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An Assessment of Women Empowerment Among Female Lead Farmers: Case of Dowa District in Malawi.

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Declaration

I, Patience Malunga, declare that this thesis is a result of my research investigations and findings. Sources of information other than my own have been acknowledged and a reference list has been appended. This work has not been previously submitted to any other university for award of any type of academic degree.

Signature.....

Date.....

Abstract

Women empowerment in agriculture is of great significance to the development discourse. Gender is an important aspect in agricultural research and in rural development. Thus, this research edifies to knowledge as it examines if and how the lead farmer extension model has socially and economically empowered female lead farmers. This mixed approach research targets female lead farmers from Dowa, Chibvala Extension Planning Area (EPA) in Malawi. Out of one hundred female lead farmers in Chibvala EPA fifty-five were randomly selected using stratified random sampling for quantitative data. Twenty-two were purposively selected for qualitative data. Five key informant interviews were conducted with three extension officers, the headman of Chibvala and community development chairperson. Chibvala EPA was purposively selected for the study because Development Fund of Norway (DF) is funding the Sustainable Agriculture Lead Farmer Project (SALFP) implemented by Trustees of Agriculture Promotion Programme (TAPP) under the project Capacity Building for Managing Climate Change (CABMACC). The study uses Women Empowerment in Agriculture Index (WEAI) as its analytical framework which is far less studied; and which uses specific indices for agriculture. The indices for analysis were production, time, leadership, income and resources. The quantitative results reveal strong trends of change in the production domain with 82% of female lead farmers exercising sole or joint decision making, although autonomy still lacks. On resources 36.4 % solely owned assets with farm equipment and livestock as the most owned assets. On income 81.9 % had control over household expenditure. while 56.4 % did not have control over income from their cash crops. On time domain there was a significant change of time use female lead farmers got assistance from their husbands and children to do farming and household chores respectively. However, the role of being a lead farmer also comes with additional work load, as such female lead farmers do not have time for leisure. On leadership most, female lead farmers belonged to social and economic groups were they also held leadership positions. Although female lead farmers have been empowered in the above dimensions they still exist many challenges. These challenges among others include conflict among follow and lead farmer, few male follow farmers, lack of regular follow ups by extension officers and more trainings, loss of livestock, transport and market problems.

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To God Almighty who made it possible for me I say EBENEZZER.

Dedication

I dedicate this study to my late mother Rumbidzai Mushosho Malunga.

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List of Acronyms

ADD	Agriculture Development Division
AEDO	Agriculture Extension Development Officer
CABMACC	Capacity Building for Managing Climate Change
CICOD	Circle for Integrated Community Development
DAES	Department of Agriculture Extension Services
DAPP	Development Aid from People to People
DFID	Department of International Development
DFN	Development Fund of Norway
EPA	Agriculture Extension Planning Area
FAO	Food and Agriculture Organization
GoM	Government of Malawi
NAAD	National Agriculture Advisory Services
NGO	Non-Governmental Organization
SALFP	Sustainable Agricultural Lead Farmer Programme
TAPP	Trustess of Agricultural Promotion Programme
NACAL	National Census of Agriculture and Livestock

CHAPTER I

BACKGROUND

1.0 Introduction

This chapter introduces the thesis by presenting an overview of women in agriculture globally. The chapter further introduces Malawi and its agriculture and land systems. The chapter also introduces the Lead Farmer Model (LF). It also gives the problem statement and outlines the objectives of the research and the research questions the study intended to answer. It ends by giving definitions of key concepts.

1.1 Overview of women in agriculture

Women constitute half of the workforce in agriculture. Statistics has it that globally women contribute 60 to 80 % of the labor in agriculture and animal husbandry (Quisumbing et al., 2014). Rural women play a more outstanding role in agriculture than urban women as they are critical contributors in the entire food system starting from the selection of seeds, sowing, manuring, drying, storing and feeding the family from the harvested product. Even though women are significant denominators in the food system they continue to have unequal access to productive resources and opportunities than that of man. Their involvement in selection of suitable crops and adoption of innovative and good management practices, is very low. Thus, Quisumbing et al argues that agriculture is underperforming because half of its farmers, which are women do not have equal access to the resources and opportunities they need to be more productive (Quisumbing et al., 2014). The major reasons for women lagging may be lack of authority in decision making in agricultural production, lack of access to natural capitals such as land and water, lack of education, patriarchal tendencies which leave women more vulnerable, lack of economic resources such as credit facilities and loans, lack of awareness about the new technologies in agriculture and the poor access to extension services.

This study focuses on Sustainable Agricultural Lead Farmer Programme (SALFP) under the project Capacity Building for Managing Climate Change (CABMACC) implemented by Trustees of Agriculture Promotion Programme(TAPP) funded by the Development Fund of Norway(DF) in Chibvala Extension Planning Area (EPA) in Dowa Malawi. The three-year project titled, " The role of lead farmers in enhancing adaptive capacity of female lead farmers to climate change", started in 2014.

1.2 Malawi

Malawi is one of the poorest nations in sub-Saharan Africa measuring its per capita level, and recent estimates place 70% of the population below the poverty line (World Bank, 2016). Malawi's economy and its agricultural sector have in recent years been growing at an average rate of 6% and 9%, respectively (Malawi Government, 2010). Despite this growth poverty and food insecurity remains high. Due to climate change there has been experiences of late rainfall that is erratic, dry spells, droughts, increased rainfall within short periods that result to floods (FAO, 2015). These have had a direct impact on agriculture and human health. Agriculture forms the backbone of its economy and highly dependent on rain fed agriculture. Over 70% of all arable land used for maize production by farmers ((Ecker & Qaim, 2011). Maize constitutes half of the Malawian diet as *tshima* their main staple food is made from maize flour (FAO, 2014). The agriculture sector supports most livelihoods in the country (National Statistical Office of Malawi, 2008).

Malawi's agriculture sector is characterized by a dual structure, consisting of smallholder farmers or small-scale producers and estates. Estates have a minimum size of 10 hectares, while small holder farmers have an average of one hectare of land (Government of Malawi, 2007). Estate farmers produce tobacco, tea, sugar and coffee for export, while small holder farmers engage in rain -fed agriculture production (Government of Malawi, 2007). For all maize varieties, plots operated by men have higher yields than those operated by women (National Census of Agriculture and Livestock (NACAL) 2006/07). Poverty and consequent food insecurity are most severe in the Southern and Central regions of the country (Government of Malawi, 2007). Poverty is gendered with incidences of poverty being higher in female headed households with 58 % (Government of Malawi, 2007). Moreover, rural female farmers face a greater burden combining domestic and productive workloads and their participation in economically productive activities. Rural small-scale female farmers face several challenges stemming from gender-based inequalities, such as: lack of access to assets, resources and services, including education, health care, credit, technology, agricultural inputs, extension services and markets, in addition to constraining socio-cultural norms. These factors can exacerbate women's overall poverty and that of their household (FAO, 2011).

1.2.1 Agriculture and land policies Malawi

In Malawi most of its societies practice both the patrilineal and matrilineal practices with matrilineal being dominant. This means that, land is inherited from the mother or grandmother, with post-marital residence in the wife's village. Men have the right to borrow and use land, but not to own it (Peters & Kambewa, 2007). Matrilineal systems tend to have the strongest land rights for women. However, in Malawi, there is a long history of prejudice against matrilineality and matrilineal

land tenure. It has been argued that it reduces efficiency as male farmers lack incentive to enhance agricultural productivity in the face of weak land rights (Peters & Kambewa, 2007).

However in 1967, Malawi sought to rectify the customary land tenure and matrilineal tenure carried over from the colonial era under the Malawi Registered Land Act (1967) which aimed to improve tenure security in areas under customary land, through privatization and titling of land at the individual level (Peters & Kambewa, 2007). This Act led to land titling by demarcating boundaries for village, lineage and family land, establish the land rights of families as well as individuals, while providing land title certificates at the family level (Ng'ong'ola, 1982). This programme was abandoned because of the several challenges it presented and replaced in 2002, by the Malawi National Land Policy (Peters & Kambewa, 2007).

Thus, based on the above land rights policies in Malawi there is evidence that only 32% of individual holders of agricultural land in Malawi are women. Despite the significant numbers of matrilineal communities (Welfare Monitoring Survey, 2008). Husbands still exercise power over the use of land and its products. (NACAL,2006/07)

1.3 The lead farmer model

The declining role of the government public extension service created a delivery gap that led to the emergence of NGOs to provide new extension services. The Lead Farmer (LF) model is one of the extension services being offered in Malawi since 2007 by NGOs in collaboration with the government (DAES, 2011). The lead farmer model is also known as the farmer to farmer approach. Most farmer's access information and advice on new technology from other farmers within their proximity (Garforth, 2011). The aim of the lead farmer approach is to assist farmers with appropriate messages for technologies to improve the adoption of recommended agricultural technologies. (DAES, 2008).

Lead farmers are individuals who are elected by the community and trained on farming technology that they pass on to other farmers. (DAES, 2010). These lead farmers are prominent reference persons for village farmer to farmer extension services. Lead farmers implement their activities through groups of farmers known as follower farmers within their village. Qualities of a lead farmer include willingness to share information with others, ability to lead, a good communicator, literate and gender sensitive (DF, 2014). The lead farmers fulfil an important role in extension delivery. They assist frontline staff in delivering technologies to the farmers, mobilize and train follow farmers, assist in compilation of agricultural report to Village Development Committee (VDC), and give feedback on challenges faced during adoption of extension services through reports(DF,2014).

However, gender disparities in delivery of extension messages between men and women affect women more as evidenced by more male field extension workers than female, which makes delivery of extension services to women farmers a challenge. The gender issues are amongst the major challenges that affect the attainment of food security in Malawi (DAES, 2011). As part of an affirmative action towards women empowerment in agriculture, women lead farmers were introduced to help reach women with extension services to enable them effectively to contribute to agriculture production.

1.4 Problem statement

Food insecurity is one of the serious threats facing people in Malawi due to impacts of climate change on agriculture and natural resources (DF, 2014). 90 percent of Malawian farmers are smallholders who face a host of challenges in their farming activities. The problems include: small land size, poor soil fertility, high cost of farm inputs, climate variability and change, lack of appropriate technology, lack of market for crops, lack of skills and knowledge and limited access to government extension workers and services (DF, 2014). To respond to this, Malawi through its Development partners introduced the lead farmer model targeting both male and female farmers to address the low access of extension services due to inadequate extension services. Under the lead farmer model, a set of farming techniques such as Climate Smart Agriculture(CSA). CSA comprises of various techniques such as Conservation Agriculture(CA), agroforestry, manure use soil and water conservation (DF, 2014).

However, levels of food insecurity and rural poverty remain high. Only 14 percent of the female farmers in Malawi have access to extension services such as training and access to information (GHA,2012). Worldwide female farmers receive only 5 percent of all agricultural extension services (FAO,2001). From these statistics, it is evident that there are gender disparities in agricultural delivery services between women and men farmers. These women face a number of challenges including limited access to income and credit facilities, low participation in community leadership roles, overburdening workload, limited participation on both household and community decision making, limited ownership of productive assets such as land and livestock (GoM, 2012). It is important to assess if challenges faced by female lead farmers have improved since the implementation of the lead farmer model in Malawi in 2014.

Gender is an important aspect in agricultural research and in rural development, thus this research will edify to the rapidly increasing importance of gender in the agricultural sector as it fills in the information gap by assessing if the lead farmer model has empowered female lead farmers in Dowa, Malawi.

1.5 Overall objective

a) To examine if and how the lead farmer extension model has socially and economically empowered female lead farmers.

1.5.1 Specific objectives

a) To understand the meanings of the word empowerment among female lead farmers.

b) To assess changes in socio-economic aspects of female lead farmer livelihoods.

c) To identify the challenges and achievements of female lead farmers.

1.6 Research questions

a) What does empowerment mean among female lead farmers?

b) What changes have occurred in the socio-economic aspects of female lead farmer livelihoods?

c) What are the challenges and achievements so far for female lead farmers?

1.7 Definitions of key concepts

This study uses key concepts such as empowerment and lead farmers. The definitions for these terms in this study are as below:

Lead Farmer Model

The Lead farmer model is an initiative that seeks elected individuals by the community to be trained in farmer-to-farmer extension (DAES, 2011). These trained farmers after training will then exchange knowledge on best agricultural practices to their follow farmers who are in their proximity.

Female Lead farmers

Women lead farmers in agriculture, are female individuals who are elected by the community to perform technology specific farmer-to-farmer extension and are trained in the technology (DAES, 2011).

Empowerment

Empowerment is the ability to break through social barriers to demand basic agricultural services. It is also the ability to take control of production resources and participate in decision making at household and community which was previously denied (Westendorp, 2012).

1.8 Overview of thesis

Chapter two will review various literature on empowerment. The literature is however limited to the research objectives. Chapter three focuses on the theoretical and analytical framework that both guided the collection and analyses of data. Chapter four presents the findings from both the quantitative and qualitative data. Chapter five gives the discussions based on the findings. Chapter six gives conclusions and recommendations respectively.

CHAPTER 11

LITERATURE REVIEW

2.0 Introduction

This chapter seeks to explore various scholarly literature. The overall objective of this research is to examine how the lead farmer extension model has socially and economically empowered female lead farmer livelihoods. The overall objective is broken down into sub objectives: (a) To understand the various meanings of the word empowerment among female lead farmers. (b) To assess if there has been changes in socio-economic aspects of female lead farmers. (c) To identify the challenges and achievements of lead farmers. Thus, this literature review limits itself based on the 2 first sub objectives. The literature review will have sub themes focusing on deconstructing the word empowerment among various scholarly definitions and to review what social and economic empowerment mean in agriculture.

2.1 What is women empowerment

Empowerment is a broad word that has led to many scholarly writings in trying to define it even though this study is limited to social and economic empowerment in agriculture it remains a debatable definition within the development discourse. The early scholars who writes about women empowerment included Barbara Solomon who highlighted empowerment as a method, " *of social work with oppressed Afro-Americans*" (Solomon, in Davis, & Ethel Percy Andrus Gerontology Center, 1972). Peter Berger and Richard Neuhaus (1977), " *proposed empowerment as a way of improving the welfare services by means of mediating social institutions*" "Julian Rappapon (1984) developed the concept theoretically and presented it" *as a world-view that includes a social policy and an approach to the solution of social problems stemming from powerlessness*" (Rappapon, 1984). These three scholars have laid the foundations on defining the concept of empowerment and these have had influence over the years in further defining and use of the word empowerment.

Julian Rappapon sentiment of a solution to powerlessness is greatly supported by feminists who center empowerment on change of power dynamics. Feminist suggest that empowerment is a process that lead people to perceive themselves as able and entitled to occupy decision making space (Hess, 1984). Feminists argue that if the dynamics of power and internalized oppression are dealt with they can lead to empowerment (Rowlands, 1996). This will give those oppressed or affected to see themselves as able and to occupy decision making space (Batliwala & Asian-South Pacific Bureau of Adult Education, 1994). Batliwala agrees with the feminist perspective of empowerment and suggest that empowerment is a process of challenging existing power relations and gaining control over the sources of power (Batliwala & Asian-South Pacific Bureau of Adult Education, 1994). Power

is control over material assets, intellectual resources and ideology (Kabeer, 2005). Oxfam also supports this view and argues that empowerment is a concept of challenging oppression and inequality (Oxfam, 2004). Agarwal, goes on to specifically state that empowerment should be able to challenge male oppression within the home and wider society (Agarwal, 1994). For instance, as argued by Agarwal, when women have land, they are economically empowered and can make decisions over the use of land. In addition, they become politically powerful within the society and they can collectively voice their concerns (Agarwal, 1994).

The capabilities approach defines empowerment as increased agency (Kabeer,2005). Agency is central to what it is to be a human being. Agency allows an individual to shape his or her own life and make choices based on the person's interest. Agency challenges insecurities and gendered inequalities (Alsop, 2005). Alsop conquer with the capabilities approach and define empowerment as the enhancement of individual capacity to make choices and to transform those choices into desired actions and outcomes (Alsop ,2005). Kabeer gives a more similar definition to that of Alsop et al and defines empowerment as the expansion of people's ability to make strategic life choices specially in contexts were this ability had been denied (Kabeer, 2001). Kabeer also conceptualizes empowerment in terms of agency, resources and achievement. She argues that agency implies not only actively exercising choice, but also doing this in ways that challenge power relations (Kabeer, 2005). Resources are important and needed to exercise agency and rectify gender inequalities.

Based on the above definitions one can argue that if women are able to exercise better agency they can be able to address poverty and the deep structural basis of gender inequality. If agency is improved, women can emancipate themselves from normative beliefs and expectations that keep women locked into situations of subordination and dependency space (Batliwala & Asian-South Pacific Bureau of Adult Education, 1994). Thus, empowerment is the ability to challenge restrictive cultural and social norms and contesting the institutions of everyday life that sustain inequality.

Culture also plays a major role in the process of empowerment. The capabilities approach emphasizes that unless women are liberated from existing power equations and relations in society they can never have a self-image of themselves but will rather continue to see themselves as weak and inferior (Batliwala & Asian-South Pacific Bureau of Adult Education, 1994). However, changing these normative believes about gender, power and change takes empowerment beyond the individual level to address cultural perceptions and assumptions about women (Sandler, Rao, & Eyben, 2012). Challenging cultural notions of what a man or woman should do especially in patriarchal societies were women are more subordinate is critical towards women empowerment (Rao & Kelleher, n.d., 2012)

The emphasis on challenging culture is also affirmed by a programme called Women's Empowerment in Muslim Contexts. It defines empowerment as, 'an increased ability to question, challenge and eventually transform unfavorable gendered power relations, often legitimized in the name of "culture"' (Porter, 2013).

CARE's women's empowerment framework also is in line with the capabilities approach. It defines empowerment as both a process and an outcome (CARE, 2001). The framework suggests that empowerment process is non-linear in that it can progress, freeze or regress. As a process empowerment is defined as,

"Expansion of women's individual and collective capacities to access, influence, and control resources; to confront and challenge gender norms and structures of power; and to negotiate with, influence, control, and hold accountable the actors and duty bearers that mediate between structural inequities and women."

(Martinez,2006).

Westendorp summarizes all the above definitions and defines empowerment ability to gain access and control over resources and exercising agency (Westendorp & Visser, 2015). Hence, from the above discussion equal participation in decision-making processes, access to resources and control of resources provide tools to challenge inequalities that suppress individuals.

2.3 Importance of women empowerment

Women empowerment is important because an empowered woman is in a better position to assure her children's health and nutrition (Porter, 2013). Kabeer supports this notion by Smith and says that allowing women to both own and control productive assets such as land increases her productivity and self-esteem (Kabeer, 2001). Feminist argue that empowerment is important because it leads to liberation from false value system and ideologies of oppression'' (Sen & Foster, 1997).

According to the human development women empowerment is important because it contributes to dealing with critical issues of gender and development (UNDP, 2007). This is because women who are empowered can turn development of a nation. More so, when women are empowered it is not only to the individual woman and to women groups, but also to the families and community through collective action for development (Pandya, 2008). The dignity and culture of a society can be detected from the status of women in that society (Batliwala & Asian-South Pacific Bureau of Adult Education, 1994).

Evidence from literature also shows that women put an average of 90 percent of their earnings back into the family, compared to the 30 to 40 per cent that men contribute' (Gender and Development Network, 2011).

2.4 Empowerment and power

Understanding and recognizing the different modes of power that exist can be of paramount significance in drawing the dynamics and the tensions generated by empowerment of women (Martinez, 2006). Batliwala defines power as having two aspects: control over resources (physical, human, intellectual, financial, and the self), and control over ideology (beliefs, values and attitudes) (Batliwala & Asian-South Pacific Bureau of Adult Education, 1994). If power means control, then empowerment therefore is the process of gaining control (Sen, 1997).

Empowerment is closely related to power according to the structuration theory by Anthony Giddens (Giddens,2004). Giddens proposes that there are different modes in which power operates *power over* which is linked to dominance and subordination and can result into violence and intimidation (Giddens, 2004). This is the kind of power that feminist activists challenge when they argue that there should be a liberation from false value systems and ideologies of oppression. One such system is that of patriarchy. Scholars like Nancy Fraser have referred this patriarchal system that perpetrates subordination as hegemonic masculinities (Fraser, 2008). The second type of power is *Power with* which means one's ability to exercise influence through co- operation with structures and other agents to achieve their interest. Third if the *power to* which involves personal ability to pursue one's interest for example power to make decisions. Fourthly is the *power within* which is based on one's assertiveness, self-confidence and self-awareness.

Although most development project tend to target women empowerment in line with the SDGs their involvement and participation in development projects should not be mistaken for empowerment as many of these women may still lack power within and power to make decisions in their household.

2.5 Economic empowerment

The vast literature on economic empowerment of women focuses on a key strategy in addressing gender inequality. More generally, the discourse on economic empowerment centers around four broad areas: a) the promotion of the assets of poor people; b) transformative forms of social protection; c) microfinance; and d) skills training (Sen,1997). Economic empowerment is to think beyond immediate daily survival and to exercise greater control over both resources and life choices (Samantha,1999). For example, economic empowerment can lead to women's influence within the household. The evidence also suggests that economic power is often easily 'converted' into increased social status or decision-making power (Eyben ,et al , 2008).In the global south most,

married women are required to get consent from their husbands before acquiring a loan which act as a restriction for women to gain economic empowerment as the consent from the husband can act as a barrier to acquiring the loan (Heyzer, 2007). Economic empowerment is important yet not adequate on its own because increased income or access to credit facilities at the expense of other critical social issues such as health, time and a change in power dynamics may lead to negation from the side of the beneficiary (Samantha, 1999). Access to credit facilities cannot generate income without supporting markets and infrastructural facilities (Prato & Longo, 2012). Empowerment through the provision of credit is necessary but not an only sufficient factor towards women empowerment (Heyzer ,2007).

According to the UN women's economic empowerment is important because it sets a direction towards gender equality and eradication of poverty. This is because women make enormous contributions as farm workers, producers of food crops and givers of unpaid care work at home (UN, 2005). Although women are major contributors to the economy, women remain inappropriately marginalized in terms of access to economic assets such as land and loans and lack of time to pursue economic opportunities because of their overburdened workload in the household.

This study uses indicators derived from the WIEA index to measure economic empowerment of female lead farmers such as savings, access to credit facilities, access to land, access to markets and supporting structures. The WIEA index is further discussed in the next chapter that focuses on theoretical and analytical frameworks.

2.6 Social empowerment

Social empowerment is understood as gaining autonomy and self-confidence (Blomkvist, 1992). The gaining of autonomy and self-confidence is influenced by the individual assets (such as land, housing, livestock, savings) and capabilities of all types: human (such as good health and education), social (such as social belonging, a sense of identity, leadership relations) (Blomkvist, 1992).A major limitation to realize the social empowerment of women is the institutionalized set of social prescriptions that limit their participation in processes such as decision making (Heyzer,2007) Efforts to increase women participation in social circles must extend to the household level. Intra family dynamics directly influences use of income and decision making over resources along gender lines which leaves women without much authority over these dimensions (Heyzer, 2007). Thus, improving the social and economic restrictions of women from household level is equally important and at the same time equally challenging.

From the ongoing literature discussions, it offers important insights on empowerment that is fundamentally about changing power relations and understanding power. Secondly that empowerment, is a process, not a fixed state and not an easily measurable outcome. It is difficult to measure because what empowers one woman might not empower another. Being empowered does not translate to greater capacity to exercise agency and transformation of power relations. Therefore, to study empowerment we need to understand the complex social issues, political and economic forces that attached to people or community (Gibson, 1991).

CHAPTER III

THEORATICAL AND ANALYTICAL FRAMEWORK

3.0 Introduction

This part focuses on the theoretical discussions and analytical frameworks that both guided the collection and analysis of the data.

3.1 CARE women's empowerment framework

This study was guided by the CARE women's empowerment framework and the women empowerment in agriculture index (WEIA) index as a guidance to collect data. Figure 1 below shows the CARE women's empowerment framework.

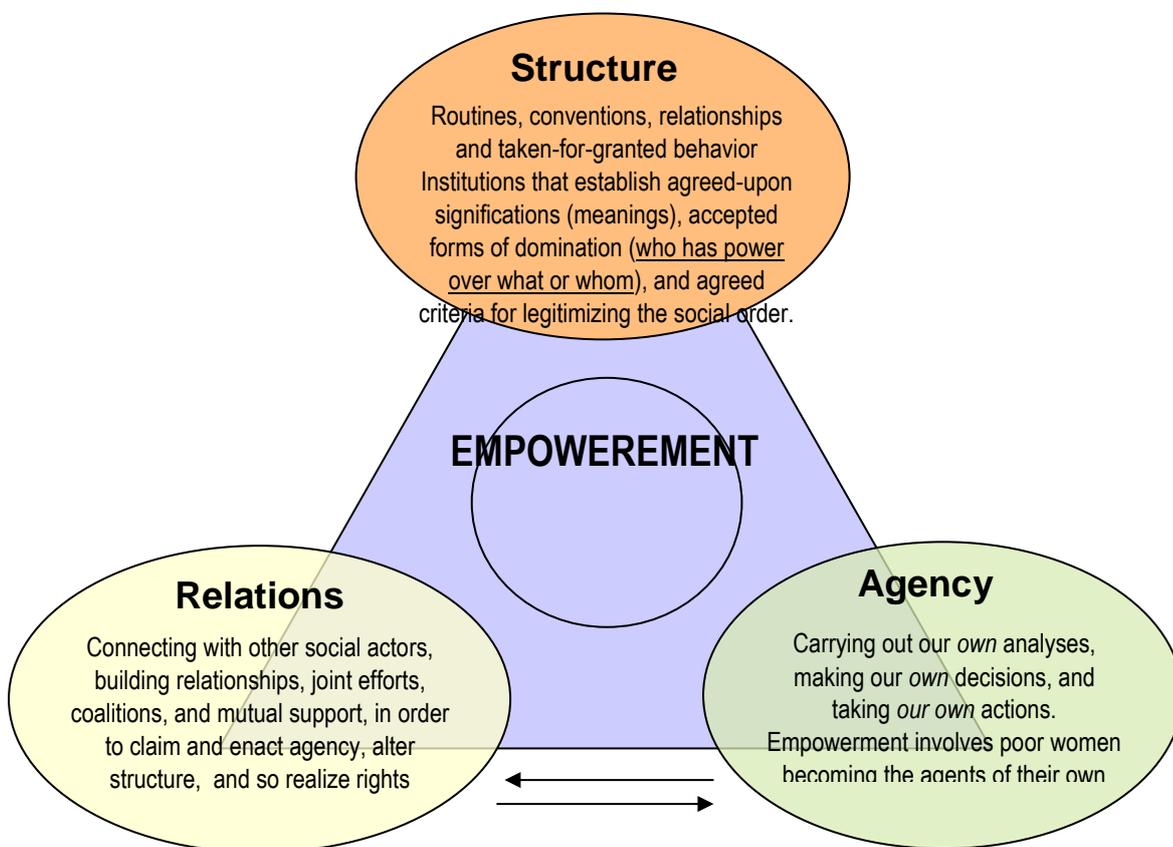


Figure 1. CARE Women Empowerment Framework Adopted from care.org

The theory of power that CARE Women's Empowerment Framework is strongly based on Anthony Giddens' structuration theory (Giddens, 2004). Central to the CARE Framework are three dimensions of social life which are: Structure, Relations and Agency.

Agency

Empowerment is the capacity to translate choices into desired actions. These choices can be translated into action if there is agency that includes, human, financial and social assets (Alsop

2005). This means that aspirations, resources, actions and achievement of a woman can be achieved by their own decisions and actions. Agency also includes the idea of *'power to'* and *'power within'* (Giddens, 2004).

Structure

Structure refers to both the physical and none physical environment that surrounds and influences a woman’s choices and chances (Giddens, 2004). Structure encompasses the routines, patterns of relationship and interactions, institutions of social norms, order and hierarchy (Giddens, 2004). Examples of structure include kinship, castes, religion and political culture. It also determines what is *'normal'* behavior and who *'naturally'* has power over what or whom.

Relations

Relations refers to the social relationship through which a woman negotiates her needs and rights with other social actors (Giddens, 2004). As mentioned above this corresponds to having *'power with'*.

Table 1 below gives a summary of sub -dimensions of CARE Women’s Empowerment Framework. The following Sub-dimensions were adopted as a guide for both the qualitative and quantitative data: access to information and skills, material assets owned, control of labour, mobility in public space, decision making and influence in household and market accessibility (labour and credit goods).

Table1.Summary sub-dimensions of CARE women’s empowerment framework

AGENCY	STRUCTURE	RELATION
Self-image; self-esteem	Cultural norms traditions, gender roles	Awareness of gender discrimination
Access to Information and skills	Market accessibility (labour, credit, goods)	Negotiation/ adaptation habits
Material assets owned		Alliance/coalition habits
Control of own labour		
Mobility in public space		
Decision making and influence in household		

Source: Adapted from Martinez (2006).

3.2 Women empowerment in agriculture index (WEAI).

Empowerment is culture- and context-specific and because of this it makes it difficult to have a universal measure of empowerment (Quisumbing et al., 2015). However, the women's empowerment in agriculture index (WEAI) uses domains, indicators and weights to try and measure specifically the women empowerment levels within agriculture. This study uses the domains and indicators only from WEIA as its analytical framework.

The Women's Empowerment in Agriculture Index (WEAI) is a new survey-based index designed to measure the empowerment, agency, and inclusion of women in the agricultural sector initially developed as a Monitoring and Evaluation tool for Feed the Future Initiative. The tool assesses the general state of empowerment, gender parity and key areas where empowerment gaps exist in agriculture (Alkire et al., 2013).

The WEAI is an aggregate index that is comprised of two sub-indexes. The first assesses the degree to which women are empowered in five domains of empowerment (5DE) in agriculture and the Gender Parity Index (GPI). The (5DE) domains are (1) decisions about agricultural production, (2) access to and decision-making power about productive resources, (3) control of use of income, (4) leadership in the community, and (5) time allocation. The second sub index the (GPI) which reflects the empowerment gap that needs to be closed for women to reach the same level of empowerment as men (Alkire et al., 2013).

The 5DE is constructed from individual-level empowerment scores, which highlight a person's achievements in the five domains. The 5 domains have indicators which have weights. The weight of the indicators are values from 0 to 10, where higher values reflect greater empowerment. Each indicator measures whether an individual has surpassed a given threshold, or has adequate achievement, with respect to each indicator. A woman is defined as empowered if she has adequate achievements in four out of the five domains or has achieved adequacy in 80% or more of the weighted indicators. (Quisumbing et al.,2015).

This research has adopted the (5DE) index to come up with questions for data collection. I chose the (5DE) index because it assesses the extent to which women are empowered in 5 domains that is 1) decisions about agricultural production, (2) access to and decision-making power about productive resources, (3) control of use of income, (4) leadership in the community, and (5) time allocation. The research approaches the measurement of empowerment based on these 5DE domains and does not use the score as measurement. Although the WEAI measures intra household gender inequality by comparing the empowerment gap between the male and the female this study only uses this to measure empowerment among female lead farmers after becoming lead farmers. Table 2 below shows the domains and their indicators and how they are measured.

Table 2. domain and indicators of the WEAI

Domain	Indicator	Definition of indicator	Weight
1. Production	1.1 Input in productive decisions	Sole or joint decision making over food and cash-crop farming, livestock, and fisheries	1/10
	1.2 Autonomy in production	Autonomy in agricultural production reflects the extent to which the respondent's motivation for decision making reflects own values rather than a desire to please others or avoid harm.	1/10
2. Resources	2.1 Ownership of assets	Sole or joint ownership of major household assets	1/15
	2.2 Purchase, sale, or transfer of assets	Whether respondent participates in decision to buy, sell, or transfer assets	1/15
	2.3 Access to and decisions about credit	Access to and participation in decision making concerning credit	1/15
3. Income	3.1 Control over use of income	Sole or joint control over income and expenditures	1/5
4. Leadership	4.1 Group Member	Whether respondent is an active member in at least one economic or social group	1/10
	4.2 Speaking in public	Whether the respondent is comfortable speaking in public concerning issues relevant to oneself or one's community	1/10
5. Time	5.1 Workload	Allocation of time to productive and domestic tasks	1/10
	5.2 Leisure	Satisfaction with time for leisure activities	1/10

Source: (Alkire et al., 2013).

3.2.1 Why use WEAI?

There are various measures to measure women empowerment. For example, the Gender Empowerment Measure (GEM), developed by the United Nations Development Programme (UNDP). GEM measures women's participation in economic, political and professional activities. The GEM has limitations in not considering relational aspects of women's lives (UNDP, 1990). There is also the Gender Inequality Index, which measures disparities in health, empowerment and labour, that has been the dominant tool of measurement since 2012 (Alkire et al., 2013).

WEAI has been chosen for this study because it captures control over resources or agency within the agricultural sector, something which existing indices have not done. It also focuses on index of time which is far less studied than resources such as income, or achievements such as educational levels (Alkire et al., 2013). WEAI also encompass decisions in the productive and economic spheres and does not confine itself to the domestic sphere (Alkire et al., 2013).

CHAPTER IV

RESEARCH METHODOLOGY

4.0 Introduction

Purpose of the study influences the choice of a research method to be used for the study (Berg & Lune, 2012). Thus, the purpose of this study is to examine if and how the lead farmer extension model has socially and economically empowered female lead farmers.

This study uses a mixed method approach or triangulation method whereby both the quantitative and the qualitative data is combined. Quantitative research is inductive as it seeks to observe trends and patterns to prove or reject a theory whereas qualitative is deductive as it seeks to come up with a theory after observing patterns and trends can be developed into a theory. Thus, according to Berg & Lune quantitative research refers to counts and measures of things while qualitative research refers to its essence and ambience (Berg & Lune, 2012). This chapter gives the study's research design (i.e. data collection, storage, analysis and presentation) and the research population and sampling. The section ends with a discussion of some of the ethical issues and limitations of the study.

4.0.1 Study area (Dowa)

Dowa district is found in the central region of Malawi and its climate is mild, generally warm and temperate. The average annual temperature for the district is 18.9 Degrees Celsius and the average annual rain fall is 1702 millimeters. Precipitation is lowest in January with an average of 5 millimeters (Wikipedia). Chibvala EPA is found in Dowa District which is divided into five constituencies of Dowa Central, East, North, South and West, with the Central being the capital. The District has an approximate population of 556,678 (Government of Malawi, 2007). Dowa is some 38 kilometers from Malawi's capital city, Lilongwe. The Chewas are the main ethnic group in Dowa followed by the Ngonis who are the original Bantu migrators. Marriage and descent systems follow the ethnic groups. Both matrilineal and patrilineal family lineages are found in Dowa with matrilineal lineages being dominant. Dowa is a farming community; the main food crops are maize and sweet potatoes. Most households depend on agriculture for their livelihoods. Most households divide land into two, one portion as a **dimba** family garden where they grow vegetables and other legume crops and one as farm land where they grow maize and other cash crops. Traditional authority is practiced with the village Head man overseeing the day to day issues. Leadership in traditional authority is hereditary. Although Malawi is a multi-party state, rural areas still uphold traditional leadership. The Headman of Dowa is called Patrick Chibvala.

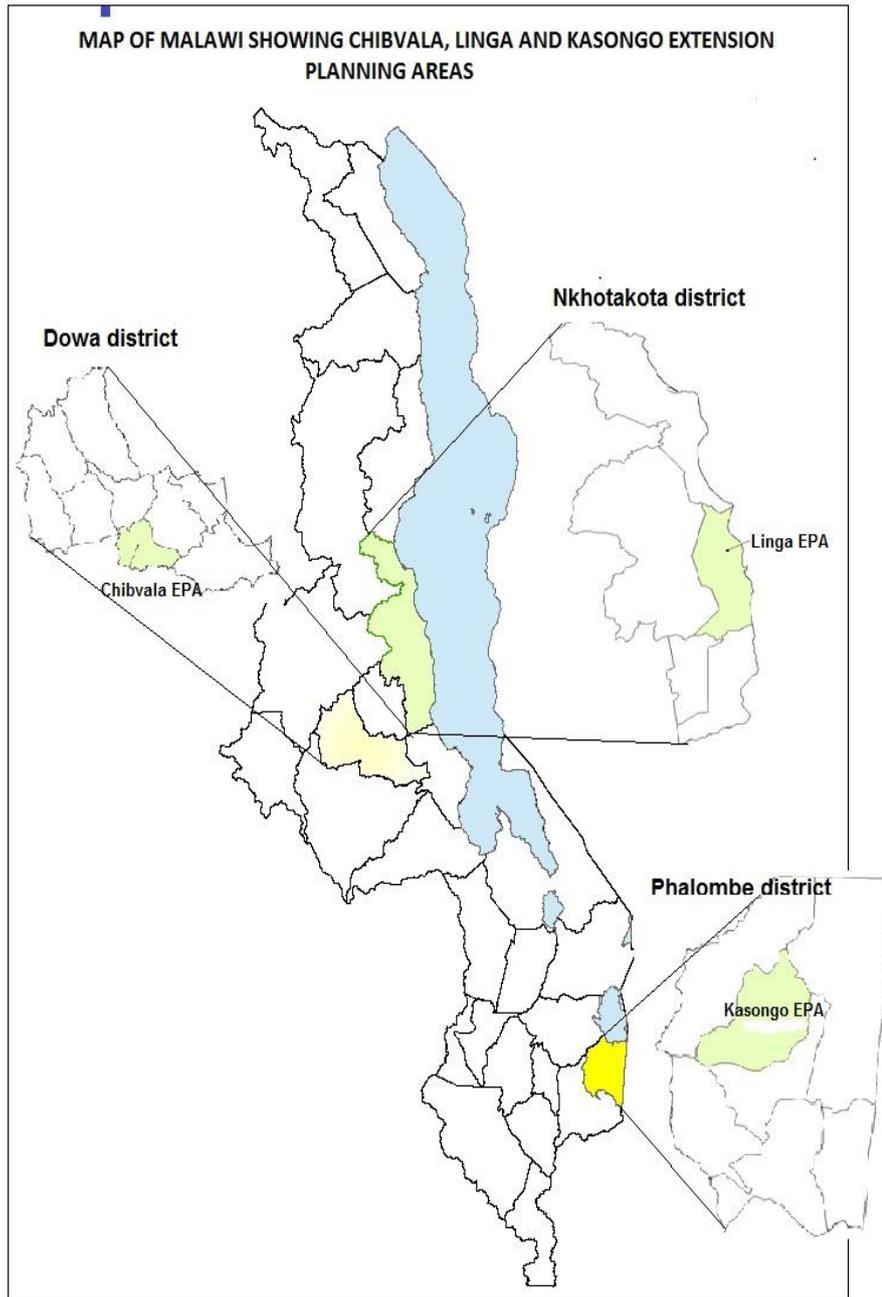


Figure 2. Map of Malawi and all its Districts source:bing.com maps

4.1 Mixed Methods approach -how?

This research uses a convergent parallel mixed method this is whereby the researcher collects both quantitative and qualitative data analyzes them separately and then compares the results to confirm or disconfirm each other (Creswell, 2014) .Figure 2 below shows a convergent parallel mixed method.

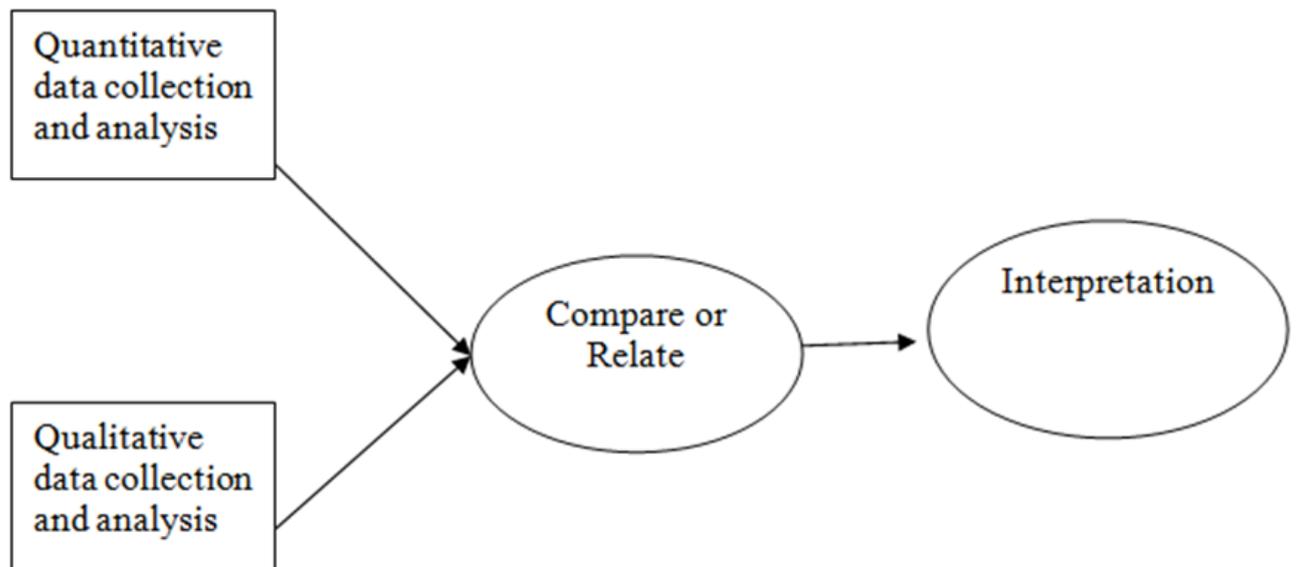


Figure 3. Convergent parallel mixed method :Adapted from J Creswell 2014

The main assumption of this approach is that both qualitative and quantitative data provides a different set of information. With qualitative giving more detailed views of the respondents whereas quantitative gives scores. Data collected used a convergent mixed method can be analyzed in two ways. First can be side by side comparison where the researcher first reports the quantitative statistical results and then discusses the qualitative findings themes that either confirm or disconfirm the statistical results (Creswell, 2014). The second way is to start with qualitative findings and compare them with quantitative. Thus, this study will use the side to side approach for its analysis.

4.2 Sampling Population

Population are the units from which a sample is to be selected to make some inferences for the research (Bryman, 2008). The population of this study are the female lead framers in Chibvala EPA in Dowa District. Out of a total of 100 female lead framers that had been trained from 2014. Fifty five responded to the call to come for quantitative interviews, Twenty two responded for the FGD and five responded for the key informant interviews .This gives a 80 percent response rate for the study.

4.3 Data Collection Methods

The data was collected in December 2017. Since the initial questionnaire was based on desktop research, a brief pilot study was conducted to test questionnaire. Two female lead farmers were called in for the pilot interview to note questions that were difficult to understand. After the two interviews some adjustments made were made. For example, the word empowerment was difficult to understand and we had to look for an alternative and commonly used Chichewa word **kutukuka**. This made it much easier for the participants to understand the language.

4.3.1 Questionnaires

Fifty -five questionnaires were administered using stratified random sampling. The respondents were stratified using villages that fall under Chibvala EPA. Since this research was conducted in a poor rural area almost all the respondents did not understand English so my research assistant translated questions into Chichewa and filled the questionnaire forms in English. All the questionnaires were conducted at the Chibvala EPA office due to the great distance between households which are sparsely located and to financial constrains within this research as the budget did not include vehicle hire or motorcycle hire. I selected respondents based on village of origin from the list of all list farmers in Chibvala EPA. After selecting these lead farmers, I asked the Extension officer to call them a day before and inform them of the interview at the EPA office. The initial target was to administer a hundred questionnaires but upon realizing that the number of the female lead farmers was only one hundred, I reduced to seventy. However, due to limited time in the field and to some respondents who had been asked to come not showing up I ended up administering only fifty - five questionnaires.

4.3.2 Qualitative interviews

For the qualitative part, face-to face interviews with key informants, focus group discussions (FGD) was conducted. A total of five key informant interviews were conducted. The interviews were conducted with three Extension officers at the Chibvala EPA, the headman herdsman of the Chibvala and the community development committee chairperson. I conducted three focus group discussions with at least seven women each per focus group. These interviews were recorded and later on transcribed from Chichewa to English. The extension officers were interviewed of their work in training farmers in Chibvala EPA. These extension officers operated under different organizations that is Circle for Integrated Community Development (CICOD) which is a German sponsored cooperation, BOMA which are government extension officers and TAPP who are officers that work both for the BOMA and the CABMACC project.

4.3.3 Focus Group Discussions

Three focus group discussions (FGD) were conducted with female lead farmers who were purposively selected. The FGD was conducted in Chichewa so as to make the participants more engaging in the discussions as most of them could not communicate in English. Each group consisted of 7-8 discussants. The discussion lasted about one and half hours. The researcher acted also as the moderator to ensure that everyone was given a chance to speak. However, there was a second group discussion in which my supervisor participated in. There was a difference in the reactions and interactions in that FGD compared to the first one. So, it was upon my discretion as a researcher that this data could have been compromised as such an extra FGD had to be conducted to replace the one with compromised data. The FGDs were conducted at the Chibvala EPA office due to the distance

between villages and the fact that the researcher did not have vehicle hire on their budget. As such participants were asked to come to the EPA in Chibvala and given 1000 Malawian Kwacha each as transport allowance money. A semi structured guide was used for all the FGDs.

4.4 Data analysis methods

For this mixed approach study a side by side comparison approach is used for data analysis. Data analysis involves a “*careful, detailed, systematic examination and interpretation*” of collected data to “*identify patterns, themes, biases and meanings*” (Berg & Lune, 2012). This study constitutes of both quantitative and qualitative data. The quantitative data was coded and analyzed using excel.

The qualitative raw data was first recorded and then transcribed. The transcripts were brought together with the field notes from the researcher’s notebook to come up with themes to answer the research questions guided by the literature review and adopted conceptual framework (Bryman & Cramer,1999).

4.5 Ethical considerations

Prior to collecting data some ethical considerations were taken by the researcher. The researcher ensured that informed consent was given by the respondents. As part of each interview the researcher and the assistant introduced themselves and explained that the purpose for the research was purely for academic reasons and that the research was not in any way going to give them any direct benefits to them and their households. This was done to avoid biased answers from the respondents with the thought that maybe the research will benefit them. For the respondents of the questionnaire their anonymity was ensured in that their names were not recorded at all. Several respondents were skeptical to which NGO I was affiliated to some thought I was affiliated to TAPP since I was asking them about a project that was mainly being implemented by TAPP. However, I consistently introduced myself as a student to remove any prejudice and skeptics among the respondents.

4.6 Reliability and validity

Data reliability and validity are two key principles important in research (Bryman, 2008). Reliability entails that if the same research were to be repeated by another researcher using the same procedure and instruments, both would produce similar results. Whereas validity entails whether indicators used in the study measure the intended concept (Bryman, 2008). Thus, if the measure is not consistent then the data cannot be valid. Hence this study by using a mixed method research both data collection and analysis and through triangulation of these fulfills the validity criteria.

4.7 Limitations of the Study

It is important to highlight the limitations of this study. Firstly, the research is limited to those who are female lead farmers. The research did not interview a control group due to time constraints however the researcher tried to frame questions in such a way that it captured changes after one had become a female lead farmer. Secondly, limited finances and time which did not enable the researcher to do household visits but rather called the selected lead farmers to come to the Chibvala EPA for interviews. This also meant that only a small sample of data could be collected within the time constraint. Although care was taken to ensure random sampling so that the findings of the sample may be generalized a larger sample and perhaps using a control group would have improved this study.

CHAPTER V

FINDINGS

5.0 Introduction

This chapter first gives the general demographic and descriptive characteristics of the sample. The chapter goes on to give the findings for the three research questions.

5.1 Demographics

Table 3 below shows the demographic statistics of the study population namely marital status, family system and household position.

Table 3. Marital status, family systems and position in household for female lead farmers.

Marital status		Number	Percent
	A) Married	45	81.8
	B) Divorced	6	10.9
	C) Widowed	3	5.5
	D) Single	1	1.8
	Total	55	100.0
Family system	A) Matrilineal	33	61.1
	B) Patrilineal	21	38.9
	Total	54	100.0
Position in Household	A) Wife	38	84.4
	B) Co-wife	2	4.4
	C) Head wife	5	11.2
		45	100.0

As can be observed in the table above 81.8 percent of the total sample of lead farmers through quantitative study are married. Of the total sample, less than 2 percent are single. While the rest 5,5 percent are widowed and 10.9 percent are divorced. The FGDs that had 22 participants also showed that most of the female lead farmers were married.

When it comes to family systems 61.1 percent practice the matrilineal lineage family. In this study matrilineality refers to both inheritance system and family name that can be traced through the female. 38.9 percent practice patrilineality which refers to tracing the inheritance and family name

through the male. The FGDs also discovered that most female lead farmers were coming from matrilineal family lineages. When it came to position in household 69.1 percent were from monogamous families. The rest came polygamous families as 3.7 percent were co-wives while 9.1 percent were head wives. The qualitative research found out that most of the lead farmers came from monogamous families while a few were from polygamous families.

5.1.1 Descriptive statistics

Table 4 below shows the minimum, maximum and mean for the age of female lead farmers, number of follow farmers and the years they have been lead farmers.

Table 4. Years as female lead farmer, age and number of follow farmers.

	Minimum	Maximum	Mean	Population (n-55)
Age of respondent (years)	22	66	38	
Number of male follow farmers	0	15	5	
Number of female follow farmers	2	20	6	
Years as lead farmer	1	5	2.5	

5.1.2 Age distribution

Table 2 above shows that the average age of lead farmers is 38 years. While, maximum is 66 and the minimum age is 22. The focus group discussions showed that most women who are above the age of 35. The FGD also noted that women above the age of 35 have the most motivation of becoming lead farmers because they have children in school, and they need to provide for school fees as the mothers. The key informant interviews from CICORD whose projects are only targeted towards women in the Chibvala EPA indicated that the most active participants were those between the age of 30 to 40. While those between age of 20 to 28 However, he indicated that most challenges were with those between the age of 20 to 28 are not very active because they like gossip and are more interested in incentives like food or money for them to attend a meeting.

5.1.3 Nexus between Age of female lead farmer and number of male follow farmers

Figure 4 below show the relationship between age of female lead farmer and number of male follow farmers.

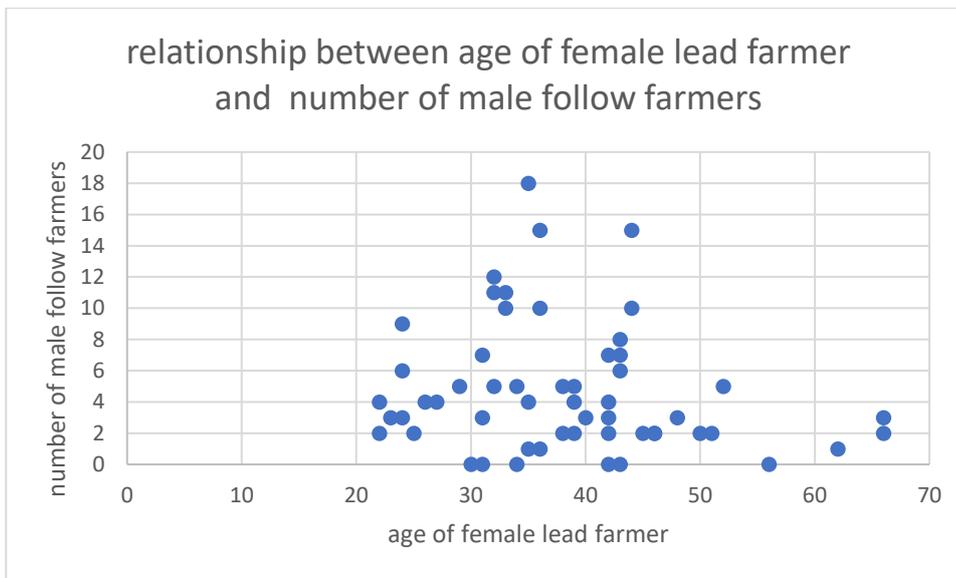


Figure 4. Age of female lead farmer and number of male follow farmers

Figure 4 above shows that there is a causality effect between the age of lead farmer and the number of male follow farmers they have. Female lead farmers between the age range twenty to thirty and fifty to sixty have the least number of male follow farmers. Whereas those between thirty to forty have the most number of male follow farmers.

The qualitative research found out that the young female lead farmers between twenty to thirty years in some cases refused to allow male follow farmers in their group due to fear of being suspected or accused by their husbands of being involved extra marital affairs with the male follow farmers. To add on the other reason for few male follow farmers was the fact that they were the age group with the least number of years as lead farmers. Hence there were considered inexperienced and none of the male follow framers wanted to be led by an inexperienced person.

The FGDs found out that the general reason that applied for all female lead farmers for not having as many male follow farmers as compared to women follow farmers was that the man didn't want to be led by women. The male follow farmers preferred being led by other men or becoming lead farmers themselves. This was also confirmed in an interview with the chairperson for the Area Development Committee who highlighted that man wanted to dominate in all the positions and decision-making structures when it came to community development projects. To solve the problem all the structures of the community development committee ensures that in every position that needs a deputy, the deputy must be of the opposite gender to that of the head leader. This nature of man wanting to be domineering in nature is a clear confirmation of hegemonic masculinities

However, although the number of male follow farmers seems to be low the Extension officer at Chibvala EPA highlighted that there had been some change.

“Beforehand men used to find the whole system useless and now they have started joining even though the numbers seem small they have been increasing numbers every day.”

Female lead farmers also supported the above view in the FGDs that even though the number of male follow farmers may look seemingly low the number is increasing as most men are changing and want to join as follow farmers. However, these male follow farmers preferred joining a group led by a much older female lead farmer or the one with more years of experience as a female lead farmer.

5.1.4 Relationship between age of female lead farmer and years as lead farmer

Figure 5 below shows the relationship between the age of the lead farmer and the years they have been a lead farmer.

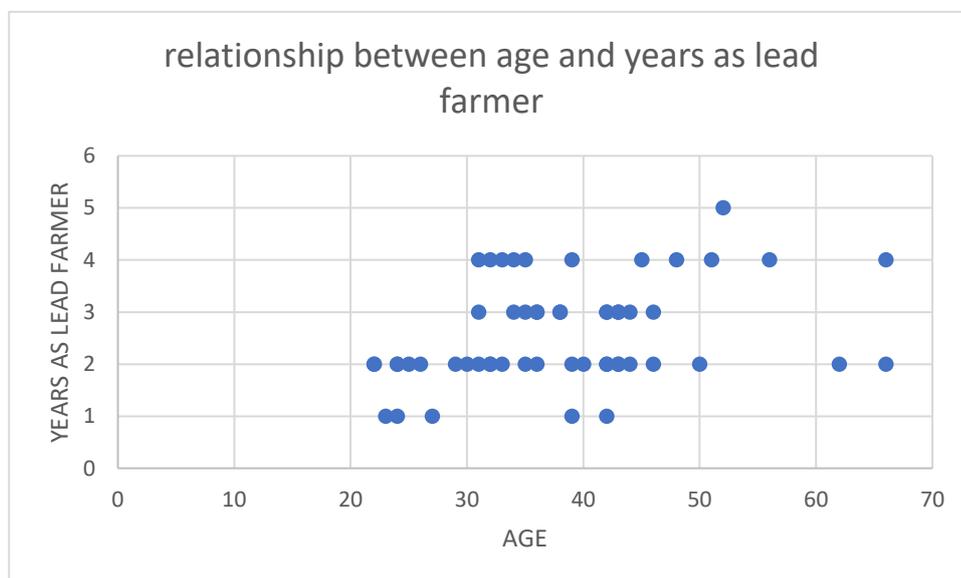


Figure 5. Age and years as a female lead farmer

Figure 5 above shows that there is a cause and effect relationship between age of the female lead farmer and number of years as a lead farmer. Those between the age of 20 to 30 had at least one year and at most two years of experience as a lead farmer. Those between the age of 30-40 had at least two years and at most four years’ experience as a lead farmer. The age ranges show a continuous increasing causality effect as the increase in age directly leads to an increase in number of years as a lead farmer. However, from the age from 40 to 50 the effect is not a continuous increasing effect as there is both a drop and an increase. Those between 50 and 60 show the highest level of experience as a lead farmer which is at five years and above.

Age plays a significant role in attracting follow farmers and research has shown that age is many societies is usually associated with status, role, individual orientation and behavior (Parsons, 1961).

5.1.5 Level of education accomplished

Education refers to formal knowledge acquisition or schooling measured using years spent in school. Educational attainment is an individual characteristic which can attest one's knowledge and skills. Figure 6 below shows the educational achievement of female lead farmers.

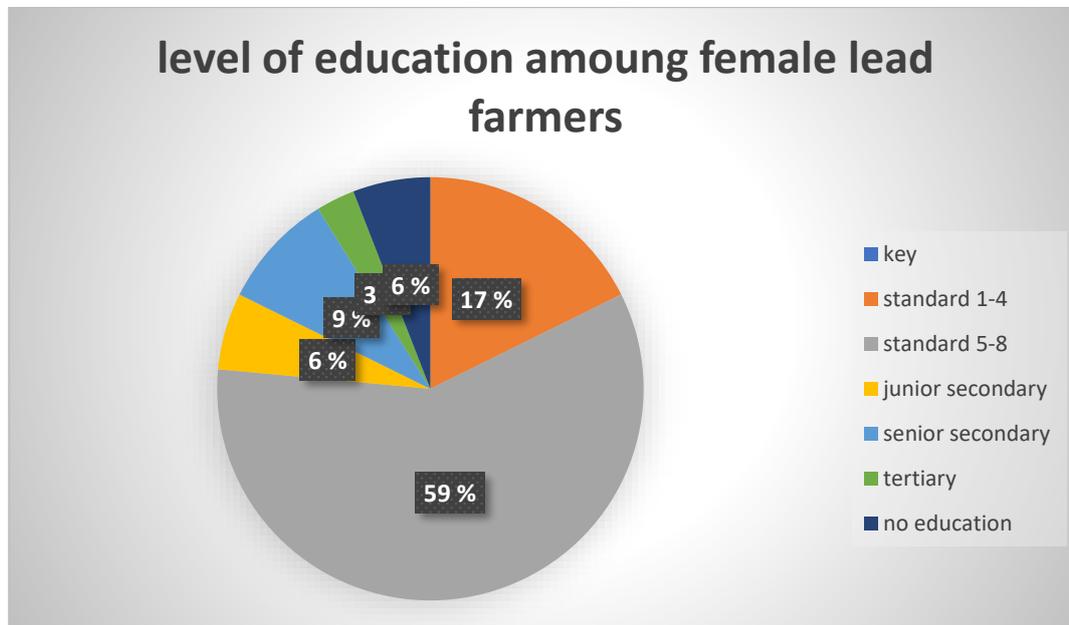


Figure 6. Educational achievements of female lead farmers.

Figure 6 above shows that out of the 55 female lead farmers interviewed 6 percent had no education, 17 percent had between standard one to four, while 59 percent had from standard five to eight, 6 percent had Junior Secondary education, 9 percent had Senior Secondary and 3 percent had tertiary education

The FGD found out that those aged between 40 to 50 had benefited from the free primary education offered in Malawi before the Economic Structural Adjustment Program (ESAP) in the early 1990s. As such there are the most age group of those who had managed to reach between standard 5 to 8 of primary education. Whereas those below this age range were negatively impacted by the ESAP and immediately dropped out of school. However free primary education was re-introduced in 1994 and despite the introduction of free primary education drop outs remain high in Malawi.

Poverty is another reason mentioned in the FGD. Lack of money levies such as development and sports levy in the school and for books and uniforms cause many to drop out. The distance from homes to the nearest schools is great and that demotivates children in winter season to go to school. Those who drop out are left with no option but to get married hence by age 18 most of these young women find themselves married.

However, most of these women have the lowest level of education which is primary, the level of education attained does not determine selection criteria for becoming a lead farmer. The extension officer through a key informant interview highlighted that it was literacy the ability to read and write that qualified to be selected as a lead farmer and not level of education.

5.1.6 Training received by female lead farmers

Figure 7 below shows the various types of training that female lead farmers received upon inception of their role as lead farmers. These trainings are done by Extension workers who are working for a collaboration of Government Extension Services known as the BOMA and NGOs such as TAPP, DAPP and CICORD.

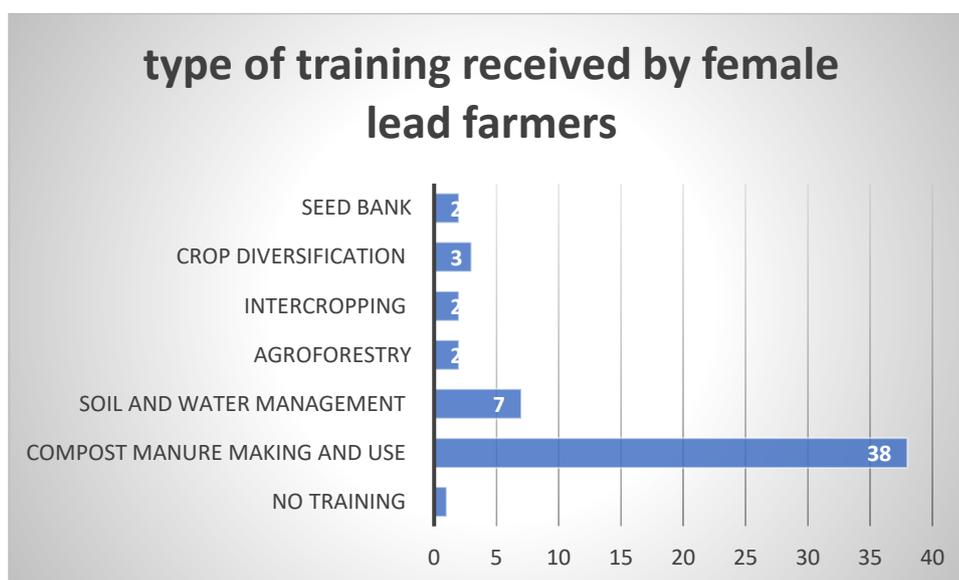


Figure 7. Types of training received by female lead farmers.

Fig 7 above shows that out of the 55 participants who participated in a questionnaire 1.8 percent received no training, 69 percent received training on compost manure and making use, 12.7 percent received training on soil and water management, 3.6 percent received training on agroforestry, 5.5 percent received training on crop diversification, 3.6 percent received training on community seeds. The FDGs also revealed that the female lead farmers were also trained in the above methods with compost and manure making and use being the most popular training. In a key informant interview the extension officer said that they use manuals from TAPP to train the farmers. The extension officer added that manure making and use was most popular because one of the greatest challenges faced in Chibvala EPA is that of soil infertility and high cost of fertilizers, thus this method addresses these challenges.

5.2 Indicators of empowerment among female lead farmers

This section answers the first research question. Table 5 below shows the various indicators of empowerment given by female lead farmers in 3 FGDs.

Table 5. Indicators of empowerment by female lead farmers.

FGD1	FGD2	FGD3
<p>1) To be rich</p> <p>2) To have plenty of property</p> <p>3) To able to have a say and make decisions</p> <p>4) Having livestock</p> <p>5) to have plenty of harvest</p> <p>6) “Mwana alirenji”why should the baby cry ----when a baby cries its a sign of hunger in the Malawian community .So empowerment is having a home where a child does not lack adequate food .</p> <p>7) To be able to have money and food to eat</p>	<p>1)To be able to have access to basic needs such as salt and clothes for which salt is a big problem in the village because of poverty</p> <p>2)A transition from poverty to access to wealth</p> <p>3)To be self-reliant and financially independent not being dependent on your husband when making decisions.</p> <p>4)A time management ability to plan a budget and owning at least a business.</p> <p>5) Is when a woman sits down to plan her day and not just move up and down aimlessly.</p> <p>7)To be able to do your own things in the right time and season</p>	<p>1)Empowerment means hard work and be determined to do what you have planned to do .</p> <p>2)To have access to basic needs</p> <p>3)To harvest plenty of food crops e.g. plenty maize</p> <p>4)Availability of basic needs at home such as food specially to provide all kind of meals to the child</p> <p>5)Access or availability of income even though the economy is fluctuating so if you are able to access money within such difficult circumstances then that is empowerment</p> <p>6)Positive change in one’s life and when you are able to harvest plenty.</p>

	8)Change in one's agricultural produce if you were failing in the past and now claim that you are empowered your productivity should change.	7)Ones ability to pay school fees to the children and buy school materials
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5.2.1 Time management ability

10.9 percent of 55 defined empowerment as ability to manage one owns time and to do what you want at your right time be it business or leisure. This was also confirmed in the FGD as some of the female leaders highlighted that they should be able to go visit their friends and do other things of their interest without any restrictions such as looking after the children or cooking.

5.2.2 Ownership of Assets

27.2 percent of 55 said that empowerment was the ability to own assets such as livestock and land. The FGD also found out that empowerment was the ability to own livestock such as goats for manure and chicken for food at home. To add on one other women said to her empowerment is the ability to own property such as house and land.

5.2.3 Economic empowerment

36.6 percent of 55 indicated that empowerment meant having enough money. The FGDs also confirmed this as female lead farmers highlighted that empowerment meant to be rich, to have plenty of money, to be wealthy and access to an income even in the face on an unstable economy. This indicator is important because majority of women in Dowa are facing difficulties in savings because the Malawian Kwacha keeps losing value. For example, an asset can be sold at a valuable price and then a few weeks later the money would have depreciated in value.

5.2.4 Plenty of harvests as empowerment

The FGD found out that empowerment is one's ability to have plenty of harvests. The Headman in Chibvala EPA in a key informant defined empowerment as, *"to work hard to harvest much to give enough food."* One female farmer is quoted to have said after becoming a lead farmer, *"hunger does not know my home address anymore i now see it from a distance from other households."*

5.2.5 Decision making

18.1 percent out of 55 said empowerment to them meant being able to give input in decision making. The FGD also confirmed this definition for example one woman highlighted that she should be able to have a say in financial decisions within the household for her to feel empowered. Most women in Chibvala do not have a say in decisions because their husbands do not respect them due to their lack of education, as such they do not think the women has any meaningful contribution to bring. Lack of financial resources also make these women more vulnerable when it comes to making decisions.

5.2.6 Availability of basic needs

The FGD mentioned that empowerment was the access of basic needs such as enough food for the children. For example, if the child wants soya porridge or eggs, clean and safe drinking water, sanitation and basic health services. One of the women is quoted to have said *“I should be able to provide food for the children including having salt in the home for which salt is a big problem in the village because of poverty.”* The women went on to mention the ability to pay levy fees for the children, taking them to hospital and buying them clothes as their measure of empowerment. One of the women decided to use some Chichewa adage to define empowerment.

“Mwana alirenji”,” why should the baby cry” ----when a baby cries it’s a sign of lack and hunger in the Malawian community, so empowerment is having a home where a child does not lack adequate food.

5.3 Socio -Economic Changes among female lead farmers

This section focuses on the findings to the second research question, which focuses on the socio-economic changes that have occurred to women farmers since they took their responsibility as lead farmers in agriculture. The findings will be presented using indices derived from WEAI that is production, resources, income, leadership and time.

5.3.1 Production

The WEAI on production index has two indicators. The first is input in productive decisions at household level that can be characterized by joint input in decision making. This means that both the husband and wife can give input towards a decision. Sole input which means that the women alone can decide without consulting the husband. The second indicator is autonomy in production. This is explained by what the women considers before deciding if she considers what is right for her, what impact it will have on the family or what the husband would think.

Figure 8 below shows that 82 percent of the lead farmers in the quantitative survey confirmed that there has been a change in decision making after becoming lead farmers and 18 percent said there has not been any change in their power to make decisions after becoming a lead farmer.

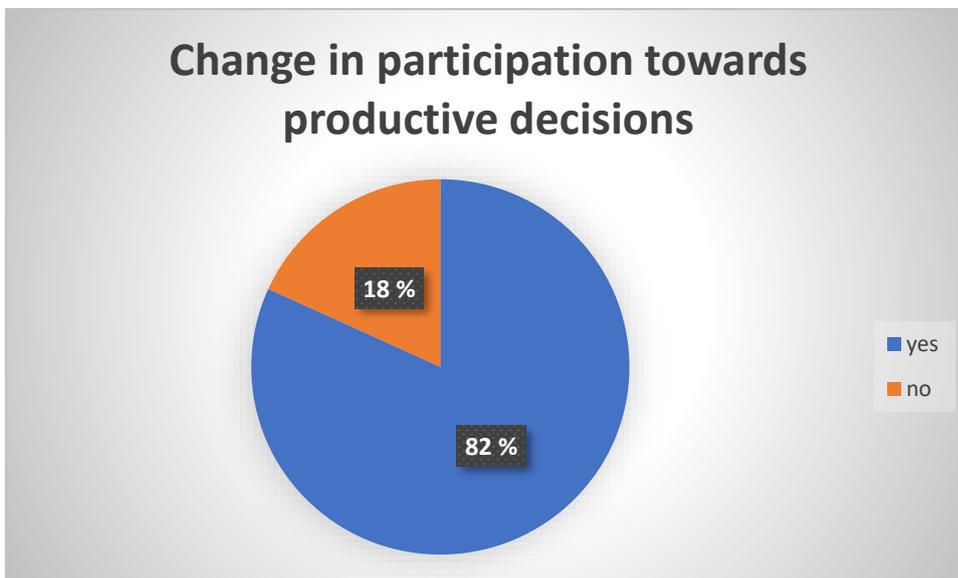


Figure 8. Change in participation towards productive decisions after becoming a lead farmer. n=55

The discussion in the FGDs revealed that those that said they have not experienced any change in their input towards decision making, it was for religious reasons. In the husband should always be the head and the wife should not intervene in decision making. Husbands did not listen to their wives because the husband thinks that her ideas are not of any value. Some husbands have drinking problem so they can become violent when the wife wants to speak out.

Input in productive decisions

Figure 9 below shows the change in power to give input in decision making on productive decisions for female lead farmers after becoming lead farmers.

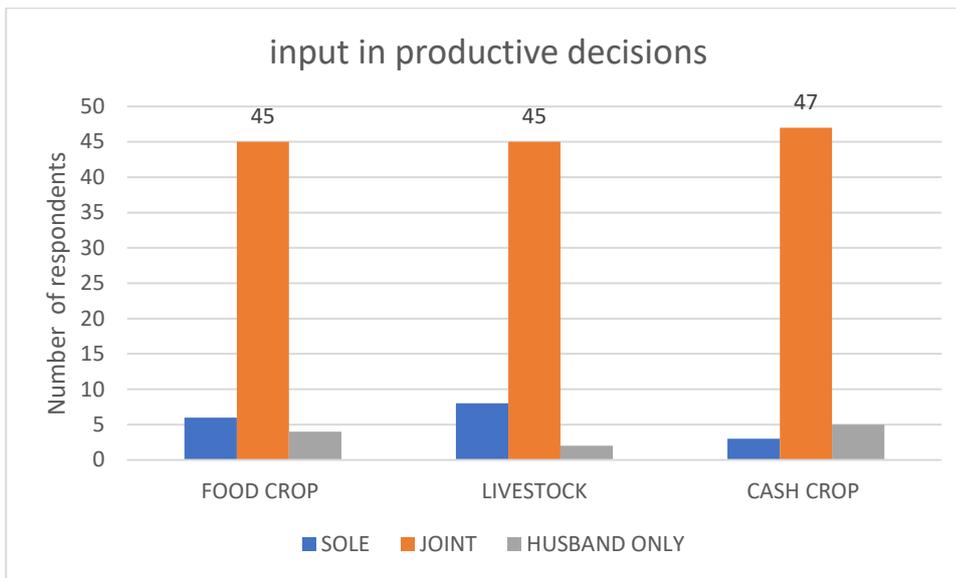


Figure 9. Input power towards productive decisions after becoming lead farmers. n=55

According to WEAI, sole or joint input on productive decisions is an indicator of being empowered in terms of production. In decisions to do with food crop 9.1 percent exercised sole decision making, while 81.9 percent exercised joint decision making and 5.5 percent had their husband only as the decision maker. When it came to livestock 14.5 percent exercised sole decision making while 81.9 percent exercised joint and 3.7 percent said it was only their husband's decision. On cash crops 5.5 percent exercised sole, 85.5 percent joint and 9.1 percent said it was the husband's decision only.

The FGDs also revealed that women exercise the most autonomy on decisions to do with livestock after becoming lead farmers mainly because of the goats, chickens or pigs they have received upon training as lead farmers. Most of these livestock came from the TAPP and the BOMA extension project. Sole owning of livestock has given the female lead farmers power to make their own decisions.

When it comes to joint decisions most husbands now prefer to make decisions together with their wives. According to the female lead farmers this change has been influenced by the women's ability to bring something in the house and not just being an idle woman with nothing to bring home. However, female lead farmers still have experiences with their husbands wanting to dominate when it comes to decisions about cash crop as compared to livestock and food crops.

Autonomy in production

Autonomy in decision making is the women's ability to exert control over their own lives within families. Autonomy is an individual aspect of power. Autonomy in agricultural production reflects the extent to which the respondent's motivation for decision making reflects own values rather than a

desire to please others or avoid harm. Figure 10 below shows what the research found out when it came to autonomy.

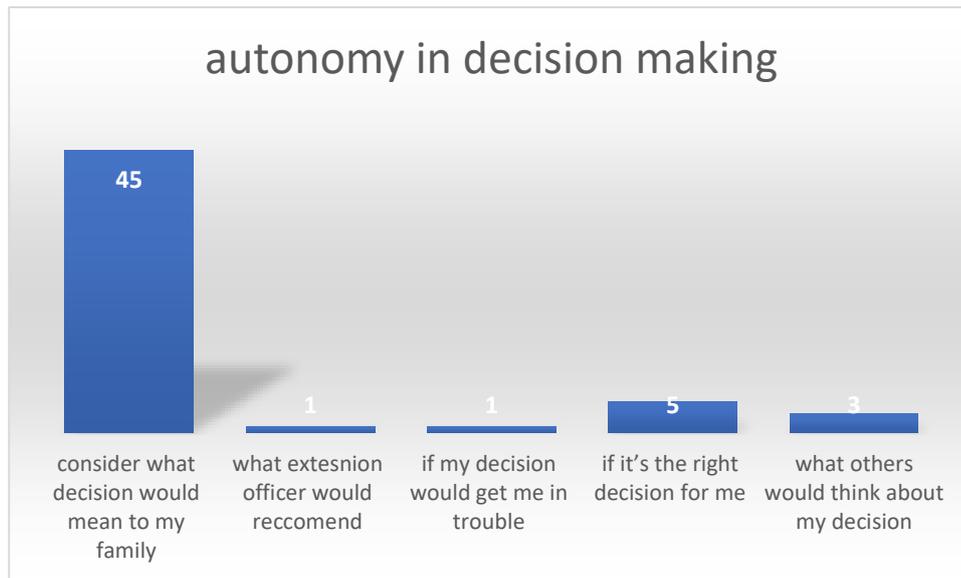


Figure 10. Autonomy exercised in decision making after becoming a female lead farmer. n=55

The figure above shows that 81.9 percent said that they would consider what the decision would mean to their families. 1.9 percent said they would consider what the extension officer would recommend and if the decision would get them in trouble. 9.1 percent said they would consider if the decision is right for them. 5.5 percent said they would consider what others would think about their decision. The figure shows that female lead farmers are more considerate of what their decision would mean to their family rather than their own will towards a decision.

The FGDs also confirmed that most women would consider what the implications of their decisions would be on their family. This was also supported by the key informant interviews that revealed that some women often rejected their elected position as lead farmers before the trainings because their husbands were not comfortable having their wives go away for a few days to get training at Mponela.

Reasons for change towards participation in decision making

Figure 11 below shows the reasons in change towards participation in decision making. The participation in decisions regarding the buying, selling and transfer of assets by female lead farmers after becoming lead farmers.

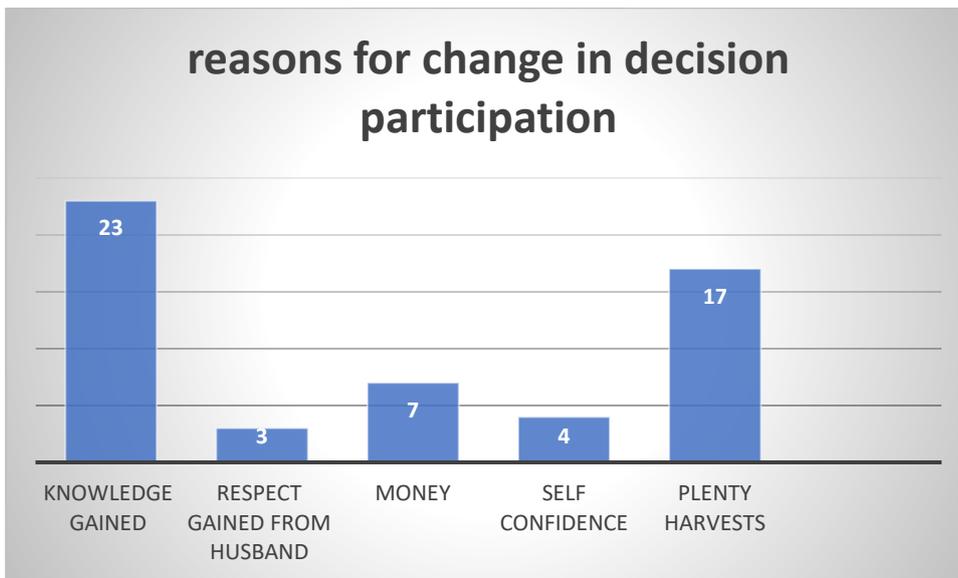


Figure 11. Reasons for change towards participation in decision making after becoming a lead farmer.

41.8 percent of female lead farmers in the quantitative survey said the change towards decision making participation was caused by the knowledge that they have gained. According to FGDs the knowledge included climate smart technologies and knowledge about loans and credit facilities. 5.4 percent said gained respect from the husband, while 12.7 percent said that they now had money due to the great harvests that had enabled them to sell surplus crops. 7.3 percent said they felt confident to talk to their husbands because of their knowledge. 31 percent said plenty of harvest had contributed to the change in decision participation.

5.3.2 Resources

Ownership of Assets

According to WEAI on resources sole or joint ownership of assets can be a sign of empowerment. Figure 12 below shows changes in ownership of assets after becoming a lead farmer.

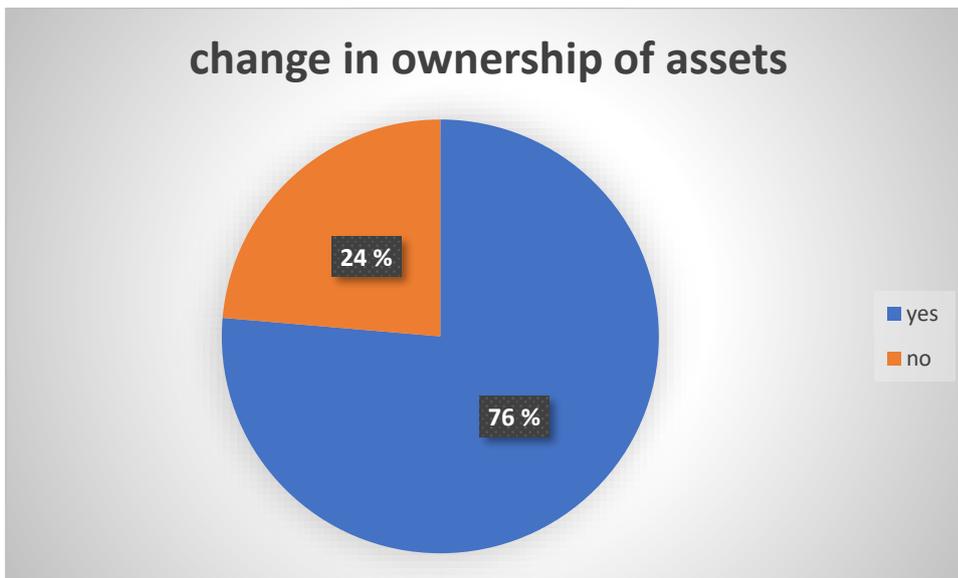


Figure 12. Changes in ownership of assets after becoming a lead farmer. n=55

The figure above shows that 76 percent owned assets that they did not have before becoming lead farmers, while 24 percent acknowledged that they have not experienced any change in their ownership of assets after becoming female lead farmers.

Sole or joint ownership

Figure 13 below shows that 63.3 percent owned these assets jointly with their husbands and 36.4 percent owned these assets solely. The FGD found out that those who said the assets were owned solely meant that the title deed were only in their name and in case of divorce they would take the assets along with them without anyone challenging them.

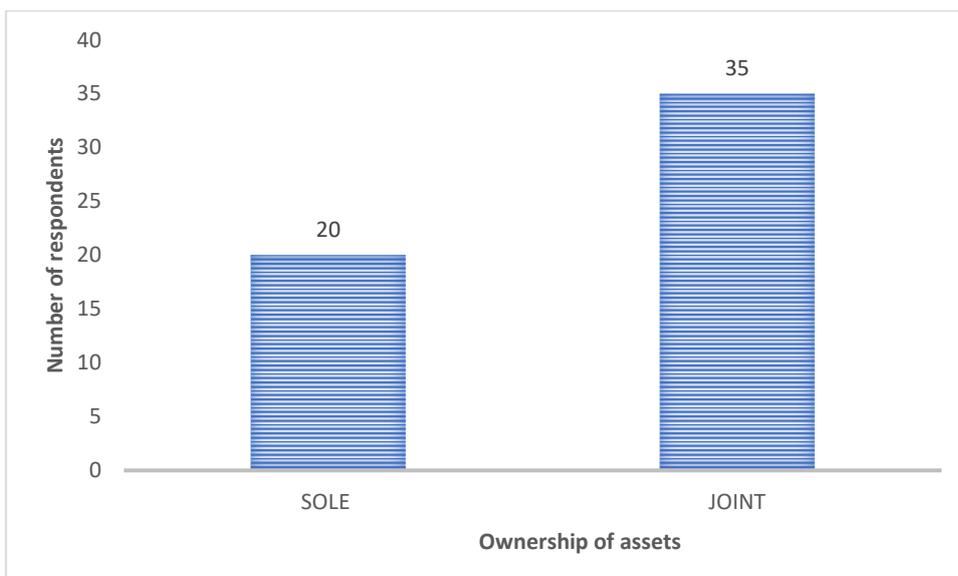


Figure 13. Sole or joint ownership status of assets. n=55

Types of assets owned after becoming lead farmers.

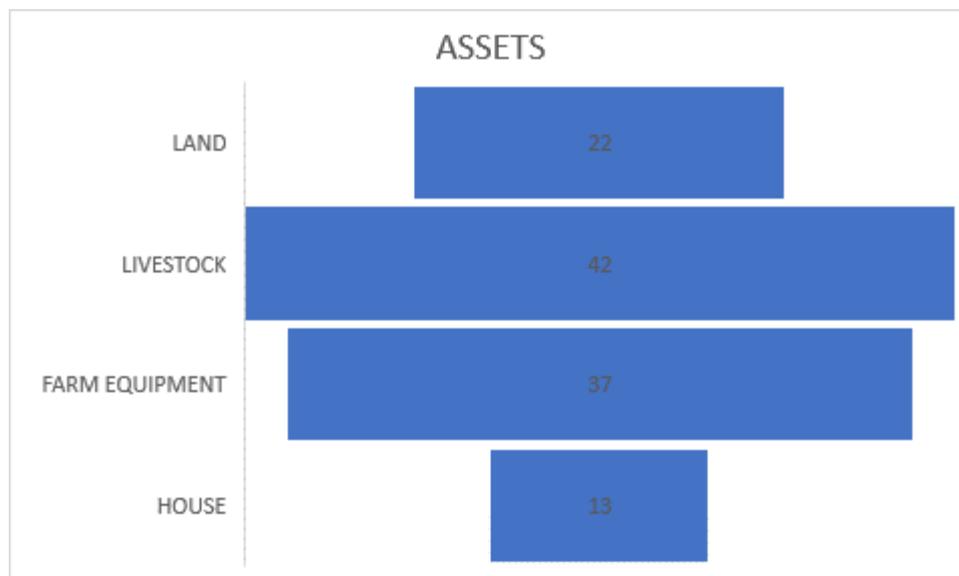


Figure 14. Type asset owned by female lead farmers. n=55

Land

The quantitative survey showed that 40 percent of the women said their access to land had changed. The FGDs found out that this change was mainly because most of these female lead farmers were now able to access credit facilities and loans to rent or purchase land. Those who purchased land mainly came from patrilineal lineages where women cannot inherit land unlike those from matrilineal lineages. However, there has not been any government policy changes that have taken place to help female lead farmers access land as land remains very expensive for the rural female lead farmers.

Livestock

76.4 percent of the women owned livestock after becoming female lead farmers. The livestock owned included goats, chicken, cattle, and pigs. Most of those who owned goats and pigs had received them from TAPP as a pass-on livestock after their training as lead farmers. Pass-on livestock is livestock received for free, but when the livestock reproduces, one passes on the livestock to their fellow farmer and the chain continues like that.

Farm Equipment

67.2 percent of the women now owned farm equipment which included hoes, ox carts, wheelbarrows, spades, shovels, fertilizers, and seeds. The FGDs found out that the most treasured equipment by female lead farmers were wheelbarrows and carts that they could use to carry goods to the market and to carry manure to the farm.

House

23.6 percent of the women owned houses after becoming female lead farmers. Most of these women already had available space on their household land and when they harvested plenty and sold the surplus they managed to build houses from the income they had received. Most of these houses are 3 roomed with one living room and two bedrooms.

35 out of 55 women said that these assets above were jointly owned while 20 said there were solely owned.

5.3.3 Income

The WEAI indicator on income says that joint or sole control over income and expenditure can be a sign of empowerment. Figure 15 below shows the number of female lead farmers who experienced change in the use of income and expenditure.

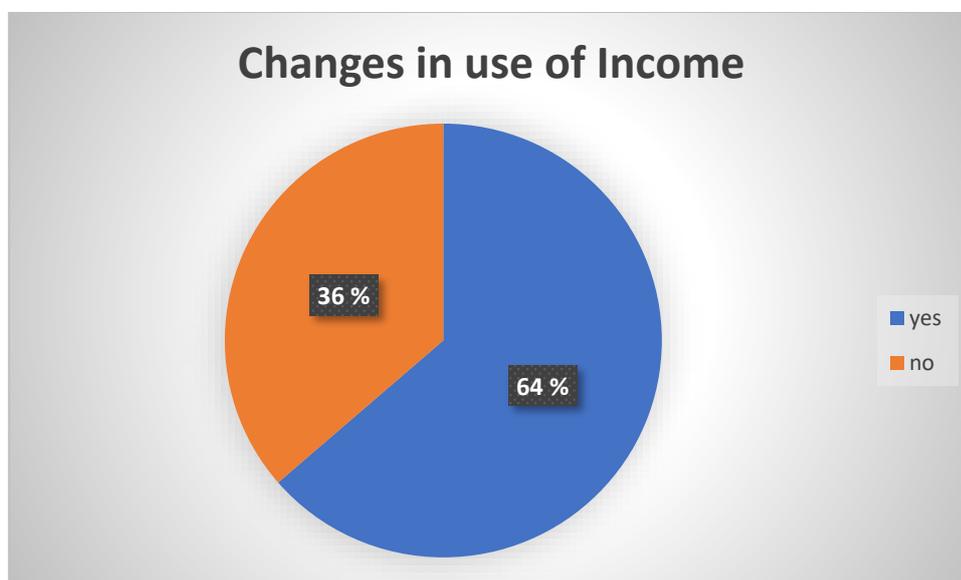


Figure 15. The changes in use of income after becoming female lead farmers. n=55

64 percent of the female lead farmers in the quantitative study said they exercised sole or joint control over use of income and expenditure. While 36 percent said they did not exercise sole or joint control over use of income and expenditure.

Table 6. Female farmers with control over household expenses and cash crop income

	Number	Percent
Household expense		
Yes	45	81.9
No	10	18.1
Total	55	100.0

Income from cash crop		
Yes	24	43.6
No	31	56.4
Total	55	100.0

After becoming a lead farmer 81.9 percent of the women gained more control over use of money for household expenses. Whereas 18.1 percent do not have control. Although many women have control over use of income for household expenses they do not have control over the use of money from their cash crop sales as 56.4 percent do not have control over their income from the sale of their cash crops. The most popular cash crop among female lead farmers is maize and groundnuts. 30.9 percent of the women said their husband alone controls the use of income in general. However, savings for these women has not increased as the money depreciates quickly. This is because Malawian Kwacha keeps losing value. More so, there has been an increase in access to loans as some of these farmers can now get loans to buy land through various economic groups that have been set up in their communities. However, the women experience high interests rate for the loans because of the unstable value of the Malawian kwacha.

5.3.4 Leadership

Belonging to a social or economic group.

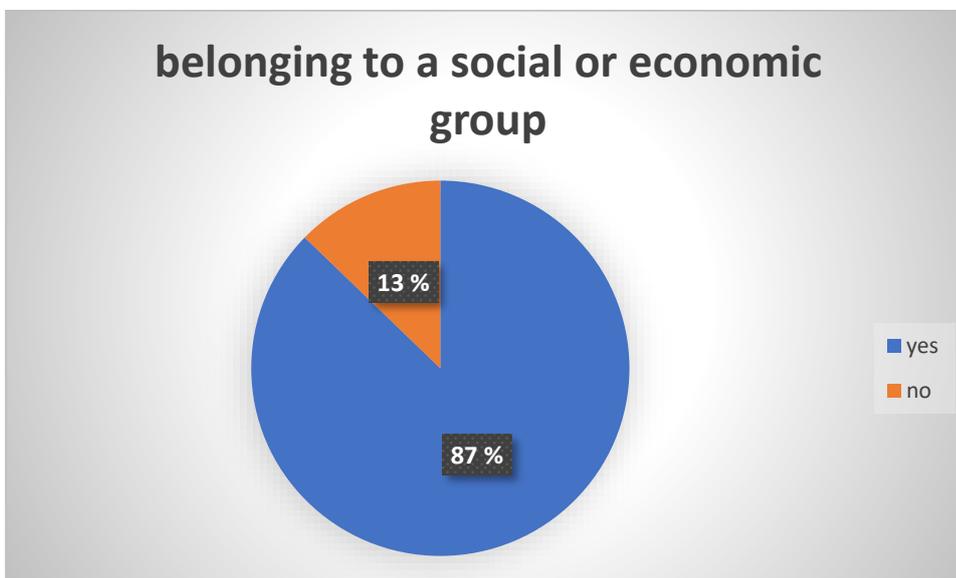


Figure 16. Number of female farmers belonging to a social or economic group after becoming a lead farmer. n=55

Figure above shows that 87 percent belonged to either an economic or social group after becoming a lead farmer, while 13 percent did not belong to any social or economic group. The FGDs

found out that the women who did not belong to social groups were restricted by their husbands. The reasons for restrictions from the husbands included fear that the wife might become promiscuous and then uses social group meetings as a scapegoat to go and meet their lover. Table 7 below shows how many female lead farmers that belong to different social and economic groups and positions they hold.

Table 7. Type of social group and the positions held by female lead farmers

	Number	Percent
TYPE OF GROUP		
Women group	9	18
Self help	3	6
Co-operative	1	2
Savings	32	64
Microfinance	2	4
Farmers association	3	6
Total	50	100.0
POSITION HELD		
Chairperson	11	29.3
Vice chairperson	1	2.8
Secretary	12	33.1
Treasurer	8	21.3
Spokesperson	2	5.4
Committee member	3	8.1
Total	37	100.0

The table above shows that most of the women belonged to social and economic groups and held leadership positions in these groups. The research found that many women belonged to economic or social groups.

5.3.5 Time

Figure 17 below shows the statistics of those female lead farmers who were now experiencing change in time use after becoming lead farmers. According to WEIA having time for both work and leisure is a sign of empowerment.

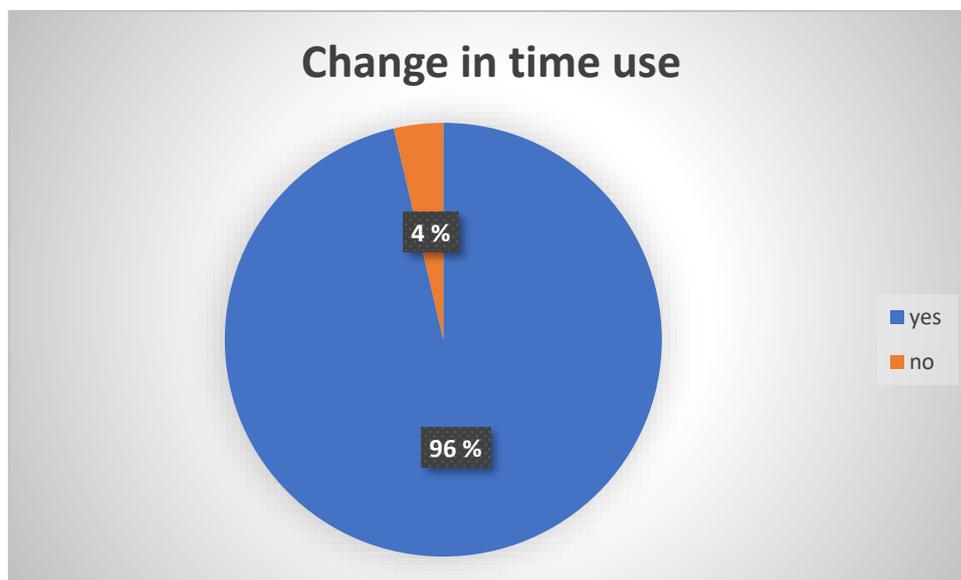


Figure 17. Change in time use after becoming a lead farmer. n=55

96 percent said that there has been a change in time use after becoming a lead farmer while 4 percent said that there hasn't been any change in their time use. The FGDs revealed that before becoming lead farmers women used to spend time on fetching water, collecting firewood, child care, trading, selling, farming and gossiping. After becoming lead farmers women spent their time doing farming, trading and selling, attending meetings, childcare and household chores. The FDG found out that most of the women were now getting help from their husbands in farming. And from their children and other family members to do house chores and looking after the children after becoming lead farmers. Although the workload of the women is now being shared most women do not have time for leisure at all.

The FGDs highlighted that time use has changed as they now spent time educating their follow farmers. When they receive the training, they take it as their responsibility that their follow farmers receive the same skills that they got as lead farmers and they train them once a week. Before becoming lead farmers most used to spend gossiping at the market place and village but now they spent time learning and practicing improved ways in agriculture. However, these women do not have time for leisure as they are overburdened with work.

5.4 Challenges for female lead farmers

Maize stock theft

Maize stock theft and burning is a problem faced by farmers practicing zero tillage. The theft emanates from hatred and jealousy. The suspicion is that the herdsman are the ones responsible for the theft as they need the maize stock to feed their cattle. This has made some farmers to abandon practicing zero tillage. It is difficult to identify the real perpetrators for the stock theft as the stealing takes place at night. The village headman also confirmed that cases of stock theft have been reported to him by some villagers. However there hasn't been any perpetrators brought to him as most of the crime is committed during the night.

Lack of support from male counterparts

Lack of support from male counterparts is also a challenge for female lead farmers. Males boycott meetings that are facilitated or arranged by female lead farmers. The reason for boycotting is that they don't want to be led by women. The extension officer highlighted that those men who would have completed secondary school education and are follow farmers think they are the boss over the extension officers themselves.

Suspicion and conflict between female lead and follow farmers.

Misunderstandings between lead farmers and their follower farmers is a common problem facing both lead and follow framers. The extension officer said that when he is made aware of such conflicts he always encourages the lead farmers to continue working because he believes that whenever a group is working there is always conflict. There are also accusations of theft, corruption and of offering sexual favors to the extension officer. These accusations are mainly from their follow farmers. The reason for the suspicion from the follow farmers is that lead farmers are at times invited attend meetings and trainings that follow farmers are not invited to attend. The follow farmers do not understand why they cannot as well attend these meetings. For example, lead farmers got bicycles from TAPP and follow farmers did not get the bicycles. The follow farmers were disgruntled by not receiving bicycles and went on to accuse the lead farmer of corruption.

Lack of confidence in the lead farmer concept

The research discovered that most lead farmers acknowledged that one of the problems they were facing was that they do not have 100 percent confidence in the lead farmer concept. And as such they preferred mixing the CSA farming methods together with their own traditional methods on their

fields. Even though they confirmed that the side with CSA always harvest better they still preferred mixing the methods.

Transport and Market problems

Transport problems to get to the market so sell the produce are an everyday challenge. Although the farmers have received bicycles from TAPP these bicycles are not friendly for carrying goods. Most farmers depend to sell their products to the vendors who normally come to the village from Lilongwe to buy from them. These vendors bargain for low prices for example, a bag of maize going for 40000 Malawian Kwacha a vendor would for bargain 20000 kwacha as his buying price. The lead farmers are left with no option but to sell at these low prices being offered by the city vendors.

Lack of regular follow ups and more trainings

Most farmers indicated that they only received one training and they never had any follow up training after. To add on the follow ups in the farms are not very regular. These have resulted in a knowledge gap between the lead farmers and the extension officers. There is also lack of training on how to maintain livestock upon receiving them. Many farmers were losing livestock due to only one person with veterinary expertise in the area and could not attend to the needs of everyone.

Relocation

The extension officer said relocation with the family which leaves a gap within the lead farmer circle. This was confirmed in the FGDs, one woman highlighted that she had to take up the position of a lead farmer after the lead farmer moved to a different village. Those who move to other villages do not take the lead farmer position in their new place.

Lack of responsibility over livestock and bicycles

The extension officer highlighted that the lead farmers believe that the organization (TAPP) that gave them the bicycles should fix it for them in case of damage. Many have also lost livestock that they believed the extension officer should have come to take care of. The extension officers highlighted that there have been many incidents of farmers bringing their damaged bicycle or sick goats to the EPA office so that the extension officers can fix it for them.

5.5 Achievements for female lead farmers

Figure 17 below shows the some of the achievements by female lead farmers.



Figure 18. Achievements of female lead farmers.

The figure below shows statistics from the quantitative data for achievements of female lead farmers. Buying livestock, building a house, increased yields and new knowledge chronologically were the most achievements highlighted by female lead farmers. These achievements were also confirmed in the FGDs. The FGD also revealed that high yields had led to improvement of nutrition within the household.

5.6 Story of change

Name Kilnesi Phiri

Village: Kantchere

Age: 41

Number of Children 5

Marital Status Divorced

She dropped out of school in standard of because of poverty. After dropping out of school her elder sister brought house. At her elder sister's place instead of being sent to school she was asked as a shop attendant at her sister's tuck-shop. This tuck shop was a village version of a coffee shop where people would come and drink tea. As years went by she was asked to concentrate on farming by her elder sister and later she found herself a husband at the age of 16. Although she never knew the husband before getting married to him. However, she later discovered that the husband had a drinking problem to the extent that he sold household property such as goats and pigs without the wife's consent so as to get money for beer. The husband was also unfaithful and brought other women into the house when she was away. She was unable to buy clothes for the children since the husband was showing signs of neglect due to his bad drinking habit. At times she could go into other people's homes to beg for food for her family. Years later the husband had married four more wives and when he brought a 5th wife she decided to walk out of the marriage. She moved out and started staying at her parents' home. The husband visited her and asked her to come back home. The visits from the husband prompted her to move away from her parents' house and get her own in a place called Mphala. In 2016 she was approached to be a lead farmer by her sister-in-laws fellow farmers. The sister-in-law had dropped from being a lead farmer. Upon being approached she excused herself that she was unable to lead the women because she was illiterate. She took herself to adult evening school so that she can be able to read and write. When she had gained some literacy skills she then joined as a lead farmer. Ever since she became a lead farmer she is now able to send her children to school, have food security due to high harvests, able to buy seeds and fertilizers.



Figure 19. The researcher and Kilnesi Phiri in Chibvala EPA

CHAPTER VI

DISCUSSIONS AND ANALYSIS

6.0 Introduction

This chapter will look at the contributions of the lead farmer model towards female lead farmers empowerment in agriculture. The sections will discuss and analyze the concepts of empowerment among female lead farmers and socio-economic changes that have occurred to women lead farmers since they took their responsibility as lead farmers. These changes will be analyzed based on the five indicators of empowerment in agriculture from the WEAI index. The five domains for analysis are production, time, resources, income and leadership.

6.1 Concepts of empowerment among female lead farmers

Female lead farmers had various definitions of empowerment. The study found out that female lead farmers defined empowerment as ownership of assets. The assets mentioned included goats for manure, chicken for food at home and having a house for the family. The lead farmers mentioned that these assets were important for them to provide improved nutrition, health and well-being for their children. However, the lead farmers did not mention important assets such as owning land and farm equipment in their definition and being able to exercise autonomy over these assets. According to CARE empowerment framework owning of assets is described under agency. Thus, exercising agency can lead to empowerment. Assets are also sources of power and power is an intangible asset ((Batliwala, 1994). The study found out that female lead farmers ignored intangible things such as **power within** and **power to** in their definition of empowerment. Power is control over material assets, intellectual resources and ideology, female lead farmers need to realize power over the control of these resources (Batliwala ,1994). Although the female lead farmers mention about participating in decision making they are not conscious of exercising power and autonomy in the decision making process.

The study found out that lead farmers defined empowerment as having plenty of money and to be wealthy. However, they are also conscious of exercising control over the use of the money. The WEIA domain on income emphasizes that having control over the use of income is a sign of empowerment. This ignorance that empowerment goes beyond having money but being able to control how it is used emphasizes male oppression within the home and wider society (Agarwal, 1994). There is need for female lead farmers to realize control over their own money.

Plenty of harvests was also defined as empowerment this falls under WEAI domain of production however these women do not mention having autonomy in making decisions over

production. Time is also mentioned which is an important indicator according to WEAI as empowerment.

6.2 Socio -economic changes: Production

The study found out that most women practiced joint decision making in productive decision of food crop, and livestock. When it came to cash crop husbands tended to dominate in have sole decisions about cash crops. In terms of autonomy female lead farmers do not have autonomy over their decisions but rather they consider what the decision would mean to their families.

According to WEIA sole or joint decision making and exercising autonomy is a sign of empowerment. Literature shows that decision making in the family level determines which individual has more power (Blood & Wolfe, 1960). CARE women's empowerment framework suggests that power emanates from increased agency. The study found out that female lead farmers had gained power from the knowledge they had gained, earning their own money from their crop sales, self-confidence and plenty of harvests. A related study on female lead farmers in Malawi revealed that change in decision making participation by women was influenced by personal assets(Kalagho,2013). Literature suggests that in most cases the one who brings more resources can exercise power in decision making (Blood &Wolfe, 1960). However female lead farmers still face domination from their husbands when it comes to decision on cash crops. This is because most man want to harvest tobacco which sells easily and at high price although labour intensive. Generally, on a global level man have more power in decision making than women.

Thus, based on the above female lead farmers are empowered when it comes to making productive decisions on food crop and livestock. There is still a need to improve women's capacity in cash crop decision making and in exercising their autonomy.

6.3 Time

The study found out that 96 percent of the female lead farmers revealed that there has been a change in time use after becoming lead farmers. The women highlighted that they get help in farming and house chores from their husbands and children respectively. Their knowledge on agriculture have given them high yields that the husbands are willing to help in farming to even achieve higher yields. Only those female lead farmers whose husbands are lead or follow farmers are willing to help with farm work. However, female lead farmers remain deprived in having time for leisure as they are even more burdened with work of being a mother and a lead farmer. According to WEAI time for both productive and domestic tasks and leisure activities is a sign of empowerment.

Literature from UNDP shows that women in Malawi spend over eight times more than men on the same tasks (UNDP, 2014). Studies show that most common household tasks men volunteer

for are daily needs tasks and not child care. Based on the above one can argue that the lead farmer model has a weakness in addressing household workload to women despite their role and duties as lead farmers. The programme does not provide sensitization to prepare husbands of female lead farmers on their wives added role of becoming a lead farmer and being a mother and wife at the same time. The lack of addressing these issues may end up overburdening women instead of empowering them. In this case female lead farmers are deprived in having time for leisure as they are overburdened with work.

6.4 Resources

The study found out that 76 percent owned assets that they did not have before becoming lead farmers. 35 percent of these assets were jointly owned and 20 percent were sole owned. The WEIA indicator on assets indicates that joint or sole ownership of productive assets can be a sign of empowerment. Female lead farmers owned assets such as land, livestock, houses and farm equipment. Literature shows that women are likely to own small livestock such as poultry and goats (FAO, 2011). The CARE women's empowerment categorizes ownership of assets under agency. CARE suggests that if access to productive assets is increased to women it can lead to the well-being of a household. The study found out that the ownership of these assets contributed to increased harvests and better nutrition within the household. This finding is like literature which says access to productive resources and assets by female farmers would increase yields on the farms by 20 to 30 percent which can raise agricultural output by 2.5 to 4 percent in developing countries (FAO, 2011).

However, on assets land was owned by only 40 percent among other assets such as livestock and farm equipment. This is a low figure considering that Dowa practices matrilineal land lineages and 61.1 percent under study were matrilineal households. In matrilineal tribes' land belongs and is inherited though the female line (Berge et al, 2012). This means that most of these women should already have owned inherited land given to them upon getting married. However, this is not always the case in Sub-Saharan Africa that women can easily inherit land as legal and cultural constrains in land inheritance makes women to be on average of 15 percent of agricultural land holders (FAO, 2010).

The research found out that most female lead farmers exercised autonomy on livestock and household assets that they accumulated after becoming lead farmers. This is because most of the livestock was received as pass on livestock from TAPP upon asserting their role as lead farmers. This finding is in line with literature that suggests that women can exercise autonomy over assets they accumulate on their own (Towen, 1995).

Thus, access and control of resources is decision making and these aspects continually influence each other.

6.5 Income

The study found out that 64 percent now practiced sole or joint control over income and expenditures. 81.9 percent exercised control over household expenditure while 56.4 percent did not have control over the income from sale of cash crops. According to WEIA sole or joint control over income and expenditures is a sign of empowerment. Under CARE framework financial assets such as income are forms of agency and improving women's agency can lead to empowerment.

This finding is in line with a research done in Sub Saharan Africa that showed men take over crops or livestock from women (FAO, 2011), sell crops grown by the women and confiscate the income (Gates , 2014). Women exercise more dominion in household expenses and this finding re-enforces women's crucial role in household budget which can translate into improved child nutrition, health and education (FAO, 2011,). However, these female lead farmers are deprived in control of income from sale of cash crops which gives the husband more dominance over the household. According to Simmel the nature of resources that one has is a determinant of what their social pattern is like among others. The ones with more resources tend to have dominance over the ones that do not have. The women under study do not have enough access to money and hence their husbands tend to dominate in all household decisions.

6.6 Leadership

The study found out that most of the female lead farmers belonged to a social or economic group after becoming lead farmers. Their positions as lead farmers helped them to join these social and economic groups because some of them are specifically created for lead farmers only. WEAI suggests that belonging to a social or economic group can be a sign of empowerment. Also, the CARE framework suggests that when agency is increased it can pave way for empowerment, belonging to a social group is part of agency. From these social and economic groups women benefited knowledge on hygiene, balanced diet, loans and credit ,savings ,technologies ,conflict resolution, trainings from other NGOs. based on these findings, it can be concluded that lead farmers role has contributed to the creation of new networks between lead farmers and other women within the community. Thus, according to WEAI most of these female lead farmers are empowered in this leadership indicator.

CHAPTER VII

CONCLUSION AND RECOMMENDATIONS

7.1 Conclusion

The lead farmer model has contributed towards women's empowerment. Empowerment has occurred in aspects mentioned in the previous chapter. The programme has contributed to some significant changes in the social and economic aspects of female lead farmer livelihoods.

At household level women are now able to give input in productive decisions which they could not participate in before becoming lead farmers. Although men still dominate in decisions to do with cash crops, this great improvement cannot be ignored. However, there is still a need to achieve autonomy in decision making for female lead farmers. Household of female lead farmers enjoy improved nutrition and food security this is because of the high yields and the ability to sell surplus crops. Although yields have improved female lead farmers still face challenges in accessing markets. The lead farmer model has not managed to establish interventions that strengthen markets. The goats, pigs and chicken received from TAPP have also led to food diversity within the home. Female lead farmers have been able to save money to send their children to school. Agricultural skills have improved for female lead farmers as they have acquired new knowledge on CSAs. Female lead farmers can buy agricultural inputs such as seeds and fertilizers. Although many still face problems of buying fertilizers because of its high cost. The manure from livestock is also acting as a good substitute for fertilizer.

At community level, female lead farmers have gained status, recognition and respect. The programme has broken through the cultural norms that women cannot be leaders as evidenced by male farmers becoming follow farmers for female lead farmers. Although the number of male follow farmers is still low there has been a notable change. Women lead farmers have been able to contribute at community level through training of follow farmers and giving inputs through their reports to both the NGOs and government extension officers.

At individual level the lead farmer model has enhanced knowledge and leadership skills. Female lead farmers are equipped with knowledge and skills on CSAs, leadership and communication skills, nutrition and hygiene. This new set of knowledge acquired have instilled the sense of self confidence and self-esteem that allow them to speak at the public and to train follow farmers. Financial literacy has enhanced among female lead farmers through membership in financial groups that gives them access to credit and loan facilities.

Thus, the female lead farmer model has managed to contribute towards changes in household, community and individual level. These changes have led to social and economic empowerment of

female lead farmers. However, even though the women lead farmers concept has achieved some positive things discussed in this study there are several recommendations that can make the model achieve better results.

7.2 Recommendations

Several recommendations are made for the improvement of the lead farmers approach. Government and NGOs and other stakeholders may jointly address these challenges for improved results towards empowering female lead farmers. The following recommendations are made:

There is need to train lead farmers on simple veterinary practices so that they can take care of their livestock when they fall sick. Many female lead farmers have lost their livestock because they have no knowledge on veterinary and the EPA in Chibvala only has one veterinary officer.

The extension services office should ensure that there are regular follow ups on lead farmers and to have more trainings in form of refresher courses.

The extension services office should find ways to subsidize fertilizer prices for female lead farmers as the price of fertilizer is very high for many.

There is need to address transport and market problems for female lead farmers.

There should be a way of rewarding lead farmers for their role as they carry a lot of responsibility being mothers, wives and lead farmers. The incentives can act as a motivation for the husbands to help with other house chores when their wives become lead farmers.

There is need to provide a monitored or secured place for those practicing zero tillage to avoid maize stock theft.

There is need to revise the CSA methods and assess the impact they have on female farmers. Many favored conservation agriculture, or no-tillage systems, which are less labour demanding.

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Appendices

Quantitative Questionnaire guide

BACKGROUND INFORMATION

- A.1 District _____
- A.2 EPA _____
- A.3 Traditional Authority _____
- A.4 Group Village Headman _____
- A.5 Village _____

B:HOUSEHOLD DEMOGRAPHIC CHARACTERISTICS

B1 Name	B2 age	B3 marital status(use codes below)	B4 position in household(use codes below)	B5 Religion (Use codes below)	B6 Number of children	B7 Education Level (Use codes below)	B8 type of family

Codes for B3: 0 = Single; 1 = Married ;3 =Divorced ;4=Widowed

Codes for B4: 1=head wife; 2=co-wife , 3= wife , 99=other (specify)

Codes for B5: 1= Christian, 2= Muslim, 3=Catholic, 4=Atheist 5 =African Traditional Religion 99= other (Specify)

Codes for B7: 0=None 1=Std 1-4, 2=Std 5-8, 3= Junior Sec, 4= Senior Sec, 5=Tertiary

Codes for B8: 1=matrilineal , 2=patrilineal

Section A

Lead farmer model

Now I will ask questions about how you became a lead farmer and who is trained you .

1)For how long have you been a lead farmer ?

- A) less than 1 year B) 2-3 years c) 4-5 years D) 5+ years

2) How many follow farmers do you have ?
 A) 10-20 B) 20-30 c 30-40 D 40-50 E 50+

3)Do you get incentives ?

A yes B no

3a)if yes from who?

4) Who trained you to be a lead farmer?

5) Who is following up on you?

6) What kind of training did you receive?

Now I will ask questions on women empowerment in agriculture. I will use 5 indices from the Women’s Empowerment in Agriculture Index (WEAI) .The 5 Indices are :i)decisions about agricultural produce, ii)access to and decision making power over productive resources, iii) control over use of income, iv)leadership in the community v)time use

Section B : Decisions about Agricultural Produce

Decisions about agricultural produce refers to either joint or sole decision making about food and cash crop farming ,livestock as well as autonomy in agricultural production.

1) Who made the decision on what crops to grow and livestock to keep? **Tick the appropriate box for your response:**

Decision about	Decision maker:			
	Husband only	Extension officer	Joint decision	Sole decision
Cash crop				
Livestock to raise				
Food crop				

2) On a range of 1 -5: 1 being the lowest and 5 highest can you rate the extent to which you feel you can make personal decisions about the following household aspects:

Household aspect:	Ranking :				
	1	2	3	4	5
Agricultural production					
What inputs to buy					
What types of crop to grow					
Who and when to take crops to market					
Whether to raise livestock					

3) What do you consider when making your decision on land use , food crop to grow and livestock to keep?

A I consider what others would think about my decision

B I consider if it's the right decision for me as an individual

C I consider if I will get in trouble by my decision

D I consider what my decision would mean to my family e.g husband

E I consider what the Extension officer would recommend

Section C :Access to and decision making power over productive resources

The 3 main indicators for this domain are : **i) ownership of land and assets ii) decisions regarding the purchase ,sale or transfer of land and assets iii) access to and decisions on credit**

1)Do you own any of these following assets after becoming a lead farmer ?

A land B livestock C farm equipment D house E none F other

1b) Are these assets solely or jointly owned ?

A solely B jointly

3) Who decides when to sale or purchase land ?

A myself B myself and my husband C my husband alone D my husband and his family E other

4) Who decides which livestock to sale or purchase ?

A myself B myself and my husband C my husband alone D my husband and his family E extension officer

5)Have the power to make decisions about when to buy or sale land ,livestock and farm equipment changed after becoming a lead farmer ?

A yes B no

5a) if yes ,How

5b) If No, Why

6) Do you have access to more credit facilities than before becoming a lead farmer ?

A yes B no

Section D: Control over use of Income

1) Do you decide on how to use money from your cash crops on your own after becoming a lead farmer ?

A yes B no

2) Do you have more control over use of money in household expenses after becoming a lead farmer ?

A yes B No

2a) If No, who or what controls how you use your income ?

A my husband B other farmers C friends D family needs E myself and my husband F other

Section E : Leadership in the community

1) Do you belong to any community group after becoming a lead farmer ?

A yes B no

1a) If no what restricts you from being a member of a community group

A my husband B no time to attend C family commitments D personal reasons E we don't have any F I am not aware if we have any in the community G women are not allowed to join F other

1b) If yes which of the following community groups do you belong to?

A women group B co-operative C self-help Groups D savings and loan group E microfinance group F farmers association G other

3) Do you have a leadership position in the community group you belong to after becoming a lead farmer ?

A yes B no

3b) If yes which leadership position do you have ?

A president B vice president C secretary D treasurer E spokesperson F committee member

5) Do you think belonging to a community group have improved you as an individual in terms of the following

A knowledge about climate smart technologies B access to credit facilities C responsibilities D networking E giving input on infrastructural development such as roads and wells F the.

Section F Time use

1)Before becoming a lead farmer what did you use much of your time doing ?

A fetching water B collecting firewood C childcare D trading and selling E general house chores F other (Add farming)

2)Has anything changed in how you use time since you became a lead farmer?

A yes B no

2a) if yes How-----

2b) If No why

3) Which one of these do you spent much of your time doing after becoming a lead farmer ?

A farming B childcare C attending meetings with social groups D domestic chores E selling produce F Other

5)Do you get any help from family members to enable you to manage your time effectively ?

A yes B no

5a) if No why

A I don't have anyone to help B I never asked for help C they don't want to help D Other

5b) If yes which chores do they help with

A farming B childcare C fetching water D collecting firewood D selling E other

Sustainable Livelihoods Framework

These questions will be guided by the sustainable Livelihoods framework that is (i) human capital; (ii) natural capital (iii) social capital (iv); physical and v)financial capital

Human Capital

1)Has access to Nutrition improved after becoming a lead farmer?

A yes B no

1a) If No what are the reasons for lack of improvement ?

A no money to buy food B no enough produce C priority to other things like tuition fees D other

2) Has your knowledge increased after becoming a lead farmer

A yes B no

2a If yes what kind of knowledge had increased?

A Climate change knowledge only B general agricultural Knowledge only C financial and credit access knowledge D all kind of knowledge

3) Which new skills have you developed as a lead farmer ?

A presentation skills B public speaking skills C agricultural skills D inter-personal skills E time management skills F other

Natural Capital

1) Have there been any improvements of access land after becoming a lead farmer ?

A yes B no

1a) If yes what has led to this improvement ?

A access to credit facilities B government policies have improved C access to communal land D other

1b) If no, what has been the major hinderances ?

A not interested in owning land B women are not allowed to own land C land too expensive D no credit facilities to purchase land F other

3 Has access to water improved ?

A yes B no

3a If yes what mechanisms have been put in place ?

A community boreholes B irrigation facilities C family help to fetch water D use of carts to help carry the water E other

Social Capital

1 Has access women groups improved after becoming a lead farmer?

A yes B no

2 Do you belong to any community group after becoming a lead farmer ?

A yes B no

3 Has mutual support increased from the extension officers after becoming a lead farmer ?

A yes B no

4 Has access to government facilities and services improved after becoming a lead farmer ?

A yes B no

5 Which of these community groups have been established to help lead farmers ?

A selfhelp B saving and loan C microcredit groups D other

Physical Capital

1 Have transport services and roads improved to allow easy transport of produce to the market?

A yes B no

2 Do you own a vehicle or is there access to community vehicles ?

A own vehicle B community vehicle C none

4 Has your knowledge on the use of traditional technology and other technologies increased after becoming a lead farmer?

A yes B no

5 Has access to seeds and fertilisers increased as a lead farmer?

A yes B no

Financial Capital

1 Have your savings improved as a lead farmer ?

A yes B no

2 Has access to credit facilities enhanced after becoming a lead farmer ?

A yes B no

4 Have your income improved after becoming a lead farmer?

A yes B no

FGD Guide

Assessment of Women Empowerment in Agriculture among the Female Lead Farmers: Case of Dowa District

Interviewer No. |_|_|

Date (DD/MM/YYYY) |_|_|/|_|_|/|_|_|_|_|

Name of Facilitator _____

Name of Note Taker _____

Focus Group Interviews

Informed consent

[Read:] Thank you for joining us today. We are going to discuss how female lead farmers have experienced changes in aspects of their lives which include i) decisions about agricultural produce, (ii) access to and decision making power over productive resources,(iii) control over use of income, (iv)leadership in the community and(v) time use. Will also discuss if these changes has had an effect to 5 capitals that is Human, Social, Natural, Financial and Physical Capital. At the end we will also discuss about the advantages and disadvantages of being a lead farmer. Your participation today is voluntary and confidential. We will not be using your names in any publication with the information that I collect today. I hope that you will feel free to express your opinions fully and share your own experiences with the topics that we will be discussing. Your views and experiences are very important to us. We cannot promise that you and your household will benefit directly from this study, but the information that we are collecting will help to improve agricultural research and development activities in your community. Please tell me/us whether or not you would like me/us to proceed with the interview. Are there any questions before I begin?

BACKGROUND INFORMATION

A.1 District _____

A.2 EPA _____

A.3 Traditional Authority _____

A.4 Group Village Headman _____

A.5 Village _____

A.6 Sex of respondents 1. Male: _____ 2Female

Part 1 :General Questions on Empowerment

I would like to know your general overview and understanding of what it entails to be empowered.

- 1)What does empowerment mean to you?
- 2)Do you think that you are an empowered individual?
- 3)In what ways do you feel empowered ?

Part 2 :Questions about the lead farmer model

Now I would like to know about the lead farmer model ,the process of becoming a lead farmer and the day to day life of a lead farmer and if you feel you have been empowered by becoming a lead farmer and in what ways .

- 1)Can you explain the process of becoming a lead farmer ?
- 2) Where you empowered before or after becoming a lead farmer?
- 3) If after ,how did becoming a lead farmer contribute to your empowerment ?
- 4)Can you list how you have been empowered ?
- 5) Can you describe your work as a lead farmer ?
- 6) What are some of the challenges that you encounter ?
- 7) What are the advantages of being a lead farmer ?
- 8) Have you received incentives for taking up the responsibility as a lead farmer? How much and from whom?
- 9) Who asked you to be a lead farmer?
- 10)What kind of training did you receive?

Part 3 :Questions on Livelihoods

Now I would like to know if there has been a change or not after you became a lead farmer pertaining access to 5 capitals these are Human ,Social ,Financial ,Physical and Natural .I will ask one question per each capital and you can answer to the best of your understanding to the indicators of each capital that I will ask.

- 1) Can you explain if your access to markets has improved, and how you get your produce to the market? (physical capital)
- 2) How has knowledge, training, education, nutrition and health improved after becoming a lead farmer (Human capitals)
- 3) In what ways have improvements been made in regard to access to land, water and agricultural inputs for female lead farmers?(Natural Capitals)
- 4) How have lead farmers been integrated more into general community and in community groups?(Social Capital)
- 5) Have your income improved?
- 6) If yes ,in what ways has it improved after becoming a lead farmer?(Financial capital).
- 7) Have you received incentives for taking up the responsibility as a lead farmer?
- 8) If yes ,how much and from whom?

