680
Building capacity of women contacts training on new technologies of irrigation methods which solve the problems associated with climatic changes in Mbeere Sub-Counties, Embu county.	74 (25.5)	108 (37.2)	26 (9.0)	74 (25.5)	8 (2.8)	2.428	1.431
The building capacity of women acts as a parameter to measuring women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu county.	50 (17.2)	128 (44.1)	30 (10.3)	22 (7.6)	60 (20.7)	2.703	1.947

Findings from the study on the issue of building capacity of women equip women with knowledge and skills to operate effectively towards enhancing food security in Mbeere Sub-Counties, Embu County shows that 60% of the respondents strongly agreed and 30.3% agreed. Likewise, on the issue of building capacity of women improves knowledge to have Land ownership, equal opportunities, increased accessibility to technology, market opportunities, and increased funding of women in Mbeere Sub-Counties, Embu County, 29.7% of the respondents strongly agreed while 55.2% agreed. This is in line with a study by Oganga (2014) in which it is indicated that building capacity entails training and equipping people with the relevant skills and material for effective operation. Furthermore, the study describes it as a process of enhancing the abilities to evaluate and solve an existing problem efficiently using the available resources. It can hence be concluded that building capacity of women in Mbeere Sub-Counties has equipped them with knowledge and skills to operate effectively towards enhancing food security by improving on the land ownership, equal employment opportunities, increased accessibility to technology, market opportunities, and increased funding of women.

In regard to the statement that in building the capacity of women, women get the opportunity to take part in decision making on socio-economic issues in Mbeere Sub-Counties, Embu County, 40% of the respondents strongly agreed while 31% agreed. In a similar trend, 24.8 % and 39.3% of the respondents strongly agreed and agreed respectively that gender gaps and discrimination are exposed and closed in building capacity of women in Mbeere Sub-Counties of Embu County. This collaborates with finding in a study by Domingo et al, (2015) which discovered various changes that have empowered women socio-economically through building capacity. Firstly, the study identifies the progress with which many countries are abolishing laws that specifically discriminate against women (Domingo et al, 2015). Another major change is democratization, which has given rise to women in the political sphere including impoverished women in countries with an elected local government (Domingo et al, 2015). In essence, building the capacity of women in Mbeere Sub-Counties by allowing women to partake in decision making on socio-economic issues has closed gender gaps that contributed to the discrimination of women.

Through building capacity of women, women explore their abilities and roles in enhancing food security in Mbeere Sub-Counties; Embu County is a statement to which 24.1% of the respondents strongly agreed while 42.8% agreed. In regard to the statement on building, the capacity of women is a platform used to claim for women's rights and position in the community and household in Mbeere Sub-Counties, Embu County, results show that 41.4% of the respondents strongly agreed, 49.7% agreed. The results concur with findings in research by Waylen (2014) where it was established that although opportunities for decision making for women are limited, they have been active in effecting outcomes, through strategic interactions and pushing for key decisions. Essentially, In Mbeere Sub-Counties, it has been confirmed that women can explore their abilities and roles in enhancing food security. Further, they utilize the opportunities offered through building capacity to claim for their rights and position in the community and household. 22.8% of the respondents strongly agreed that the building capacity of women plays a fundamental role in enhancing food security in Mbeere Sub-Counties, Embu County. Another 59.3%. Likewise, In regard to the statement on building the capacity of women acts as a parameter to measuring women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County, 17.2% of the

respondents strongly agreed, 44.1% agreed. These findings are in line with a study by Oganga (2014) which defines building capacity as training and equipping people with the relevant skills and material for effective operation. Oganga (2014) further indicates that building capacity enhances the abilities to evaluate and solve an existing problem efficiently using the available resources. Principally, in Mbeere Sub-Counties as the results show-building capacity can be used to estimate if women are empowered through its contribution to enhancing food security.

Concerning the statement that the building capacity of women has led to high food preservation and market opportunities in Mbeere Sub-Counties, Embu County, 36.6% of the respondents strongly agreed while 39.3% agreed. Additionally, findings from the statement regarding building capacity of women conduct training on new technologies of irrigation methods that solve the problems associated with climatic changes in Mbeere Sub-Counties, Embu county shows that 25.5% of the respondents strongly agreed while 37.2% agreed. This agrees with a study by Klugman et al. (2014) where it was discovered that accessibility to capital renders women to have more decision-making power both at home and at work especially if this capital is combined with some economic or social and cultural capital such as education. Ideally, building the capacity of women in Mbeere Sub-Counties, which entails training or education to acquire knowledge on food preservation, market opportunities and training on new technologies, has empowered women to make critical decisions such as those involving climatic changes. The study further observed that women who were ordinary community members were involved in the planning process indirectly through their elected management committee who were either male members contracted to this obligation or experts that carried out the process in conjunction with experts on behalf of the women. This was supported by responses from the interviews as one respondent stated

“...In community projects, we have a male representative in the committees who implement, and is common for any project undertaken here to be designed by men and it is usually them who only implement since most women lack the knowledge and will to do so. (Key Informant 1, Mwea).

4.6.2 Improvement of Building Capacity of Women

The study sought to establish what could be done to improve the building capacity of women empowerment and enhancement of food security. The table 4.8 displays the distribution of responses.

Table 4. 8: Improvement of Building Capacity of Women

	Frequency	Percent
Creating conducive platforms to engage the public	86	29.7
Political support for public sensitization	78	26.9
Equipping trainers with adequate training facilities	122	42.1
Any Other	4	1.4
Total	290	100.0

According to Table 4.8, 42.1% of the respondents stated that equipping trainers with adequate training facilities can improve building capacity of women empowerment and enhancement of food security. 29.7% indicated that creating conducive platforms to engage the public would improve while 26.9% stated that there is a need for political support for public sensitization. Only 1.4% had other ways. In Tanzania, 82% of the agricultural labour force came from women, and among the economically active citizens (50.6% of the employed) are women in both informal and formal sectors (Ursula, 2013). This was a result of women's access to land, workspace, and productive resources. This again is challenged by the customary and traditional practices and laws that inputted the discrimination effect (Ursula, 2013). The percentage of women attending and completing primary education is higher than boys at 80% vs 72% but the access to secondary 54% vs 59% and tertiary schools favours men leading to a less skilled female labour force (Fox, 2016). Women have played a great role in the economic development of Tanzania even though the productivity of the female farmers is less than their male counterparts. This is due to lower educational standards, household labour burdens, and incapacity to hire sufficient labour force (UN Women; UNDP; UNEP; World Bank, 2015). The findings observed here are also supported by qualitative data as expressed by a participant in the interview:

“Training for women in Mbeere are rare and any public gathering involving them usually involves information about the financial crisis and so women in Mbeere always have to make decisions that are not well-informed”(Key Informant 8, Evurore Ward)

4.7. Enhancement of food security

The study also examined the perceived effect of women empowerment on the enhancement of food security in Mbeere Sub-county. This was examined based on food availability, food accessibility, food utilization, food stability, and household food security as a result of women empowerment (Table 4.9)

Table 4. 9: Enhancement of food security in Mbeere Sub County

	Strongly agree	Agree	Undecided	Disagree	Strongly disagree	Mean	STD_Dev
	F (%)	F (%)	F (%)	F (%)	F (%)		
Women empowerment programme has contributed to increased food availability	95 (32.8)	119 (41.0)	62 (21.4)	8 (2.8)	6 (2.1)	2.003	0.838
Women empowerment programme has contributed to increased food accessibility	63 (21.7)	127 (43.8)	62 (21.4)	27 (9.3)	11 (3.8)	2.297	0.043
Women empowerment programme has contributed to increased food utilization	103 (35.5)	117 (40.3)	19 (6.6)	42 (14.5)	9 (3.1)	2.093	0.049
Women empowerment programme has contributed to increased food stability	93 (32.1)	151 (52.1)	18 (6.2)	20 (6.9)	8 (2.8)	1.962	0.053
Women empowerment programme has contributed to increased Household food security	117 (40.3)	158 (54.5)	12 (4.1)	3 (1.0)	0	1.659	0.066

The study found women empowerment programs had contributed to increased food availability as implied by a mean of 2.003 and a standard deviation of 0.838. Respondents also agreed that the women empowerment programme had contributed to increased food accessibility as shown by a mean of 2.297 and a standard deviation of 0.043. regarding food utilization, the study found an agreement among the respondents that the women empowerment project enhanced food security in Mbeere sub-County (mean=2.093, SD=0.49).

4.8 Hypothesis Testing

The hypothesis was tested using the Chi-square test. The computed Chi-square statistics were compared with tabulated Chi-square statistics at $\alpha=0.05\%$. The formula used for calculating chi-square value is as follows:

$$X^2 = \frac{\sum (O-E)^2}{E}$$

Where, E- Expected frequency

O- Observed frequency

This was computed using a calculator and compared with a value from the Chi-square (X^2) table. Chi-square (X^2) Computed and tabulated values were used to test the hypotheses (H_1 - H_4). During the computed chi-square was compared with the tabulated Chi-Square value. In cases where computed (X^2) > tabulated (X^2), the Null hypothesis is rejected in favour of an alternative hypothesis.

H0: The level of women's education has no significant relationship with food security.

Table 4. 10:

Expected Frequency and Computed Chi-Square (X²) of Level of women education and Enhancement of Food Security

	Strongly agree		Agree		Neutral		Disagree		Strongly disagree		Total
	F	E	F	E	F	E	F	E	F	E	
Strongly agree	51	50.1	45	45.7	18	18.0	11	11.0	9	8.32	134
Agree	24	31.1	33	28.0	12	11.0	9	6.46	4	5.09	82
Neutral	26	18.2	14	16.4	6	6.46	2	2.42		2.98	48
Disagree	9	6.83	5	6.14	2	2.42	1	1.08	1	1.12	18
Strongly disagree	0	3.03	2	2.73	1	1.08	1	11.0	4	0.49 7	8
Total	110		99		39		24		18		134

Pearson Chi-square = 40.6; degrees of freedom = 16, probability = 0.001

The study found the relationship between the level of women education and enhancement of food security had a Pearson's Chi-square (X²) =40.6 (table 4.10), which was considered statistically significant at $\alpha=0.05$. This implies that the Null hypothesis was rejected in the favour of the alternative hypothesis. Therefore, we conclude that level of women education has a significant effect on the enhancement of food security in the Mbeere sub-county. Singh, et al (2018) outlines that women with good education levels have an influence the nutrition and food productions. In another finding by Zhou, et al (2019), the level of education was found to significantly affect household food security in rural Pakistan. Our study findings were consistent with Zhou, et al (2019) and Singh, et al (2018) which implies that the effort focused on enhancing the level of women's education will significantly improve food security in Mbeere County.

H0: Credit availability has no significant relationship with food security.

Table 4. 11: Expected Frequencies and Computed Chi-Square (X2) of Credit Availability and Enhancement of Food Security

	Strongly agree		Agree		Neutral		Disagree		Strongly disagree		Total
	F	E	F	E	F	E	F	E	F	E	
Strongly Agree	81	68.1	52	31.6	25	26.1	7	9.48	5	4.74	170
Agree	32	37.7	46	34.1	11	14.4	3	5.24	2	2.62	94
Neutral	2	6.41	4	5.80	9	2.45	3	0.892	1	0.446	19
Disagree	0	1.6	2	1.45	1	0.613	1	0.223	0	0.111	4
Strongly disagree	0	1.2	0	1.09	1	0.460	2	0.167		00.00362	3
Total	115		104		47		16		8		

Chi-square = 53.9 degrees of freedom = 16, probability = 0.000

The study found the relationship between credit accessibility and enhancement of food security had a Pearson's Chi-square (X2) =53.9 (table 4.11), which was considered statistically significant at $\alpha=0.05$. This implies that the Null hypothesis is rejected in the favour of the alternative hypothesis. A study conducted by Asghar and Salman. (2018) whose study was consistent with our findings reported that increased credit had a significant effect on food security. The findings also confirm the findings of Osabohien, Afolabi, and Godwin (2018), a study that concentrated on the econometric analysis of food security and accessibility of agricultural credit. Osabohien, Afolabi, and Godwin found increased accessibility of agricultural credit facilities had a significant and positive effect on food security. Consequently, Bidisha, et al (2017) found credit accessibility was positively associated with food security. This implies that the effort focused on increasing credit availability to women will significantly improve food security in Mbeere Sub-counties.

H0: Building capacity has no significant relationship on food security.

Table 4. 12: Expected Frequency and Computed Chi-Square (X2) of Building Capacity and Enhancement of Food Security

	Strongly agree		Agree		Neutral		Disagree		Strongly disagree		Total
	F	E	F	E	F	E	F	E	F	E	
Strongly Agree	74	48.0	51	55.3	14	28.9	3	6.86		2.94	142
Agree	21	36.5	57	42.1	26	22.0	3	5.21	1	2.23	108
Neutral	3	8.11	4	9.35	15	4.88	2	1.16		0.497	24
Disagree	0	3.04	1	3.51	2	1.83	5	0.434	1	0.186	9
Strongly disagree	0	2.37	0	2.73	2	1.42	1	0.338	4	0.145	7

Chi-square = 235.0, degrees of freedom = 16, probability = 0.000

The study found the relationship between Building Capacity and enhancement of food security had a Pearson's Chi-square (X2) =235.0 (table 4.12), which was considered statistically significant at $\alpha=0.05$. This implies that the Null hypothesis is rejected in the favour of an alternative hypothesis. Therefore, we conclude that building capacity had a significant effect on food security in Mbeere Sub-Counties. These findings support the study carried by Shilomboleni (2020) whose study reported the capacity building was crucial in capacity building. The study findings were also consistent with Cramer, Förch, Mutie, and Thornton, (2016) findings that reported that building capacity in women could increase food security. This implies that the effort focused on building capacity of women on agriculture will significantly improve food security in Mbeere Sub-Counties.

CHAPTER FIVE: SUMMARY OF THE FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter entails the summary of findings, conclusion, recommendations and suggestions for further study into the research topic and related areas. The chapter ends with suggestions for further studies.

5.2 Summary of the study

This section provides a summary of the findings that are presented in Chapter four. This section is organized based on four themes; the level of women education and enhancement of food security; accessibility of credit and enhancement of food security; and finally building capacity and enhancement of food security.

5.2.1 Level of Women Education and Enhancement of Food Security

The level of women's education significantly influenced the enhancement of food security in Mbeere Sub- County, Embu County. It was observed that level of women education is the most powerful agent of women empowerment and enhancement of food security. It was also noted formal, non-formal, and informal education, that level of women education encompasses life skills, increased level of women education, affected the enhancement of food security. The study further found when women acquire equal employment opportunities increased accessibility to technology, increased funding of women, training which involves practical demonstration on modern agricultural technologies can improve the level of women's education empowerment. While testing the association between the level of women's education and enhancement of food security, the study found the relationship between the level of women's education and enhancement of food security was significant at $\alpha=0.05$. This implies that increased training, exposure of women to agriculture technology, giving them more employment opportunities will increase the food security of the women in Mbeere sub-County in Embu County as well as other similar regions.

5.2.2 Credit Availability and Enhancement of Food Security

Credit availability to women was considered to have affected the enhancement of food security. It was observed, credit accessibility empowers women's social-economic status and enhanced food security. It was reported that credit accessibility enabled women to improve family nourishment through entrepreneurship start new business ventures, improve food production through the purchase of firm inputs, and empower women in terms of owning productive assets or income and to have cash savings and enabled women to have the ability and capacity to purchase foodstuffs. The existence of microfinance targeting women was considered an important aspect of women empowerment. Loans given based on personal savings are a challenge to credit availability while the reduction of interest rates was seen as one way of improving credit availability. The study further demonstrated that credit availability has a significant relationship on the enhancement of food security in Mbeere Sub-Counties, Embu County at a 5% significance level. The findings indicated that the chi-square (χ^2) computed 53.9 was more than chi-square critical = 9.49 which in essence meant that there exists a significant relationship between credit availability and enhancement of food security.

5.2.3 Building Capacity of Women and Enhancement of Food Security

The study further found the building capacity of women enhanced food security in Mbeere sub Counties. The study noted building capacity of women equips women with knowledge and skills to operate effectively towards enhancing food security, own land, improvement of employment opportunities, increased accessibility to technology, market opportunities, and increased funding to women. Capacity building also improves the ability of women to make decisions, helping to identify the gender gap, and address the gaps. The study further observed the building capacity of women; women explore their abilities and roles in enhancing food security as well as helping them claim for women's rights and position in the community and household. Concerning the statement on building capacity of women acts as a parameter for measuring women empowerment and enhancement of food security, building capacity of women has led to high food preservation and market opportunities. Women also found the building of capacity important in introducing new technologies of irrigation methods, which solve the problems, associated with climatic changes and increasing training facilities were

crucial in improving women's productivity, which in turn improved food security. The study further demonstrated that building capacity has a significant relationship on the enhancement of food security in Mbeere Sub-Counties, Embu County at 5% level of significance. The findings indicated that the chi-square (X^2) computed 235.0 was more than chi-square critical = 9.49 which in essence meant that there is a significant relationship between building capacity and enhancement of food security.

5.3 Conclusions of the Study

The study examined the influence of the level of women education on the enhancement of food security in Mbeere Sub-Counties, Embu County. The study assessed the influence of credit availability on the enhancement of food security in Mbeere Sub-Counties, Embu County. The study evaluated the influence of building capacity of women on the enhancement of food security in Mbeere Sub-Counties, Embu County.

5.3.1 Level of Women Education and Enhancement of Food Security

Based on objective one, the study established that there is a significant relationship between level of women's education and enhancement of food security. This was tested by majority of the respondents who agreed that level of women education is the most powerful agent of women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County. This is because formal, non-formal, and informal education encompasses life skills that are vital for empowerment hence the enhancement of food security. Further, the level of women education in Mbeere Sub-Counties gains knowledge on land ownership, equal employment opportunities, increased accessibility to technology, market opportunities, and increased funding of women that are also crucial for enhancing food security. From the findings, training is also an important aspect of education since women in Mbeere Sub-Counties must be trained to improve on literacy levels as well as knowledge on the best quality of seeds. The training factor is reinforced by the fact that most of the respondents noted that practical demonstration on modern agricultural technologies can improve the level of women's education empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County. However, the lack of political will remains the biggest hindrance to better education among women for enhancement of food security in the region.

5.3.2 Credit Availability and Enhancement of Food Security

About the second objective, the study established that there is a significant relationship between credit availability and enhancement of food security in Mbeere Sub-Counties, Embu County. Findings indicate that the general issue of accessibility to credit services empowers women's socio-economic status. This is because credit services enable women to improve family nourishment through entrepreneurial activities and this has been exemplified by the majority of the respondents who indicated that access to microcredit products and services by women has facilitated them to undertake business ventures in Mbeere Sub-Counties, Embu County. Further, credit availability has enabled women to purchase farm inputs and improve food production, productive assets, and have cash savings. Most importantly, with accessibility to credit services, women can also purchase foodstuffs in their households, which is vital to enhancing food security. The efficiency of credit accessibility in Mbeere Sub-Counties is not bad. However, high-interest rates and loan issuance based on personal savings remains the greatest challenge to credit availability for enhancement of food security in Mbeere Sub-Counties.

5.3.3 Building Capacity of Women and Enhancement of Food Security

Regarding the third objective, the study found that there is a significant relationship between building capacity of women and enhancement of food security in Mbeere Sub-Counties, Embu County. This could be attributed to the fact that the building capacity of women equips women with knowledge and skills to operate effectively towards enhancing food security. In Mbeere Sub-Counties, building capacity specifically entails training on new technologies of irrigation methods that solve the problems associated with climatic changes. Further, building capacity offers women the opportunity to participate in decision-making, explore their abilities and roles in enhancing food security. Building capacity also improves their knowledge on seed quality, food preservation techniques as well as existing market opportunities for their production. Fundamentally, building capacity plays an important role in enhancing food security since it offers women a platform to claim their rights and position in Mbeere Sub-Counties, Embu County. Interestingly, building capacity can also be used as a parameter to measure women's empowerment for the enhancement of food security in Mbeere Sub-Counties. Key factors affecting building capacity in the region include gender roles and

stereotyping as well as women's ability and performance. To improve on the building capacity that takes place in Mbeere Sub-Counties, trainers must be equipped with adequate training facilities that can improve building capacity of women empowerment for enhancement of food security. Additionally, creating conducive platforms to engage the public will improve building capacity for the enhancement of food security in the region.

5.4 Recommendations of the Study

The recommendations of the study are based on the key findings of the study concerning the influence of women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County.

5.4.1 Level of women education and Enhancement of Food Security

The study established that level of women education is the most powerful agent of women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County. Further training was found to be an important aspect of the education of women. The study, therefore, recommends that more trainers should be hired who are equipped with skills to handle women from Mbeere Sub-Counties. This would ensure a seamless learning process where women are equipped with skills and knowledge on the best quality of raw materials and agricultural technologies that can enable them to attain food security. Both the national government and county government should invest heavily in the education of women and training programmes in Mbeere Sub-Counties. Specifically, the government should increase its funds and also invite other stakeholders like churches, local leaders, CBOs, and businessmen and scale up education and training of women for enhancement of the food security in the region.

5.4.2 Credit Availability and Enhancement of Food Security

The study established that accessibility to credit services empowers women's socio-economic status in Mbeere Sub-Counties, Embu County. The study, therefore, recommends the adoption of a holistic approach that focuses on economic, social, and political dimensions when addressing credit accessibility for women in Mbeere Sub-Counties. The approach would entail designing products and formulating policies that contribute to women empowerment for the

enhancement of food security. Microfinance products that can contribute to women empowerment include No frill, low-cost savings accounts, large interest subsidies on individual accounts, digital lending services, and grace periods for women on maternity. Likewise, expansionary fiscal policies that address women's needs should be instituted to ensure they could adequately enhance food security in Mbeere Sub-Counties.

5.4.3 Building Capacity of Women and Enhancement of Food Security

The study established that there is a significant relationship between building capacity and enhancement of food security in Mbeere Sub-Counties, Embu County. In line with the relevance of building capacity, the study established that it is still not adequate. The study recommends enhancing the skills of women in the region through organizational support of one or more institutions. Specifically, this will entail building on the already existing competencies in the community which involves addressing challenges such as; hiring, training, and managing a team are to be considered in every community activity. Community colleges, institutions, or polytechnics can create additional resources of time and facilities to train women on various agricultural production techniques that can contribute to their empowerment for enhancement of food security. Additionally, the focus should strongly be on training, evaluation, and management of employees and consistent integration of the aspects of the capacity building into every work and activity in the daily lives of women in Mbeere Sub-Counties. At the national level, the government with the help of development partners; should provide policy and technical support to improve on human and institutional development. Therefore, in the scope of Mbeere Sub-Counties, building capacity should entail the creation of dynamism and apprenticeships, rather than the transfer of knowledge.

5.5 Suggestions for further study

Generally, the study recommends a study be conducted using a larger sample size and different research designs. These studies can be conducted in the following areas:

- Therefore, this study recommends that future studies need to examine how women empowerment for enhancement of food security has been affected by the three aspects of women empowerment.

- Future studies can focus on policies that can be formulated to make it easier for farmers to access credit from MFIs and other NGOs in the lending sector. Such policies will create favourable environments for women to borrow funds and engage in activities that will enhance food security.
- A study to be conducted to establish suitable frameworks that can address the emerging challenges that are associated with women empowerment for enhancement of food security.
- A further study should be conducted on other aspects of women empowerment other than the level of women education, credit availability, building capacity, which influence the enhancement of food security.

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APPENDICES

APPENDIX 1: RESEARCH LETTER FROM UNIVERSITY



UNIVERSITY OF NAIROBI
OPEN, DISTANCE AND e-LEARNING CAMPUS
SCHOOL OF OPEN AND DISTANCE LEARNING
DEPARTMENT OF OPEN LEARNING
NAIROBI LEARNING CENTRE

Your Ref:

Our Ref:

Telephone: 318262 Ext. 120

REF: UON/ODEL/NLC/31/353

Main Campus
Gandhi Wing, Ground Floor
P.O. Box 30197
NAIROBI

28th November, 2019

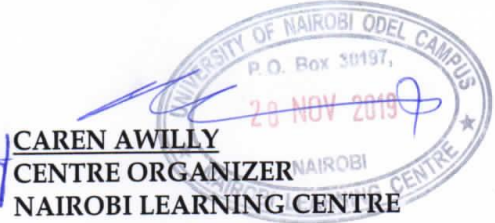
TO WHOM IT MAY CONCERN

RE: NAOMI NYAKI - REG.NO. L 50/7702/2017






The above named is a student at the University of Nairobi, Open Distance and e-Learning Campus, School of Open and Distance Learning, Department of Open Learning pursuing a Masters course in Project Planning and Management.

She is proceeding for research entitled "*Influence of Women Empowerment and Attainment Food Security in Mbeere Sub-County, Embu County, Kenya.*"

Any assistance accorded to her will be appreciated.


CAREN AWILLY
CENTRE ORGANIZER
NAIROBI LEARNING CENTRE

APPENDIX 2: RESEARCH LICENSE

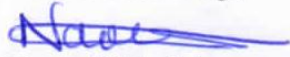
 <p>REPUBLIC OF KENYA</p>	
Ref No: 330016	Date of Issue: 18/December/2019
RESEARCH LICENSE	
	
This is to Certify that Miss.. NAOMI NYAKI of University of Nairobi, has been licensed to conduct research in Embu on the topic: INFLUENCE OF WOMEN EMPOWERMENT AND ATTAINMENT OF FOOD SECURITY IN MBEERE SUB-COUNTY, EMBU COUNTY, KENYA for the period ending : 18/December/2020.	
License No: NACOSTI/P/19/3109	
330016	
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APPENDIX 3: LETTER OF INTRODUCTION

Dear Respondent,

I am a student at University of Nairobi. I am conducting a study on **Influence of Women Empowerment and Enhancement of Food Security in Mbeere Sub-Counties, Embu County**. You have been picked to participate in this study. I will appreciate if you could help me answer all the components in the questionnaire. No section of the questionnaire needs to reveal your name. The data solely be used for academic research and it will remain confidential. You are highly appreciated for your participation.

Yours faithfully,



Naomi Nyaki.

APPENDIX 4: QUESTIONNAIRE FOR WOMEN IN THE WOMEN SOCIO-ECONOMIC EMPOWERMENT PROGRAMME

Dear Sir/Madam,

Greetings. My name is Naomi Nyaki, a Masters student in Project Planning and Management at the University of Nairobi. I am carrying out a research entitled: **Influence of Women Empowerment and Enhancement of Food Security in Mbeere Sub-Counties, Embu County.**

Your participation in this research will be a great contribution to enable me complete the study. Kindly help by filling in the following questions to the best of your knowledge. The information you give will solely be used for the purpose of this research and will be handled with the utmost confidentiality.

Thank you for your cooperation.

Section I: Background Information

1. Age bracket

a) Below 30 years	[]	c) 41-50 years	[]
b) 31-40 years	[]	d) 51 years and above	[]

2. Education Level

a) University	[]	c) Secondary	[]
b) College	[]	d) Primary	[]

Section II: Level of women education and Enhancement of Food Security

3. What are some of the potential challenges that could affect level of women education and enhancement of food security in Mbeere Sub-Counties, Embu County?

- (a) Rigidity to change. []
- (b) Insufficient training facilities []
- (c) Lack of political will []
- (d) Any Other (Specify).....

4. Indicate whether you agree, strongly agree, undecided, disagree or strongly disagree with various statements regarding the influence on level of women education and enhancement of food security in Mbeere Sub-Counties, Embu county.

Key: SA: Strongly Agree; A: Agree; UD: Undecided; D: Disagree, SD Strongly Disagree)

NO.	Factors	SA	A	UD	D	SD
a)	Education of women is the most powerful agent of Women Empowerment and Enhancement of food security in Mbeere Sub-Counties, Embu county.					
b)	Formal, non-formal and informal education is considered valid to influence women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County.					
c)	Education of women encompasses life skills which helps influencing women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County.					
d)	Through education of women, women gain knowledge on food preservation, market opportunities and irrigation methods in order to provide food security in Mbeere Sub-Counties, Embu County.					
e)	To enhance food security in Mbeere Sub-Counties, Embu county, women need to be trained in order to be literate					

	and highly innovative to know high quality of seeds.					
f)	Access to education of women appears to increase women's intellectual capacity to deal with food insecurity in Mbeere Sub-Counties, Embu county.					
g)	Improving women education can result in reduction in food insecurity.					
h)	Lack of women education undermines generatively among women in fight against food insecurity in Mbeere Sub-Counties, Embu county.					
i)	Women education has led to increased household food security in Mbeere Sub-Counties, Embu County.					

5. What can be done to improve on education of women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County?

- (a) Empowering women to have knowledge on land ownership []
- (b) Equal employment opportunities []
- (c) Increase accessibility to technology and market opportunities []
- (d) Any Other (Specify)..... []

Section III: Credit availability and Enhancement of Food Security

6. Indicate whether you agree, strongly agree, undecided, disagree or strongly disagree with various statements regarding the extent to which you think credit availability influences women empowerment and enhancement of Food Security in Mbeere Sub-Counties, Embu county.

Key: SA: Strongly Agree; A: Agree; UD: Undecided; D: Disagree, SD Strongly Disagree)

NO.	Factors	SA	A	UD	D	SD
a)	Accessibility to credit services empowers women socio-economic status in Mbeere Sub-Counties, Embu County					
b)	Microfinance is an important means of empowering women financially in Mbeere Sub-Counties, Embu County					
c)	Women use credit services to enhance food security in Mbeere Sub-Counties, Embu County					
d)	Credit services enable women improve family nourishment through entrepreneurships in Mbeere Sub-Counties, Embu County					
e)	Women use credit services to purchase farm inputs and improve food production in Mbeere Sub-Counties, Embu County					
f)	Access to microcredit products and services by women has facilitated them to undertake business ventures in Mbeere Sub-Counties, Embu County					
g)	Access to microcredit can empower women in terms of owning productive assets or income and to have cash savings in Mbeere Sub-Counties, Embu County					
h)	Access to loans has enabled women to have the ability and capacity to purchase foodstuffs in Mbeere Sub-Counties, Embu County					

7. How would you rate the efficiency of Credit availability as an effect to Women Empowerment and Enhancement of Food Security in Mbeere Sub-Counties, Embu County?

a) Excellent	[]	c) Average	[]
b) Good	[]	d) Poor	[]

8. What are the challenges faced in the credit availability as an effect of women empowerment and Enhancement of Food Security in Mbeere Sub-Counties, Embu County?

- (a) High interest rates []
- (b) Loans are given basing on personal savings []
- (c) A pool of assets is given as security []
- (d) Any Other (Specify).....

9. What can be done to improve on the credit availability towards empowering women and enhancement of food security in Mbeere Sub-Counties, Embu County?

- (a) Mobilization and sensitization on the available funding agents []
- (b) Reduction of interest rates []
- (c) Modification of both standard and lawful guidelines []
- (d) Any Other (Specify).....

Section IV: Building Capacity of Women and Enhancement of Food Security

10. Indicate whether you agree, strongly agree, undecided, disagree or strongly disagree with various statements regarding extent to which building capacity of women influences women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County.

Key: SA: Strongly Agree; A: Agree; UD: Undecided; D: Disagree, SD Strongly Disagree)

NO.	Factors	SA	A	UD	D	SD
a)	Building capacity of women equips women with knowledge and skills to operate effectively towards enhancing food security in Mbeere Sub-Counties, Embu County.					
b)	Building capacity of women improves on knowledge to have land ownership, equal employment opportunities, increased accessibility to technology, market opportunities, increased funding of women in Mbeere Sub-Counties, Embu County.					
c)	In building capacity of women, women get opportunity to take part in decision making on socio-economic issues in Mbeere Sub-Counties, Embu County.					
d)	Gender gaps and discrimination are exposed and closed in building capacity of women in Mbeere Sub-Counties of Embu County.					
e)	Through building capacity of women, women explore their abilities and roles in enhancing food security in Mbeere Sub-Counties, Embu County.					
f)	Building capacity of women is a platform used to claim for women rights and position in the community and household in Mbeere Sub-Counties, Embu County					
g)	Building capacity of women plays a fundamental role in enhancing food security in Mbeere Sub-Counties, Embu County.					
h)	Building capacity of women has led to high food preservation and market opportunities in Mbeere Sub-Counties, Embu county.					
i)	Building capacity of women contacts training on new technologies of irrigation methods which solve the problems					

	associated with climatic changes in Mbeere Sub-Counties, Embu county.					
j)	The building capacity of women acts as a parameter to measuring women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu county.					

11. What are the key issues addressed in building capacity of women which effect women empowerment and enhancement of food security?

- (a) woman's ability and performance []
- (b) Gender roles and stereotyping []
- (c) Modification of societal rules and norms []
- (d) Political participation and decision making []

12. What can be done to improve on building capacity of women in empowering women and enhancement of food security in Mbeere Sub-Counties, Embu County?

- (a) Creating conducive platforms to engage the public []
- (b) Political support for public sensitization []
- (c) Equipping trainers with adequate training facilities []
- (d) Any Other (Specify).....

Section V: Enhancement of Food Security

13. Please indicate your level of agreement with the following statements on enhancement of food Security in Mbeere Sub-Counties, Embu County. (Please CIRCLE the appropriate number)

Key: SA: Strongly Agree; A: Agree; UD: Undecided; D: Disagree, SD Strongly Disagree)

NO.	Factors	SA	A	UD	D	SD
a)	Women empowerment programme has contributed to increased food availability					
b)	Women empowerment programme has contributed to					

	increased food accessibility					
c)	Women empowerment programme has contributed to increased Food utilization					
d)	Women empowerment programme has contributed to increased Food stability					
e)	Women empowerment programme has contributed to increased Household food security					

APPENDIX 5: INTERVIEW GUIDE FOR KEY INFORMANTS

1. What is the effect on level of women education and enhancement of food security in Mbeere Sub-Counties, Embu County? (Probes: forms of education, education challenges, how education is carried out, community response to education of women?)

.....
.....

2. How does credit availability affect women empowerment and enhancement of food security in Mbeere Sub-Counties, Embu County? (Probes: rate of loan accessibility to women, role of credit facilities, productive use of credit services, challenges facing credit availability and strategies?)

.....
.....

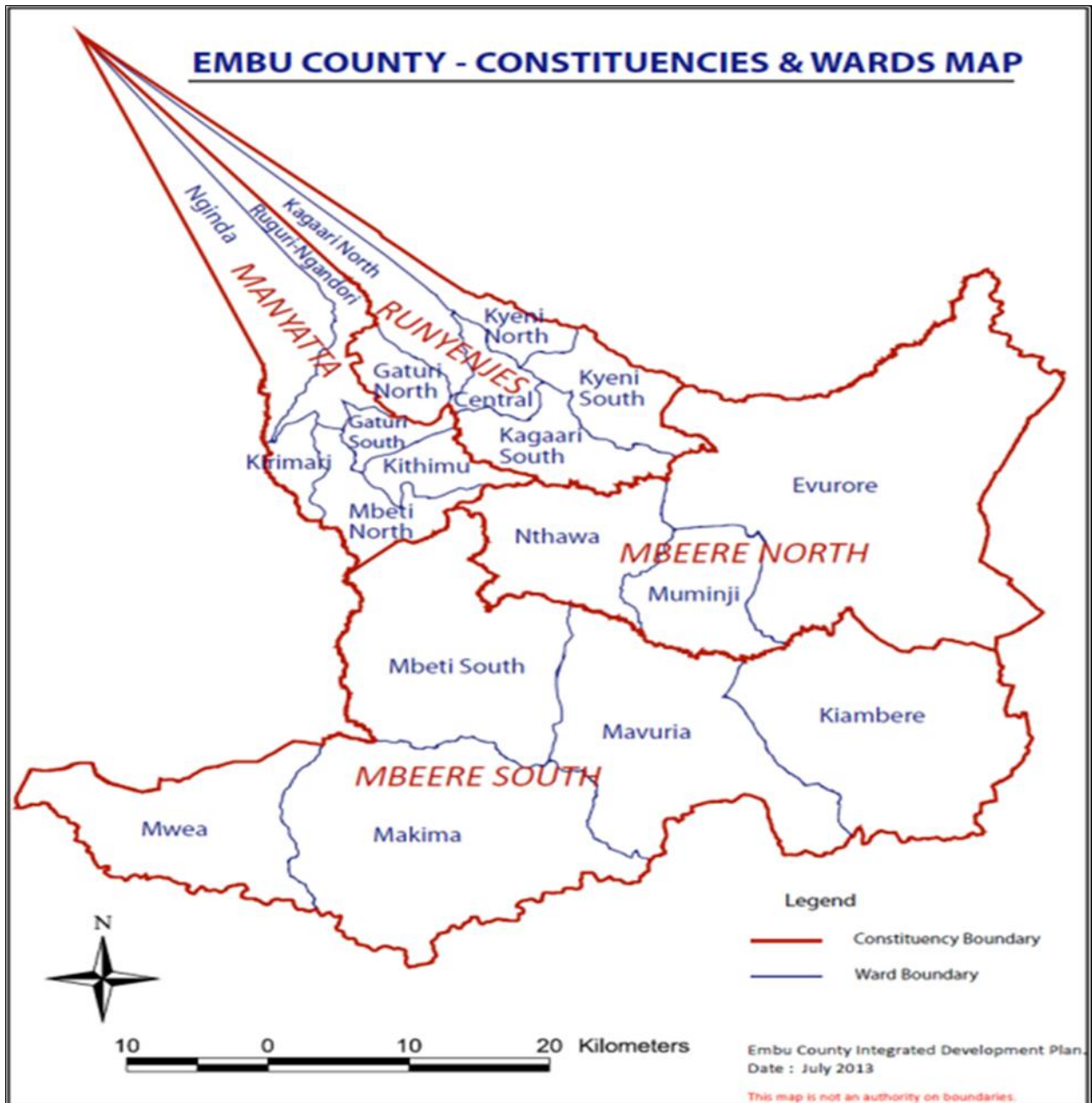
3. What is the effect of building capacity of women and enhancement of food security in Mbeere Sub-Counties, Embu County? (Probes: results of training and equipping women with skills, employment opportunities, decision making, operation strategies on capacity building, rate success of building capacity of women?)

.....
.....

4. How does culture affect women empowerment and enhancement of food Security in Mbeere Sub-Counties, Embu County? (Probes: Gendered divisions and land ownership challenges associated with culture?)

.....
.....

APPENDIX 6: MAP OF EMBU COUNTY SHOWING MBEERE SUB-CONUTIES



APPENDIX 7: TURNITIN REPORT

Turnitin Originality Report

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INFLUENCE OF WOMEN EMPOWERMENT ASPECTS ON ENHANCEMENT OF FOOD SECURITY IN MBEERE SUB-COUNTIES, EMBU COUNTY, KENYA By Naomi Nyaki

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< 1% match (student papers from 14-Apr-2019) Submitted to University of the Western Cape on 2019-04-14
< 1% match (publications) "Zero Hunger", Springer Science and Business Media LLC, 2020
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