

**GENDERED DROUGHT EFFECTS WITHIN FAMILY SETTINGS, MASVINGO
ZIMBABWE “2000 to 2016”**

By

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Declaration

I, Takayindisa Flora Maruva, hereby declare that the thesis for the doctoral degree at the University of Venda, hereby submitted by me, has not previously been submitted for a degree at this or any other university, and that it is my own work in design and execution and that all reference materials contained therein have been duly acknowledged.

Signature.....

Date.....

Abstract

This study examines the views, understandings, beliefs and practices on the effects of drought and how women cope in this regard. Feminist theories such as the Standpoint theory, Intersectionality, Ecofeminism and Social Construction were used to conceptualize the gender roles and practices that continue to hinder equity between men and women. This study was qualitative in design. The population of the study comprised of men and women living in Shashe village. A total number of people interviewed was 24, 6men and 6 women from focus group and 12 participants for individual participants. A purposive sample of participants was drawn from the population of farmers. The researchers targeted farmers, who are affected by erratic rainfall. The data was analysed using thematic analysis. The themes that emanated from the study were; environmental effects, economic effects, food scarcity, health effects, distribution of gender roles and coping strategies to drought. The findings showed that there were paradigm shifts in terms of gender relations with regard to drought in many villages, townships and cities today. Furthermore, cultural patterns embedded in patriarchal relationships are accommodating forms of relationships which are not favourable to women. The study recommends that farmers should also have other sources to generate income other than farming because of the changing weather patterns and also to educate women in all dimensions of agriculture so that they are well informed.

Key words: drought, equity, family, gender equality, gender roles, natural disasters, vulnerability,

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Dedication

To my late grandparents, Mr and Mrs Macharaga, thank you so much for your support.
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Abbreviations

ARC -	Institute for Agricultural Engineering
BFAP -	Bureau for Food and Agricultural Policy
CARE – ALP-	Christian Action Research and Education Adaptation Learning Programme
CEDAW -	Elimination of All Forms of Discrimination against Women
CEDRISA -	Centre For Development Research And Information In Southern Africa
CEM-H -	Centro de Estudios de la Mujer-Honduras
CHG-	Confederación Hidrográfica del Guadiana
CIMMYT-	International Maize and Wheat Improvement Centre
DT-	Drought Tolerant
EC -	European Commission
F-	Female
GB-	Great Britain
GDP -	Gross Domestic Product
HRSCRA -	Housing of Representative Standing on Regional Australia
ICESCR -	International Covenant on Economic, Social and Cultural Rights
ICHRP -	International Council on Human Rights Policy

ISDR -	United Nations International Strategy for Disaster Reduction
IOM -	International Organisation for Migration
IRRI -	International Rice Research Institute
KNBS -	Kenya National Bureau of Statistics
M -	Male
MD -	Millennium Drought
mm -	Milimitres
MDB -	Murray – Darling Basin
MDG-	Mellenium Development Goals
ND -	Natural Disasters
NOAA -	National Oceanic and Atmospheric Administration
OCHA -	Office for the Coordination of Humanitarian Affairs
OXFAM -	Oxford Committee for Famine Relief
PPFA -	Planned Parenthood Federation of America
RI-	Refugee International
SADC -	Southern African Development Committee
SF -	Subsistence Farmers
SDG-	Sustainable Development Goals

UNFPA -	United Nations Fund for Population Activities
UDHR -	Universal Declaration of Human Rights
UNICEF -	United Nations International Children's Emergency Fund
USAID -	United States Agency for International Development
WB -	World Bank
WEDO -	Women's Environment and Development Organisation
WFD -	Water Framework Directive
WHO -	World Health Organisation
WFP -	World Food Programme
UN -	United Nations
UNDP -	United Nations Development Programme
VAM -	Vulnerability Analysis and Mapping
ZIMSOFF -	Zimbabwe Small Holder Organic Farmers' Forum

CHAPTER 1: INTRODUCTION AND BACKGROUND

1.1 Introduction and background

Drought affect the livelihoods of men and women differently. Water is life, and is needed in our day-to-day lives. In households, work places and in other places, water is a need. The effects of drought have impacted on socio-economic, health, migration and distribution of gender roles within family settings. Droughts are causing environmental degradation, which in turn, is affecting the planet on social, economic and ecological levels and these effects are widely considered as a defining social challenge of our time (Bob and Babugura, 2014; Mearns and Norton, 2010). Given the negative realities of gender inequality, particularly in the developing world, natural disasters are likely to increase these realities. Droughts are affecting both women and men equally.

Drought have significantly affected women as primary caregivers in most families, for instance, they walk long distances in search of water and in the process, and women are reported to be victims of crime. According to Nellmann, *et al.* (2011) women are more vulnerable to organised criminal traffickers as a result of communities being dispersed, and protective patterns in families and society being disturbed. Organised women trafficking is emerging as a potentially serious risk associated with environmental problems. Climate-related tragedies like drought may interrupt local security, leaving women and children unaccompanied, separated or orphaned due to the erosion and breakdown of normal social controls (Nellmann *et al.* 2011). As a result, women and children are left vulnerable to attacks.

Gender differences between men and women are not only portrayed in vulnerability in coping with drought; it is also shown in how women and men perceive and experience extreme events (ICIMOD, 2009). Some of the challenges women encounter due to depleted water resources include poor sanitation, health, hygiene, and safety. Their workload is usually intensified when they have to walk or travel long distances to fetch water for household consumption such as - drinking, cooking, childcare and washing. Women are also forced to walk and travel long distances to offer their labor, such as in agriculture. Women who have to trek longer distances to find potable water in mountainous regions are even worse off because the difficulty of such activity is exacerbated by topography (Ebi and Uma, (2009) and Mitchell et al. 2007). Moreover, when women spend lots of time on these and reproductive tasks, their time for income generation, alternative livelihood activities, training, and education, participating in institutional and governing fora, engaging in social and developmental opportunities and maintaining their health is usually limited. As a result, such instances reinforce the already skewed customary-gendered divisions of labour.

In most rural families, women lack information published in the media as compared to men who always watch and listen to news and read newspapers, hence, men seem more informed than women (Kabiti, 2017). Many women die because of their lack of information and this also affects their mobility, decision-making, access to resources and training, aggravating gender-based cultural norms and barriers, as well as encouraging high rates of male out-migration (Nellmann *et al.* 2011). Women are seen to be submissive so such act of not having mobile phones is an act of letting men take the lead.

In times of drought; financial stability within families is one of the issues of concern. During droughts, for instance, livestock are in poorer conditions, thus milk production diminishes. This can have negative impacts on household food security, income generation opportunities and women's social status (Save the Children UK, undated). Loss of livestock beyond herd recovery, generally leads men into activities traditionally associated with women, such as selling milk, water and firewood, hence, pushing women away from their usual income-generating opportunities (Save the Children UK, undated). Women then, may often find themselves in desperate situations as options to secure money become limited.

Extreme events may trigger out-migration from local communities and villages due to lack of resources. In most cases, when livelihoods are destroyed and productive assets are eroded, men tend to migrate in search of income-generating opportunities. This in turn intensifies women's workload as they struggle to consolidate both their duties and male primary duties into their own daily workload (UNDP, 2011). Difficulties in accessing resources, in particular, fuel wood, food, fodder and water further intensifies female workload (CIDA, 2002). The effects of men's out-migration on women's autonomy and freedom of movement are complex, however, the process can potentially lead to greater opportunities for women to step outside their previously constrained gender roles; to take on new livelihood options, and increased functions in the public domain (UNDP, 2011; CIDA, 2002).

The increasing migration rates is another driver of change. Poor and marginalized women and men face multiple and complex challenges with insecure livelihoods, conflicts, natural disasters and the degradation of natural resources exacerbating and reinforcing poverty

and marginalization. Many people, mostly men, seek alternative livelihood options away from home; women have reported both positive and negative shifts due to this (CARE – ALP, 2011). An example of this is the situation where both girls and boys from Saamini in Ghana are increasingly moving to town for casual labour as a coping mechanism, which in turn increases their vulnerability, adding to the breakdown of families (CARE – ALP, 2011). Due to migration, some communities are finding it more difficult to access labour through local farming groups, and traditional livelihood networks have weakened. The jobs that they used to get around are hard to come because of lack of rainfall. Wives to migrant husbands feel less supported with greater workloads as a result of their husbands' absence (Christian Aid, 2010). A number of women also reported, facing discrimination as female household-heads, although there are women also reported greater confidence, decision-making power and control over their own lives (CARE – ALP, 2011). Women in the latter category, although, they reported more space to exercise their influence, many said that these changes still limit them to the household level where they continue to face challenges in accessing information and services or participating effectively in community decision-making (Christian Aid, 2010).

In Garissa, Kenya, younger women are tasked with collecting fodder and occasionally take young animals to water points (CARE – ALP, 2011). Housewives are usually in charge of milking cattle, sheep and goats. They may also take livestock products such as milk, meat and butter to market. In female-headed households, women are involved in every aspect of livestock rearing (Okali, 2012). Overall, women contribute much more to livestock production than men seem willing to acknowledge (CARE – ALP, 2011). In Mozambique, women's decision-making is often limited to household issues such as

maintenance of utensils, clothing and food, whereas men make decisions about significant issues like the sale of major assets and use of financial resources (Arora-Jonson, 2011). Despite women's engagement in production, they still seek permission to access household productive assets and do not have the same level of access to agricultural inputs or livelihoods networks. The overall women's heavier workload is not recognised, negotiable, or compensated in families or communities (Arora-Jonson, 2011).

There are some international measures that have been put forward to protect both men and women in relation to the issue of natural disasters. The International Covenant on Economic, Social and Cultural Rights (ICESCR) includes rights to work, education, social security, to enjoyment of the highest attainable standard of physical and mental health, to adequate food, clothing and housing, and to a continuous improvement of living conditions. These rights are directly related to the impacts of natural disasters such as drought yet they are rarely protected by international mechanisms and those affected tend to depend upon domestic welfare mechanisms (ICHRP, 2008), although in such situations, more attention is given to women as compared to men. The Convention on the Elimination of All Forms of Discrimination against Women (CEDAW), adopted by the UN General Assembly in 1979, defines gender equality with set principles. It established an international bill of rights for women as well as an agenda for action to guarantee the implementation of those rights. This Convention has direct implications in the context of NDs, as it obliges states to eliminate discrimination against women in rural areas to ensure that they participate and benefit from rural development and are involved in all levels of development planning (UNFPA and WEDO, 2009).

According to preliminary data from the Southern African Development Community (SADC) (WFP, 2016) some 18 million people in the region's countries worst-hit by drought required emergency humanitarian assistance during the later months of 2016 into 2017. This means that, during droughts, families which dependent on agriculture have no means to sustain their families. This will have an impact on migration, as heads of households have to go and look for jobs elsewhere. World Food Programme (WFP) has categorized the Southern African region as a Level 3 Corporate Response, which is its highest level of emergency. Lesotho, Malawi, Swaziland, Botswana, Namibia and Zimbabwe were declared national states of emergency due to drought (WFP, 2016). Droughts in Zimbabwe have been associated with unprecedented erratic weather patterns, with devastating effects on fragile ecological environments. The primary cause of any drought is deficiency of rainfall and in particular, the timing, distribution and intensity of this deficiency in relation to existing reserves (WFP, 2016). A prolonged period of relatively dry weather leading to drought is a widely recognized climate anomaly. Drought can be devastating as water supplies dry up, crops fail to grow, and animals die, and malnutrition and ill-health become widespread (WFP, 2016). Due to drought women for example, walk longer distances searching for water. It also puts a strain on men as they have to abandon their agricultural activities and sought for employment elsewhere, leaving their families.

1.2 Problem statement

Both men and women are affected by the impacts of drought. In some cases, the effects of drought on men seem to be more intense as compare to women, however, it is believed that women are more affected than men. Drought also affects female gender roles;

women are usually responsible for providing the family with its basic nutrition, yet they rarely have access over the resources required to fulfil this task when cultivation conditions deteriorate. Most parts in Zimbabwe have been struck by drought, and what makes Zimbabwe situation different is that it is experiencing an economic instability as well, so it makes the situation complicated. Shashe village is a rural community whose inhabitants rely on agriculture for survival, especially when monies obtained from sales of agricultural produce are used to support all facets of their lives. Because of the persistent erratic droughts which bedeviled the village between 2000 and 2016, there has been some shifts in gender roles within families. Both men and women are abandoning their household chores as they travel for long distances in search of water, therefore, the agricultural productivity levels have been lowered. In addition, as women are travelling longer distances in search of water and other necessities, in some cases without men, they get raped or beaten up on their way.

1.3 Aim of the study

To examine the views, understandings, beliefs and practices of effects of droughts in relation to gender roles.

The following are the objectives of the study:

1.4 Objectives

- To examine the effects of drought on men and women, within families;
- To investigate the distribution of gender roles within families as they respond to droughts, and
- To establish ways to prepare communities during times of drought-related shocks.

1.5 Research questions

1.5.1 Main research question

- What are the views, understandings, beliefs and practices on drought in relation to their effects on gender roles?

1.5. 2 Sub research questions

- What are the effects of drought on women and men within family settings in Shashe village?
- How is the distribution of gender roles within families as they respond to drought in Shashe Village?
- What are the strategies that men and women implement before, during and after droughts?

1.6 Justification

Scientists have channeled so many resources on understanding the geophysical characteristics of natural disasters, like droughts; this is a phenomenon already well understood, although little has been done on its social consequences. The researcher seeks to understand the socio-ecological constructs of human experiences beyond the science of drought. This study would generate knowledge that would enable societies to handle the experiences of national disasters. In addition, the study will enable the public to set up response mechanisms to natural disasters, like droughts, that are sensitive and considerate of gender; this should help in the equal distribution of responsibilities.

1.7 Definition of operational terms

Drought

Drought is a deficiency in precipitation over an extended period, usually a season or more, resulting in a water shortage, causing adverse impacts on vegetation, animals, and/or people (NOAA, 2016). In this research, a drought is when there is lower precipitation than is expected per given time.

Gender roles

Gender roles are the way people act, what they do and say, to express being a girl or a boy, a woman or a man. These characteristics are shaped by society. Gender roles vary greatly from one culture to the next, from one ethnic group to the next, and from one social class to another, (PPFA, 2016). Gender roles are a perceived set of behavioral norms usually associated with males and females in a given social group or system. They allow individuals to refer to certain attitudes or behaviors that categorise a person's stereotypical identity (Klein, 2003). In the context of this study, gender roles are roles which are assigned, by society to be appropriate for either a male or a female.

Natural disasters (NDs)

Natural disasters are extreme, sudden events caused by environmental factors that injure people and damage property. Earthquakes, windstorms, heat waves, floods, droughts and disease are examples of disasters that strike anywhere on earth and often without warning (Ivers and Ryan, 2014). For the purposes of this study, natural disasters are defined as the catastrophic events that are caused by nature or the natural processes

such as floods, droughts and heat waves of the earth that have colossal negative effects on humans and animals.

Vulnerability

Vulnerability is a characteristic of a system that causes it to suffer a definite degradation as a result of having been subjected to a certain level of effects in an unnatural (manmade) hostile environment (Aguilar, 2009). In this research, vulnerability refers to exposure to the possibility of being attacked or harmed, either physically or emotionally.

1.8 Delimitation of the study

The study will be delimited in the following manner:

- The effects of drought in relation to gender roles in a family set-up.
- The study is on women and men living in Shashe village
- The study area is limited to a research site called Shashe village in Masvingo Province, Zimbabwe.

1.9 Summary

The chapter introduces the study and gives a background on the issue of the effects of drought on men and women. The chapter unpacks the challenges that are being faced by men and women before, during and after drought. Men and women being in diverse cultural backgrounds have different challenges that they face, however the main aspect that is universal is women predominantly suffer from the patriarchal dominance. This must not eliminate the effects drought has on men also.

CHAPTER 2: LITERATURE REVIEW

2.1 Introduction

This chapter focuses on secondary sources, which are articles, reports, journals and other published documents to probe issues of drought and its impact on gender roles. The literature encompasses international, regional and local perspectives on drought and gender roles. The review provides an explanation, summary and evaluation of each source. According to Kumar (2014) literature review is the process of searching the existing literature relating to a research problem or topic to develop theoretical and conceptual frameworks and to integrate the research findings with what the literature says about them.

2.2 Types of drought

2.2.1 Meteorological drought

Meteorological drought is defined usually on the basis of the degree of dryness (in comparison to some “normal” or average amount) and the duration of the dry period. Definitions of meteorological drought must be considered as region-specific since the atmospheric conditions that result in deficiencies of precipitation are highly variable from region to region (FAO, 2013). “Drought is a prolonged period of dry weather caused by a lack of precipitation that results in a serious water shortage for some activity, population, or ecological system” (EPA, 2014). The severity of such droughts depends on the magnitude of the shortfall of precipitation, as well as the duration of the shortfall.

2.2.2 Agricultural drought

Agricultural drought links various characteristics of meteorological (or hydrological) drought to agricultural impacts, includes - precipitation shortages, differences between actual and potential evapotranspiration, soil-water deficits, reduced groundwater or reservoir levels. Agricultural droughts are caused by meteorological drought, when there is low precipitation in a specific area over a long period of time; it causes crop failures and also death of animals (FAO, 2013). Agricultural drought is perceived as lack of availability of soil water to support crop and forage growth (UNISDR, 2007). These types of droughts are more common in non-irrigated agricultural areas where a plant's source of water is largely dependent on prevailing weather conditions. The occurrence of an agricultural drought is affected by the magnitude, timing, duration and deficits and also by the varying responses of soils, plants and animals to water stress (Whitmore, 2002).

An agricultural drought is experienced in conditions where dampness available in the soil fails to match the needs of certain crops, at a specific time (Mutekwa, 2011). It is also noted that agricultural drought follows meteorological drought and precedes hydrological drought (IFAS, 1998). This shows that agricultural activities are the first ones to be affected by droughts. It is elaborated that, even though deficiencies in precipitation are significant in this case, the severity of this type of drought is more associated with soil moisture deficiency which is deemed the most critical factor determining production potential of crops in agriculture (ISDR, 2003).

2.2.3 Hydrological drought

Hydrological droughts occur when a water supply becomes scarce due to low levels in water bodies like lakes, rivers, and reservoirs. Often, meteorological droughts precede

hydrological droughts since low levels of rainfall and high temperatures may cause water bodies to dry up (FAO, 2013), although, changes in weather conditions are not always the cause of hydrological droughts.

A hydrological drought is associated with the effects of periods of precipitation (including snowfall) shortfalls on surface or subsurface water supply - streamflow, reservoir, lake levels and groundwater. The frequency and severity of hydrological drought is often defined on a watershed or river basin scale (Wilhite, 2000). This type of drought occurs when water reserves in aquifers, lakes and reservoirs fall below an established statistical average (Gornall, *et al.* 2010). In addition, hydrological drought can happen even during times of average or above-average precipitation, if human demand for water is high and increased usage has lowered the water reserves.

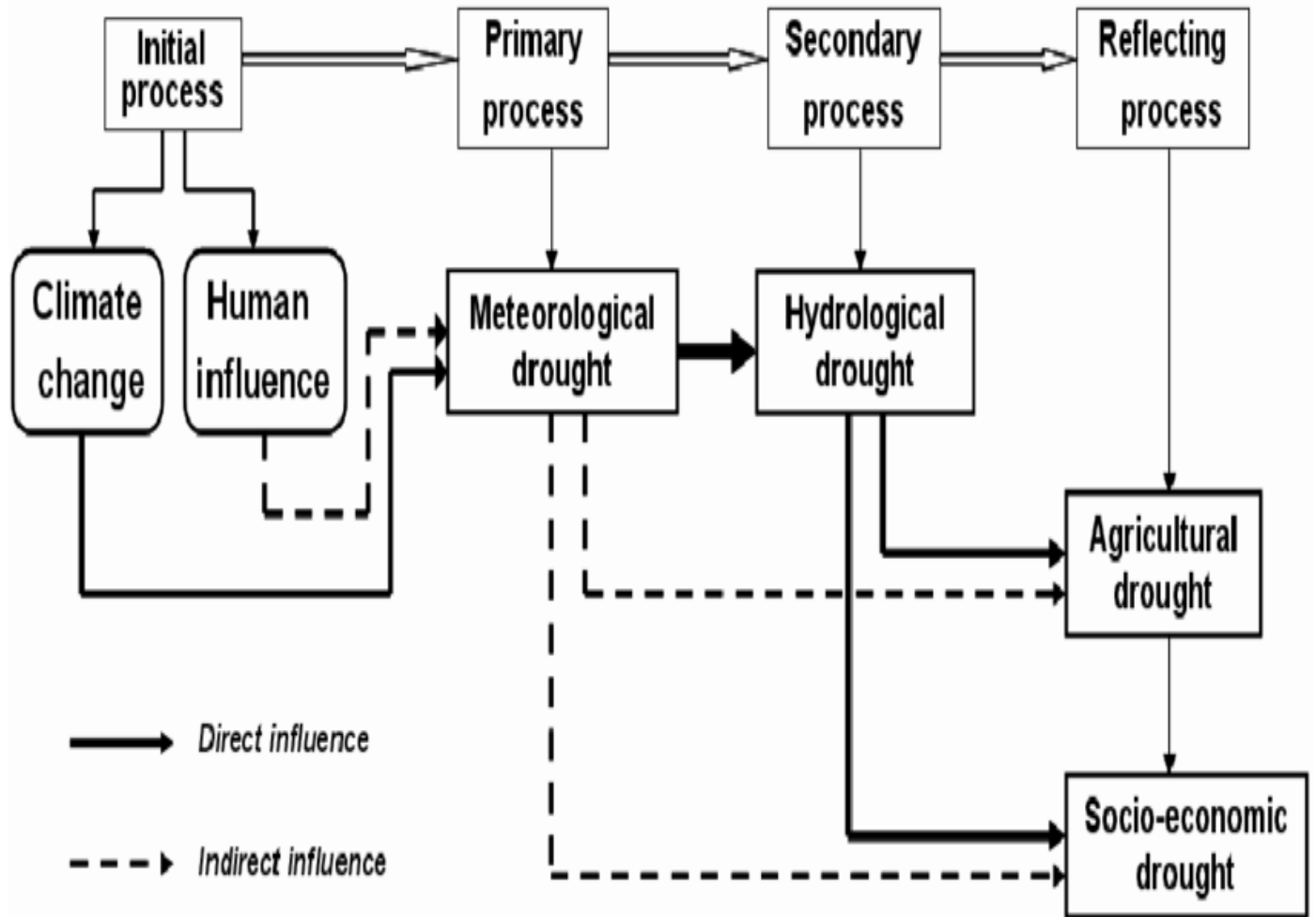
Hydrological drought is perceived as a situation where a hydrological system lacks water which is shown by below-normal stream flow in rivers and below-normal levels in lakes, reservoirs and ground water (Van Loon, 2015). The author further explained that a hydrological drought affects drinking water supply, crop production, recreational facilities, electricity production and water transport.

2.2.4 Socio-economic drought

Socio-economic definitions of drought associate the supply and demand of some economic good with elements of meteorological, hydrological, and agricultural drought. It differs from the above-mentioned types of drought because its occurrence depends on the time and space processes of supply and demand to identify or classify droughts (FAO, 2013). The supply of many economic goods, such as water, forage, food grains, fish, and hydroelectric power, depends on weather. Socio-economic drought is also viewed as the

imbalance between supply and demand of water to society, which ends up affecting social and economic activities (Gornall, *et al.* 2010).

The socio - economic drought happens in most Southern African countries where maize grain is on high demand during drought spells; most countries in Sub-Saharan African region have maize mealie as their staple food. The lack of adequate rainfall, therefore, affects their ultimate crop's produce. Shashe village is not an exception to the above-mentioned types of drought and the area has been subjected to all types of droughts since early 2000s.



National Drought mitigation center, 2017 University of Nebraska-Lincoln,

The diagram above summarizes the different types of drought that lead to the socio-economic drought. Shashe village is suffering from all the different types of drought. There is low or minimal amount of rainfall so it makes it difficult for the farmers to sustain themselves on the agricultural activities. Irrigation system was introduced in 2018, meaning that the farmers did not know how to use the water they were having in the rivers.

2.3 Australia

Men and women are affected by drought. Men suffer psychologically due to the fact that traditionally men are the sole providers for the family. Three decades ago, Whatmore (1991) identified the “farm wife” role as instrumental in shaping the labor practices of both women and men on farms and on facilitating the primacy of the male farmer. The work of farm women has substantially changed in the intervening period as they have moved into multiple spheres on and off the farm, undertaking income-generating activities. Yet gender inequities remain in the way the work of men and women on farms is negotiated and validated (Alston and Whitenburry, 2012). Land ownership and patrilineal inheritance practices shape power and influence in agricultural communities, giving male farming partners a dominant position in gender negotiations and limiting women’s negotiating power in intimate farm-family relations (Alston and Whitenburry, 2012). Women are the ones who usually suffer when it is an issue of land distribution of inheritance; land is usually passed on to the eldest male child and not the female ones. Women are constrained by the structural factors inherent in agriculture in that they do not negotiate their inability to renegotiate household and child-care tasks even when working off-farm (Alston and Whitenburry, 2012). Women’s negotiating position is further compromised by any absence from the farm and by the structural elements that have led them to be in a subordinate position in the family-farm system (Alston and Whitenburry, 2012).

Lack of sources to sustain families will make them despair. In the rural communities studied by Babugura (2010) in Australia, men indicated that joblessness and low incomes have prevented them from fulfilling their roles as economic providers. According to Babugura (2010), men felt helpless and had low self-esteem seeing their wives taking on

economic responsibilities. In Australia, some of the results highlighted in the studies of drought impacts due to drought are - mental health problem and suicide (Alston and Kent, 2008). Men persist in their work and even if the work is affecting their well-being, they will choose to remain with it (Alston and Whitenburry, 2012). Farmers are supposed to be tough and strong (Leipins 2000; Alston and Kent, 2008); this has left most farmers in a crisis of ill-health and non-wellbeing since being sick does not fit the dominant masculine position (Alston and Whitenburry, 2012). The strains of lost income and associated indebtedness can cause mental health problems, despair and suicide among men (Fragar *et al.* 2008). This negative health outcome among Australian rural farmers has also been linked to poor health-seeking behavior, which is an intrinsic element of rural masculinity. The country was particularly severely hit by the Millennium Drought (MD) where river ecosystems, the irrigated and dryland agriculture in Victoria and the Murray-Darling Basin (MDB), Australia's largest river system, were all affected (Leblanc *et al.* 2012).

While higher rates of suicide have been observed in rural farming communities in Australia compared to non-farming communities Page and Fragar 2002, an explicit link to drought as a causal factor has not yet been established. In a study which examined rates of suicide in farmers during a prolonged drought (2001-2007) in Victoria, Australia, there was no evidence of a pattern of increased farming suicides during the drought years studied. Drought as a risk factor that contributes to stress in rural communities, however, should not be dismissed (Guiney, 2012). Another study identified suicide or suicidal thoughts as a result of drought-related stress, although no quantification of this was reported (Hossain *et al.* 2008).

The MDB in Australia is seen as the food bowl since it occupies one seventh of Australia's land area, holds 11 percent of the population and produces 45% of agricultural produce, mainly from irrigation (House of Representatives Standing Committee on Regional Australia, 2011). The issue of MDB, however, has some complications since there are a lot of farmers that rely on the dam, environmentalists, people along the rivers, city dwellers subject to water restrictions, other industries dependent on water allocations, and different states along the Murray-Darling, so it is complicated for farmers to do farming on a very large scale (Alston and Whitenburry, 2012). Despite the large-scale farming that was being practiced, the water that was allocated to farmers was determined by the amount of water flowing in the system. As the water was declining in the flow, so were farmers getting little or no water for irrigation. Drought contributed to the enforcement of water restrictions in most major cities, to increased electricity prices, and to major bushfire events in 2003 and 2009. On a global scale, Australia's drought was the main cause of an apparent reversal in water cycle intensification observed in previous years, raising questions about the likelihood of further intensification in future ((Huntington, 2006; Jung *et al.* 2010). In the developed countries, during times of water crisis, there are positive mitigation approaches of ensuring that everyone has water; this is achieved through irrigation. These processes helped farmers in the production of agricultural produce, thereby sustaining the economy.

2.4 United States

The 2011 US drought covered the southern states; Texas, Oklahoma and New Mexico were most adversely affected. Drought also affected parts of Arizona, Kansas, Arkansas, Georgia, Florida, Mississippi, Alabama, South and North Carolina (Azuara *et al.* 2016).

The extreme US great grain belt drought of 2012 was forecast to persist into spring of 2013. Drought in large parts of the United States also pushed up world food prices, exerting pressure on the cost of living and affecting food security. The estimates were that US retail food prices would increase between 3 and 4 % in 2013 (FAO, 2013).

In the United States, the effects of drought on gender roles is no different from any other country. In the Prairies, there is unrest whenever there is minimal or no rainfall at all. Women have historically played integral roles in food preparation, childcare, and healthcare that are critical during drought situations but these become even more difficult to carry out during drought (Enarson and Chakrabarti, 2009). Entrenched gender roles can therefore create different experiences of disaster for women and men (Dankelman, 2010; Enarson and Chakrabarti, 2009). During times of drought, there is gender division when it comes to distribution of work. Many family farms in the United States, in North Carolina, are structured by a gendered division of labour, in which men are more likely to be positioned as the “main farmer,” while farm women’s work is construed as “helping” (Fletcher 2013; Faye 2006). Household tasks, such as cooking and cleaning, and yard work through their association with social reproduction tasks and their relative detachment from day to-day farm decisions are not highly rated (Kubik and Moore, 2005; Fletcher, 2013). Historical sources, including farm women’s own accounts of past droughts, also provide some insight into the gendered dimensions of drought in a historical framework.

Heat and drought also pose a problem for drinking water supplies, which, for example, North Texas sources from surface reservoirs that are increasingly prone to evaporation.

Some water managers are considering pumping the reservoirs underground during exceptionally hot and dry conditions (Anna, 2018).

Drought mitigation measures are many. Impacts associated with drought are generally non-structural, and thus are less visible, more difficult to assess like, (reductions in crop yield) and do not require reconstruction as part of the recovery process (Chabay *et al.* 2015). Drought mitigation measures would include, establishing comprehensive early warning and delivery systems, improved seasonal forecasts, increased emphasis on water conservation (demand reduction), increased or augmented water supplies through greater utilization of ground water resources, water reutilization and recycling, construction of reservoirs, interconnecting water supplies between neighbouring communities, drought-preparedness planning to build greater institutional capacity and awareness-building and education (Chabay *et al.* 2015).

2.5 Spain

In the province of Seville, there is Isla Mayor Municipality with annual average temperatures of 16.8 °C and annual average precipitation of 550 mm (CHG, 2012), is a drought, flood and salinity zone. Meteorological drought causes scarcity in the supply of water, which in turn causes a shortage in supply of freshwater, hydrological regimes, pollution control, food, erosion protection, biological regulation as well as a reduction in psychic, leisure and aesthetic values (Vicente-Serrano, 2013). Wetlands assist in biodiversity, nutrient cycling and formation of the soil.

Spain has been highly affected by droughts (Domínguez-Castro *et al.* 2012) with the major ones having occurred in the 20th century with some bouts of drought stretching for

numerous years (Vicente-Serrano, 2013). Droughts in Spain have severe economic impacts (Maia and Vicente-Serrano, 2017), which include reduced availability of water causing failures in crop yields (Pascoa *et al.* 2017), thus reducing food for human consumption. Agricultural production dropped dismally, crops especially cereals (barley and wheat), grapevine production, olives and almonds have significantly dropped in their output. This has led to a drop in farm labour requirements, salary reductions and wage ceilings on the employees kept on the farms as well as a reduction in agricultural output and quality.

Gender influences the ability of society to manage conflict or disasters. If not properly addressed, certain behaviours may culminate into social injustices. Men, often the young and lower class may learn through their upbringing and interaction with peers to use their physical form to protect themselves, their families and communities (Myrntinen *et al.* 2014). Men may, however, use this physicality to engage in gangsterism, thieving and cattle raiding (Wright, 2014). Gender should be viewed comprehensively as a relational dynamic looking at how men and women relate to each other in the environment they live in (Myrntinen *et al.* 2014).

Drought and water shortage causes turmoil in the community in the form of displacement and conflict amongst gender roles, however, in post-conflict era, when new opportunities arise, pressure is placed upon women and girls to participate more and increase their contribution to the economy's recovery and in the political domains, which also raises their vulnerabilities (United Nations, 2013). Ideologies in gender are slow to empower women and in post-crisis era, communities return to patriarchal practices they had before the disaster (El-Bushra *et al.* 2014).

There is some intervention in terms of the coping strategies when there is a drought. Different households have been affected by drought to different extent such as the water-pricing approach that is being implemented in the European Water Framework Directive (WFD) (European Commission, 2012). In the Vinalopó basin, there are traditional vineyards which employ over 3000 farmers in the area as well as olive trees and market gardening of vegetables, all sustained through the use of drip-irrigation. Excessive use of drip irrigation systems has led to water table lowering as well as compromising the quality of the water, increased pollution loads and increased salinity in surface water (López Ortiz and Melgarejo Moreno, 2010). Some of the strategies that are used in controlling economic crisis have negative effects on the ecosystems.

2.6 Iran

The occurrence and the depth of poverty is greater in rural areas than urban areas (Okidegbe, 2001). Iran is not an exclusion in this case. There have been some ongoing droughts for a very long time in Iran, this has worsened drought impacts (Keshavarz *et al.* 2011). According to the World Bank (WB) and UNDP, two thirds of the poor of the world live in rural areas of developing countries live in a rural area and Iran forms part of this the two thirds. Since the country is rich in oil, the hardships in agriculture should not be significant, however, the country has been under a series of drought for a very long time and it cannot cope (Hayati *et al.* 2010).

Food production is affected leading to higher prices, as commodities become scarcer (Allison *et al.* 2009; Batisani, 2012; Ahmed *et al.* 2011; Wheeler and von Braun, 2013). Access to food is affected through a reduction in farmers' income as production costs rises (Mushtaq *et al.* 2013). Within the traditional house settings, women are the ones

who do household chores; in anything that has to do with the household chores, they are deeply engaged, however, when it comes to the issue of payment and acknowledgements they get less paid. In Iran, drought reduces GDP growth and threatens development achievements (Shiferaw *et al.* 2014). Migration increased social conflicts, malnutrition, decreasing income and welfare are some of the widespread effect of drought on human societies (Udmale *et al.* 2014). Iran has experienced drought extensively and intensively over the past 30 years (Khayyati and Aazami, 2016).

Women make up the majority of the world poor and are more dependent than men on natural resources for their livelihoods and survival (Yavinsky, 2012). Women tend to have lower incomes and are more likely to be economically dependent than men. When drought or unseasonable rain, threatens agricultural production, men can use their savings and economic independence to invest in alternative income sources or otherwise adapt. In times of food scarcity and drought, women will often give priority to their husband's nutritional needs before themselves (Yavinsky, 2012).

Religious beliefs also play a role in the lives of rural farmers in Iran, where they believe that God is punishing them for their bad deeds during disasters (Hayati *et al.*, 2010). Some of the farmers do not align to the scientific approach to what is happening to them, but they assume that it is God who is punishing them for their sins, (such as telling of lies or not being cooperative), therefore the Lord was taking away the alms since no one had paid (Hayati *et al.* 2010). Both urban and rural farmers share the same culture and belief that a drought is a punishment from God. Drought also affect the poor families because of their low socio-economic position, therefore, the fact that the farmers get low income affect them adversely.

Some farmers also believe that drought is an opportunity for the rich farmers to lend some money to poor farmers with the intention of possessing their lands (Hayati *et al.* 2010). This situation leads to the strengthening of the rich domination on the poor and increases their exploitation, hence, the rich will get richer and the poor will get poorer (Hayati, *et al.* 2010). Gramsci describes the South as a “great agrarian bloc,” of extreme social disintegration that is divided into social layers: “the great unstructured, disintegrated mass of the peasantry; the intellectuals of the petty and medium rural bourgeoisie; and the big landowners and great intellectuals” (Gramsci, 1977). The men and women who form the lower classes are the ones who suffer a lot from the abuse of the wealthy. The bourgeoisie are the ones who oppress those who are from the lower classes and that is inclusive of men and women.

Women disproportionately suffer the impacts of disasters, severe weather events, and climate change because of cultural norms and the inequitable distribution of roles, resources, and power, especially in developing countries (Yavinsky, 2012). Women are also more vulnerable because they have less access to education and information that would allow them to manage drought risks to agriculture and livestock. Female farmers, move from one place to the other looking for food, borrowing money, selling their land and also selling their belongings so that they can survive on food from other people (Hayati *et al.* 2010).

The farmers lose the most important assets to them that is land, so that they can sustain themselves with food. Women do not have other sources of income, so in times when the land was very dry, they were forced to cultivate since they did not have another source of income.

Women continue to engage in traditional roles as mothers and family caregivers whereas men may be able to migrate for economic opportunities, but women are more likely to remain at home to care for children and elderly or sick family members (Yavinsky, 2012). In times of drought and erratic rainfall, women and girls must walk farther and spend more of their time collecting water and fuel. Women and girls bear the burden of fetching water for their families and spend significant amounts of time daily hauling water from distant sources (Fletcher, 2013). The water from distant sources is rarely enough to meet the needs of the household and is often contaminated, such that women and girls also pay the heaviest price for poor sanitation. Girls may have to drop out of school to help their mothers with these tasks, continuing the cycle of poverty and inequity (Yavinsky, 2012). The gender roles that are ascribed to the girls, make them desert school whilst the boys will be at school. Girls and boys might have equal opportunities, however, the traditional roles hinder them from progressing like the boys.

Marrying off a girl child was one of the coping strategies. Some boys married girls from wealthier families specifically to benefit from any financial support that might be available. In some cases, in order to reduce their costs, vulnerable families would encourage the engagement of daughters to normally-undesirable persons, for example, drug users, much older men or polygamous men. A major impact, especially for the vulnerable families, was that many families had to defer the marriage of their children.

Both men and women have their coping strategies during times of drought; they would go and look for loans and governmental interventions. Another intervention put into practice was drip irrigation, however, this kind of irrigation was mainly used by the rich farmers; this left the poor farmers suffering a lot in terms of watering their plants. Those who

practiced irrigation did different types of irrigation which included Sprinkler Irrigation Systems and also drip irrigation. Farmers were hopeful for the next seasons, they prayed to their God for assistance, although all farmers felt hopeful for the next year's rain.

2.7 India

In India, the livelihood of women is dependent on agricultural activities which include fishing and paddy cultivation which is affected by climate change (Ram *et al.* 2013). In the rural areas of Garo Hills in India, men and women are highly dependent on biomass such as wood, agricultural crops, wastes and forest resources for their energy requirements and livelihood (Parikh, 2011). Women are particularly vulnerable to droughts because they have less access and control of resources compared to men. Despite the increased interest in the effects of droughts on the environment and agriculture, systematic studies on the effects of extreme climate variability on men and women who are dependent on the natural environment for their livelihoods, are scant (Bradshaw, 2010).

The Government of India stated that over 336 million people are affected by the conditions of severe drought (World vision, 2014). The most long-term implications are being faced by children in the form of trafficking, forced and bonded labour, child mortality, ill-effects on their health, child marriage and discontinuation of education within the catastrophic implications of a natural calamity of this gravity (World vision, 2014). With two-third of the population of India dependent upon agriculture, disasters push entire villages into extreme poverty and vulnerability (Chapagain *et al.* 2017). Children are forced out of education and into situations of vulnerability, including trafficking, surviving becomes a daily struggle for families. This not only brings an end to the childhood of millions of

children, but further sustains the cycle of poverty, exploitation, and lack of education (World vision, 2014). Some of the long term implications on large-scale farmers are suicides due to debt and lack of any tenable means of subsistence, and their children face vulnerability in the form of debt bondage (Chapagain *et al.* 2017). The vulnerability of the girl child to various forms of exploitation including child marriage, early pregnancy and other health risks is heightened due to the inability of parents to provide her with security (World vision, 2014). The debt of family breadwinners makes it hard for the children's future as they will have to pay with bondage for debts left by their parents. When drought strikes, agricultural production is low making it hard for the families to sustain themselves. Early marriages is a way of making the burden less; this involves girls from disadvantaged background being send off to families who are wealthier than them; this means that young girls, before the age of maturity are forced to get into marriages.

Education is one of the main routes to get out of the cycle of poverty but is unfortunately one of the most affected during a drought (World vision India, 2016). Adolescent children are withdrawn from school, moved out of their village to work in other places to supplement family income. In a report by IRRI titled 'Economic costs of drought and rice farmers' coping mechanisms: a cross-country comparative analysis' which included India, reported that more than 50% of farmers had to pull their children out of school due to three reasons: the inability to meet the cost of schooling, supplementation of family income or migrating along with parents (World vision India, 2016).

The Government of India has devised many short, medium and long-term strategies to mitigate and overcome adverse effects of drought, and has implemented relief and

development programs in cooperation with the concerned states (Gupta *et al.* 2011). These measures include ensuring availability of food grains and fodder, judicious use of surface and ground water, prevention of migration of cattle camps, appropriate selection of crops, cropping sequences and agronomic practices, promotion of subsidiary income of the affected people, and employment generation in rural areas (Gupta *et al.* 2011). In India, many women have considerably less access than men to critical information on weather alerts and cropping patterns, affecting their capacity to respond effectively to climate variability.

2.8 Brazil

Drought is one of the costliest and less understood natural disasters, given the way it begins and end (Rivera and Penalba, 2014). Women and men have been affected by drought differently. In Brazil, most of the natural disasters are drought-related; there are semi-arid regions in Brazil where the impacts of drought are felt especially Northeast (Sena *et al.* 2014). In the southern cities, like São Paulo, Rio de Janeiro and Belo Horizonte, there is an increase in the demand for water and high temperatures however, the reservoirs that supply water to these cities have had low levels in 2013/14 and continued very low during 2014/15, due to a deficient rainy season (Nobre *et al.* 2015).

Environmentally-determined geophysical and environmental characteristics of the area are - drought severity, water scarcity and contamination, soil contamination and salinization, land use change and degradation, loss of biodiversity, ecosystem degradation, inadequate crops, overgrazing, and the increasing impact of climate change (Sena *et al.* 2014).

Agriculture is being affected everywhere, hence, with international impacts. Production of arabica coffee beans, a commodity that Brazil supplies in far greater bulk than any other country fell 15% last year pushing up the global price of the commodity by almost half. Growers in Minas Gerais said rainfall was just 900 millimetres last year, about half its usual level. As coffee has a two-year growing cycle, the impacts will be felt next year too, even if the rains return (Watts, 2018). At least six cities have been hit by blackouts due to weak hydroelectricity generation and high demand for air conditioning as temperatures soar over 35 degrees celsius (Watts, 2018).

Droughts have impacts, like inadequate or unsafe water for consumption and sanitation. It also has impacts on acute and chronic health effects which include malnutrition, respiratory conditions, psycho-social stress and mental health issues. Without access to clean water and adequate sanitation, women's daily lives are intensely affected, not only as individuals, but because they are unable to carry out their prescribed role within their families and communities (UN, 2005; Souza, 2008). When there is limited access to clean water and sanitation, women and men's health, physical and psychology integrity, privacy and sanitation are affected (Leite, 2010). Health diseases include basic sanitation and hygiene, which will include skin infectious and parasitic diseases, due to little access or no water available in the daily running of household chores (Stanke *et al.* 2013). Families who live in rural areas, especially those located in the north and north-east regions, have to provide their own water because there is no public supply outside urban areas (Leite, 2010).

Drought can be seen as a chronic emergency whilst other disasters can be seen as acute emergency so it is really difficult for people to act in such situations (Sena *et al.* 2014).

There is also the issue of respiratory diseases which emanate from the effects of drought that is the air quality will be compromised, the diseases include allergic rhinitis and also asthma (Stanke *et al.* 2013). This will have an effect on both men and women health.

The heavy investments made in water-related infrastructure in the Northeast region in the 1990s and 2000s appear to have been a response to the impact of the recurrent droughts, at least with respect to those specifically involving water systems. In the present, 2010 to 2015, extended drought, which is the most severe of the past 80 years, has demonstrated that decades of structural solutions, while necessary, are insufficient to overcome multiple successive years of below-average rainfall.

2.9 Uganda

The semi-arid areas of the country stretching from Southwest through Central to the Northeast regions of the country (the 'cattle corridor') experience chronic water stress (Opio, 2003). As a consequence, prolonged droughts always cause severe water shortage, leading to loss of livestock, decline in milk production, food insecurity, increased food prices, and a negative effect on the overall micro and macro economy.

Women and men have distinct roles in cropping systems throughout Uganda; both are engaged in the production of different crops but there is some gender division of labor in cropping activities (Opio, 2003). The degree to which the traditionally defined gender roles and responsibilities are followed in practice varies considerably across locations and over time (Kasente *et al.* 2002). Men tend to concentrate on cash crop production, especially when it is highly mechanized (Kasente *et al.* 2002). Women, meanwhile, focus on the production of food crops, mainly for family consumption, while simultaneously providing

much of the labour for cash crop production. Women supply the bulk of agricultural labour and are responsible for cooking, cleaning, and taking care of dependent household members (Kasente *et al.* 2002). Men are the ones who want to have control over monetary issues so with all their produce they look forward to obtaining money, on the other hand, women are the providers in the family; they value taking care of the family, so instead of going to the market, they make sure that the family is adequately fed.

Within the family settings, men are the ones who hold high status, preference is given to them regarding everything especially the issue of meals and power relations. Men have better access to nutritious food than women due to household food hierarchies that ensure the dietary needs of men and boys are met first in times of food scarcity (WHO, 2011). Indeed, women become more vulnerable to infectious diseases as well as childbirth complications when they have less access to nutritious food (Doss, 2010). In particular, inadequate intake of iron-rich foods increases the risk of anemia, especially among pregnant women. This, in turn, increases the risk of poor pregnancy outcomes. Globally, it is estimated that anemia contributes to one out of every five maternal deaths (WHO, 2011).

Gender roles include different labour responsibilities, decision-making processes, and knowledge. According to their needs, men and women often use and manage resources in different ways (Mushtaq *et al.* 2013). Food policy should serve humanity by advancing the humane goals of eradicating extreme poverty and hunger, however, these goals have recently been challenged by emerging forces including water scarcity, energy and credit crisis (Mushtaq *et al.* 2013). This means that the time dedicated for searching for wood fuels could be used for other valuable activities, like watering vegetables, helping their

kids with school homework or simply doing other business that could generate some income for their households. This shows that climate change affects women.

Traditionally, women are expected to ensure that the family remains intact during times of distress, as men migrate to seek greener pastures leaving the women behind who then acts as household heads. Male migrants engage in unprotected sex outside the marriage while they are away from their wives and this has contributed to the spread of HIV and AIDS to their wives (Chanaka, 2014). As a result, climate change and climate variability are additional oppression for women. Women are expected to perform the conjugal rights when they meet their partners and they are often not in the position to question their partners about the issue of trust and infidelity.

Gender-influenced cultural expectations and institutions intersect to help address the causes of migration and its consequences. Male members of the community, usually elders, decide upon the movement of livestock and in particular large-scale movements (Filtan, 2011). In some cases, the whole household will move to other places with the livestock in search of a place to graze or water. Women will then be responsible for the erecting of new shelter (Filtan, 2011) during such movements. Generally, women and children stay at home taking care of the remaining livestock, mostly with unclear and weak decision-making power (Shiferaw *et al.* 2014). Either way, women are affected by the decisions made by the leaders of their community (Shiferaw *et al.* 2014). One key negative effect of this is on GDP. The frequency of droughts in many countries reduces GDP (Gross Domestic Product) growth and threatens developmental achievements (Shiferaw *et al.* 2014). The effect on women and gender dynamics is complex (World Bank, 2007).

The migratory effects influence gender roles in family settings, for instance, in a female parent family set-up, the women migrate whereas in a couple setting, men do the job seeking. The frequency of droughts in many countries reduces GDP (Gross Domestic Product) growth and threatens development achievements (Shiferaw *et al.* 2014). The effect on women and gender dynamics is complex (World Bank, 2007). On the other hand, women who are left behind by male migrants may experience more autonomy and have greater decision-making power because they become household heads after their husbands migrate. Male out-migration can also enhance the economic situation of the household left behind through remittances, which have grown dramatically in recent years and exceeded official development aid in some developing countries (IOM, 2007).

In Uganda, there have been some adoption strategies which have been in use. There are drought-tolerant (DT) maize which has been in use so as to fight drought (Fisher and Carr, 2014). In some cases, women who are the head of households make such decisions to agricultural input use, such as the maize to grow. The International Maize and Wheat Improvement Center (CIMMYT) in a Uganda-based survey data, indicated that only 5% of the sampled wives had decision-making power over one or two maize plots, and therefore the opportunity to independently adopt DT maize (Fisher and Carr, 2014). Women who were heading the households have less information on DT maize compared to the wives in spousal couple households.

2.10 Kenya

In Kenya, incidents of drought are the major climate signal affecting rural households (Ngigi *et al.* 2015). A drought cycle in Kenya has been happening for three decades dating back to 1975. Widespread drought affected 16,000 people in 1975 and there has been

repeated droughts up to the early 2010 where 10 million people were at risk of hunger after harvests failed, due to drought (Ngigi *et al.* 2015). Kenya has been affected by droughts almost every year for the past 12 years. Recent incidences include the most dreadful droughts in the Horn, and severe droughts in 2009 and 2011 in Kenya. Available crop data for 2009 indicate that Kenya's agriculture was the most severely affected, with wheat yields dropping by 45 percent compared to 2010's good crop season (FAO, 2013).

In Garissa, Kenya, younger women are tasked with collecting fodder and occasionally with taking small animals to water points. The women of the household are usually in charge of milking cattle, sheep and goats (but not camels). They may also take livestock products such as milk, meat and butter to market. In female-headed households, women are involved in every aspect of livestock rearing. Overall, women contribute much more to livestock production than men seem willing to acknowledge.

Some 2.5 million people are receiving emergency food aid in the country but the effect of the drought has meant that a further 1.3 million now also need help (FAO, 2013). Kenya is exposed to high climate variability, including drought (Iceland, 2015). It is primarily the poor who suffer the most from the negative consequences of climate change, and women make up the majority. Agriculture is the backbone of economic growth in Kenya. Over 70 percent of Kenyan GDP (Gross Domestic Product) is from agriculture and agriculture-related industries. Effects of changes in weather patterns on the agricultural sector are becoming more devastating each year.

Drought is exposing children to the risk of diseases and other permanent effects that will render them less productive at school (UNICEF, 2015). Child malnutrition is an important issue in the Marsabit district of Northern Kenya, in whose remote hotspots one out of four

children are malnourished (UNICEF, 2015; KNBS, 2015). Low productivity of children at school can have detrimental effect on their future livelihoods. Droughts are affecting children in that they would not be able to go to school on an empty stomachs and also that most parents who are in the rural areas rely on cash crops to pay for the children's school fees.

In Kenya, the occurrence of three years of poor rains have exhausted people's coping capacities, and intensifying conflicts over water and pasture are driving people out of the region. According to the UN Office for the Coordination of Humanitarian Affairs (OCHA), more than 20,000 Kenyans in Garissa and Turkana communities were displaced by drought in 2017 (UN, 2017). Gender roles within families have been affected, however, there are adopting mechanisms which have been applied in some areas. In Turkana and Wajir, men have decided to go and look for wild fruits although it is culturally women and children perform such duties (Bailey *et al.* 2017). The drought has opened opportunities for changing gender roles, the difficult decisions need to be made concerning whether the family should split or not, and how remaining resources should be distributed (UN, 2017). Both men and women have their role to play and will be affected by the decisions made by the other.

2.11 South Africa

The 2015-16 El Niño resulted in the worst drought in much of southern Africa, in 35 years. This has had a catastrophic effect on the food security of millions of people across the region (WFP, 2016). South Africa's agricultural sector is comprised of livestock, field crops and fruits, in gross value terms (FAO, 2013). People living in rural areas and resource-poor farmers are often cited as more vulnerable to the impact of drought (Akpalu

2005, Austin, 2008; Pelser *et al.* 2005; Benson and Clay, 1994), and according to Austin (2008) their suffering and vulnerability are often exacerbated by a lack of progress in effective drought management. Beyond food security crisis, the region had wider humanitarian needs that resulted from water scarcity, impacts on access to water and sanitation, education, health services and livelihoods.

The scarcity of water led to the constraints of gender roles within family settings. The main food of Southern Africa is maize; it is the staple food crop yet it is highly vulnerable to the moisture stress which is brought by erratic rainfall patterns that characterize weather system in the area (Kassie *et al.* 2017). Maize is the staple food crop for the majority of the population in the African continent and reliance on maize is nearly universal for those in Southern Africa, where it provides an average 40-50% of the calories consumed by the poor (Smale *et al.* 2011).

According to Sadoff *et al.* (2015), the countries that are most vulnerable to GDP losses due to droughts are located in eastern and southern Africa, South America, and South and Southeast Asia. South Africa's annual average rainfall dropped by over 200mm in 2015 to its lowest level since 1904 (Bureau for Food and Agricultural Policy – BFAP, 2016), providing a good indicator of what a future Sub-Saharan Africa will look like as the effects of climate change take hold (Wright and Sweijd, 2015). The drought, caused by El Niño and supercharged by climate change, is exposing and exploiting vulnerabilities wherever they exist. Droughts have affected families to a large extent as there have been job losses and the heads of the houses cannot sustain their families anymore (Hornby *et al.* 2016). Women and men are expected to fulfill different roles within the society, there are certain roles which the society has well defined as fit for either of the genders (Hornby

et al. 2016). In some cases, dress codes hinder, especially women, from taking part in some of activities. For instance, women are not expected to wear trousers or clothes which are defined as “men’s attire” because it is regarded as deviant to what is expected of them (Parikh, 2011). Socially-constructed roles also influence individual disaster responses from men.

The ARC-Institute for Agricultural Engineering is currently implementing the rural engineering programme that forms part of their effort to assist resource-poor communities to farm more efficiently and improve their yields (FAO, 2013). The emphasis is on the development of infrastructure, equipment and machinery that are appropriate for use by smallholder farmers. The Institute also offers practical training in the application of technologies (FAO, 2013). The agricultural engineering programs are integrated with other disciplines. These appropriate technologies enhance the production efficiency of farmers, thus ensuring food security and ability to cope with disasters, such as drought (FAO, 2013).

In Southern Africa, most households rely on agricultural activities for survival. Small scale farming is a major livelihood source for poor rural households. Considering their low and limited resource endowments, impacts of climate change heavily affect this group due to their limited adaptive capacity. The lack of rains has caused crops to fail and cattle-herders are also struggling to keep their animals alive. There are coping strategies that have been implemented by the government of South Africa against the issue of climate change which has increased the poverty levels amongst the vulnerable families. These coping strategies include grants, seasonal employment and trade (Babugura, 2017).

2.12 Zimbabwe

Developing nations are prone to rural disasters as the majority of livelihoods (50-95% of the population) are based on farming (Chapagain and Raizada, 2017). Droughts have affected many livelihoods in Zimbabwe. The El Nino drought hit hard many parts of Zimbabwe; the parts which have shown the highest mortalities are Masvingo province and also Matabeleland (Scoones, 2010). Small scale farmers and commercial farmers have been encouraged to keep fodder stocks so as to keep livestock alive, however, in some parts there has been small showers which have helped in improved grass conditions (Scoones, 2010). There are also some long-term effects of drought - lack of attendance amongst school pupils which will lead to poor performance. In some cases, the issue of drought will lead to the dropping out of children from classes and schools.

Since October 2015, the month when the rain starts, the Mashonaland region experienced unprecedented heat wave with temperature rising as high as 42 degrees Celsius. The heat wave persisted into November and December and early January 2016, months which traditionally are peak rainfall. Only a few drops were received. According to rainfall data compiled (Fernandes *et al.* 2016) the area received a total of 49mm of water between October and December 2015; no rains fell in October; there was 9mm in November and the rest fell in December. Only 3mm of rainfall was recorded in the first 12 days of 2016. The severity of the drought can only be seen if one compares this data with that from 2009/10 to 2014/15 agricultural seasons, which received 52, 219, 251, 148, 137 and 224mm for the same period. The distribution of rainfall is very low which has made it possible for the place to be classified as drought-prone area.

Water scarcity as a result of drought is another clear indication of climate change in Chivi district. The Tugwi and Runde rivers are the main water source for Chivi people and their animals (Chanaka, 2014). Dhilwayo (2007) argues that boreholes that are 42 meters deep are now dry and this forces people to travel about 25km in search of water. This was the case with ward 22 whereby out of 36 boreholes that were drilled, 7 have dried up. This increases the burden on women and girls for ensuring proper sanitation and the availability of clean water for household consumption from a gender perspective (Chanaka, 2014). It has been noted that water sources in Chivi are now seasonal due to variations in rainfall patterns. Chivi district is a predominantly dry area; there has been a marked decrease in rainfall levels over the past years which led to water scarcity.

The impact of El Niño has been felt most acutely in terms of the extensive crop failure across the country. The outlook was disturbing with little or no rain falling in affected areas and the next window for planting had already closed (Scones, 2015). Given that maize stocks among many households had already depleted and food prices were high, there was a grave concern for the ability of children and their families, who were already struggling to feed themselves and continue to cope until the next harvest in 2017.

In drought-affected areas that Refugee International (RI) visited in Matabeleland North and Masvingo Provinces, several members of affected communities with whom RI spoke speculated that the drought was forcing people to migrate abroad (Thomas and Hollingsworth, 2016). In one village in Masvingo District, the village chief estimated that approximately 10 percent of families had left for South Africa in the past year, including one case in which both parents left behind their two small children with relatives (Thomas and Hollingsworth, 2016). Regular movement and migration trailing is also needed for

unforeseen event planning for either a deepening of the food crisis or the eruption of political violence leading to a complex emergency.

In Africa, women spend one hundred and thirty-four minutes a day collecting water for household purposes (Chanaka, 2014). This clearly indicates that climate change is a threat multiplier, thus it increases a range of livelihood threats and vulnerabilities rather than being an isolated specific risk. Drought affects peoples' household food security as it changes food choices to less expensive and often less nutritious food. It also reduces the intake of food within the household level which has a negative bearing on the health of people.

Table 2.1: Drought history in Zimbabwe and the southern African region

Period	Event
1820-1830	Decade of severe drought in Africa
1844-1849	Southern Africa experiences five consecutive drought years
1861	Well documented drought in Zimbabwe's Matabeleland region
1875-1910	Decrease in rainfall in southern Africa.
1911-1912	Zimbabwe receives less than average rainfall
1915-1916	Drought in Zimbabwe. Average rainfall was a mere 394mm
1921-1930	Severe droughts in southern Africa
1930-1950	Dry spells alternating with wet conditions. 1933 considered the worst drought between 1930 and 1940.
1946-47	The severe drought has stuck in living memory
1967-1973	Dry period across southern Africa
1981-1982	Drought in most of southern Africa
1983	Severe drought for entire African continent
1986-1987	Dry conditions resulting in drought, though not as severe as 1982-83
1991-1992	Severe drought in southern Africa
1992-1993	Although conditions improved, communities still suffered from impacts left over by the previous drought
1994-1995	Severe drought, in some cases surpassing the impacts of the 1991-1992 drought
1997-1998	Drought in Zimbabwe. However, this turned out to be less severe than had been expected
2001-2002	Drought in most parts of southern Africa

Adapted from CEDRISA, 2009; Iliffe, 1993; NEPC, 1999; Raftopoulos et al. 2000; Scoones, et al. 1996; Thompson, 1993 and Unganai, 1994

In Zimbabwe, there used to be three types of rain which was received in the past years, *Bumharutsva* used to be received in August followed by *Gukurahundi* of September and lastly *Munakamwe* received in November (Chanaka, 2014). The country now receives only one rainy season around December (household interviews, 04/04/14). These findings have been corroborated by Dhilwayo (2007) who argued that the contemporary Chivi community receives rainfall that is, if it receives at all, around December. It is now difficult for the residents to get rainfall; things have changed for in the past they used to receive rainfall 3 times, now it has reduced to once and in some circumstances to zero.

Women and water are very closely associated since water is at the core of their traditional responsibilities such as cooking, cleaning, maintaining sanitation and hygiene in the household (WHO/UNICEF, 2015) and although access to safe, clean, affordable drinking water and sanitation is a basic human right, almost 768 million people, globally, lack access to safe water and 2.5 billion lack access to safe sanitation (WHO/UNICEF, 2015). Water shortages are linked to increases in diarrhea and cholera incidences, especially among children and the elderly, since hygienic practices are commonly sacrificed to more pressing needs for water, such as drinking and cooking. This increase in diarrheal disease is leading to many death among children in developing states (Fragar *et al.* (2008). Although women and water are closely linked this does not exclude men from being sick since any lack in hygienic practices within the household also affect them.

Drought impacts on health are excessively affecting women, influencing and worsening existing social determinants of health such as poverty and illiteracy. In many communities, women tend to have less access to the resources that could help them overcome existing vulnerabilities; are more likely to be reliant on climate-sensitive resources and livelihoods;

and tend to have lower levels of meaningful participation in climate change adaptation processes (WHO, 2012). These gender differences appear to be greater in more severe disasters, and where women have relatively lower socio-economic status than that of men (Nelson, 2011). On the other hand, there is evidence that men are more affected in some situations.

Men are the ones who hold higher status in the family and also when it comes to decision making, their word is respected. Men from the drought-prone areas in Kenya, are the ones who choose to be involved in the collection of wild fruits although it is mainly done by children and women. This purely indicates that men will always be there to give directives and have their say in the household. Even in times of drought, the issue of gender roles are respected. There are certain gender roles that are expected to be done by men and women. Women are the ones that use water when it comes to their duties at home so they are mostly likely to get sick because of poor hygiene that will be practised due to the limited access to water.

Climate change intervention creates gender inequality because it has been largely driven by the elite and men make up the elite in international climate governance (Chanaka, 2014). Women have less access to decision-making on climate adaptation programs and projects; for example participating in education programs initiated by the government that are aimed at adapting to climate change through land use management (Chanaka, 2014). This was the case with conservation agriculture whereby the training for this practice is mostly accessed by men. In most cases, projects that are designated for women ended up benefiting men because men have the rights over the use and management of natural resources, therefore, women are more vulnerable to climate change as compared to men.

Indigenous rainfall predictions were noted as important, although they are at times treated as primitive and unreliable (Chanaka, 2014). These predictions were found particularly useful in the absence of scientific rainfall forecasts, since the Meteorological Services Department was incapacitated due to lack of resources to replace obsolete equipment. The Department even suspended the broadcasting of weather forecasts on national television during the period under discussion (Chanaka, 2014). There are coping strategies that have been developed like having drought-tolerant maize varieties maize available to farmers, both subsistence and commercial farmers (Kassie *et al.* 2017). There are men and women who are living in marginalized areas far from where others will be receiving relief.

2.13 Sustainable Development Goals 2030

It is also important to note that there is 2030, agenda that have to be taken into consideration. The SDG emanated from the MDG, where there was a gap in terms of the looking at issues like food security and sustainable agriculture. In each and every society where there is extreme climate variability, there is a need to make sure that such challenges do not hinder the availability of food.

According to UN General Assembly, (2015): Goal 2 seeks sustainable solutions to end hunger in all its forms by 2030 and to achieve food security. The most important thing is to make sure that everyone, everywhere has enough good-quality food to lead a healthy life. Achieving this Goal will require better access to food and the widespread promotion of sustainable agriculture. The sustainability of agriculture is to make sure that the resources like drought resistant crops, irrigation and improved drainage systems is put into consideration so that there will be high production and good quality of crops. This

entails improving the productivity and incomes of small-scale farmers by promoting equal access to land, technology and markets, sustainable food production systems and resilient agricultural practices. It also requires increased investments through international cooperation to boost the productive capacity of agriculture in developing countries (UN General Assembly, 2015). Ending hunger can be achieved through taking control of the environment and also implementing goal 2 on the SGDS fully.

2.14 Summary

Many male farmers from developed countries like Australia, suffer a lot from mental illnesses due to the fact that, they are often not financially stable, because of the occurrence of drought. There is a feeling of being helpless and also feeling low self-esteem when it comes to the issue of providing for the family. Women are suffering equally as men as they have to fulfill their duties around the house providing for the family. The other health effect is having airborne diseases like asthma due to dust. Lack of water has led to the irrigation of some crops through the Murray Darling Basin (MDB). The psychological problems that farmers were having are not representative of the rest of the world. In the United States in the Prairies there is lack of water during times of drought, one of their adopted strategies is drilling boreholes and making sure that the water is enough for everyone. There has also been an adoption strategy of drip irrigation which, however, is costly to the farmers.

In Spain, both men and women have experienced the effects of drought. The economy of Spain is negatively affected by drought, and the lack of good yields to sustain the economy has detrimental effects on families. Iran is rich in oil, therefore, any hardships in agricultural should not be significant, however, the country has been under a series of

droughts for a very long time and it cannot cope. The agricultural sector has been vastly affected by the low precipitation. This has impacted on the gender roles between men and women, with women being affected more, since they have to fetch water from faraway places.

In India, the livelihood of people in the rural areas is dependent on biomass and also fishing. Women's roles are more taxing and crucial since women are responsible for cultural responsibilities, in addition to domestic chores and livestock production activities (Hornby *et al.* 2016). Adolescent children are withdrawn from school to move out of their village to work in other places to supplement family income, this has affected the children's education. It is a similar situation in countries like Kenya and Zimbabwe where child marriages are happening. Children are also vulnerable to kidnapping for human trafficking when they go to fetch water from water sources far from their homes. There are some laws that protect children, however, most of these laws are not implemented to the latter. In developing countries children are vulnerable to danger because of poverty; children end up doing duties that are supposed to be done by adults. The government of India has implemented some mitigation measures on reducing the effects of drought on its citizenry. It included supplying fodder and food grains as well as drilling of boreholes.

The farmers in Brazil have also been affected by the effects of drought like any other country. The environment has degraded; there are concerns over water scarcity and contamination, soil contamination and salinization, land use change and degradation; loss of biodiversity, ecosystem degradation, inadequate crops, overgrazing, and the increasing negative impact of climate change (Sena *et al.* 2014). Agriculture is suffering internationally as a result of these, production of commodities like arabica coffee beans

that Brazil supplies in far greater bulk than any other country fell 15% last year pushing up the global price of the commodity by almost half. The resultant diseases include those arising from lack of basic sanitation and hygiene, like skin infectious and parasitic diseases, are all due to little access or no water available in the daily running of household chores.

In Uganda, men and women are allocated different tasks. Men mainly concentrate on the cash crop production whilst women are responsible for cooking and other household chores. Men are the ones who are given first preference when it comes to nutritional needs while pregnant and nursing women will have food last since they are at the bottom of the hierarchy within the family setup. This may cause pregnant and nursing women to suffer from anemia, due to iron deficiency. Mitigation strategies to help to reduce the effect of drought problems include having drought-tolerant maize which has high production even during drought time.

In Kenya, men and women are vulnerable to drought and the way they are affected is subject to their location, gender and other factors. There is an increase in conflicts when it comes to the grazing of land as the nomads move from one place to the other. Women are the ones who are closely related to the keeping of livestock around the house whilst men will be going around looking for wild fruits. Similarly, in Uganda, India and Zimbabwe children are affected by drought as they will be lacking nutrients in their diets leading to malnutrition. In Turkana and Wajir, there has been a shift in gender roles; men have decided to look for wild fruits although it is something culturally practiced by women.

In Zimbabwe, men and women are affected socially, psychologically and physically. The maize crop is the staple food in most of the countries in the sub-Saharan, however, the

erratic rainfall affects the crop production, thereby causing distress to men and women. There is an issue of girls being married off at a young age or deprived from going to school because their families do not have enough staple food which was expensive. When it comes to sanitation, women are the ones who suffer more since they are the ones who closely play the traditional roles. When it comes to nutritional food within the family, men are not usually affected by its lack since they are the ones on top of the hierarchy so preference is given to them.

CHAPTER 3: THEORETICAL FRAMEWORK

3. 1 Introduction

A theoretical framework is a summary of theories regarding a particular problem that is developed through a review of previous research on the variables involved. It identifies a strategy for enquiry and interpretation of the results (Creswell, 2016). The theoretical framework involves a well-supported justification and is organized in a manner that helps the reader to understand and assess perspective. The purpose is to demonstrate that the relationships proposed are not based on a researcher's personal instincts or assumptions but rather formed from facts obtained from authors of previous research (Creswell, 2016).

The development of the theoretical framework helps to clarify the theory in a manner which can be easily understood. The theoretical framework helps in reducing biases that may influence any interpretation (Leedy and Ormrod, 2005). When developing a theoretical framework, there will be alternative theories that might challenge a perspective consequently, the researcher considered the limitations associated with the selected theory. The research will use the Social construction theory of gender, Standpoint theory, Intersectionality theory and African feminist theories. The researcher will use different theories as each one of them has something that contributes towards the grounding of the study.

3.2 Standpoint theory

The standpoint theory considers that women and men create their own realities through their different activities and experiences. Cockburn (2010) propagated the standpoint theory where she proposed that men and women create their lived realities through their

experiences. Standpoint theory seek to go beyond the analysis and description of roles played by social locations in structuring and shaping knowledge. Both men and women who live in the marginalized parts (rural areas) face deprivation of resources for farming during times of drought. In countries like Zimbabwe and Uganda, there have been an introduction of drought-resistant crops but because of the location of the families it was impossible for them to get any. It was really hard for them to survive in such situations. The degree to which traditionally-defined gender roles and responsibilities are followed in practice varies considerably across locations and over time (Kasente *et al.* 2002).

Standpoint theory manifests firstly in a commitment because of the ways in which power relations transform knowledge that is not understood subjectively threatens their objectivity; rather that socially-situated knowledge can be properly objective. The standpoint theory normative weight is felt in their commitment to the claim developed by an extension of the Marxist view of the epistemic status of the standpoint of the proletariat. It states that some social locations, especially sidelined locations are epistemically greater in that they afford hitherto unrecognized epistemic privilege, thereby correcting untruths and revealing previously suppressed truths (Cockburn, 2010).

Gender roles include different labour responsibilities, decision-making processes, and knowledge. Resources are being used and managed by men and women in different ways (Mushtaq *et al.* 2013). The roles which are closely linked to water include washing, cooking and cleaning. In a place where there is a man and a woman in a household, woman are the ones who will be working closely with water, however in a setup where men are staying alone, men will be closely working with water. This is about the different situations that individuals are exposed to, create some gender roles that are ascribed to

women. There is also a concept of gender in development, where men and women often hold different positions and responsibilities. Decision-making authorities/people in household and community settings, play different roles in society, however, they have different control over and use of resources, and often have different views and needs (Cockburn, 2010). Similarly, Wood, (2005), notes that women's lives differ systematically and physically from men's lives; women are closely linked to household chores versus men who do things which involve masculinity. Many marginalized populations depend on the welfare scheme to survive (Mushtaq *et al.* 2013). Unfortunately, the welfare system have been structured by those who typically have never needed to utilize its services before. The welfare that is provided is for basic needs, like maize and cooking oil, and sometimes the distribution is inconsistent. The food will not be distributed as per demand but when the food is available for the next delivery. This will be hard on the individuals to sustain themselves. Standpoint theory has been presented as a method for improving the welfare system by recognizing suggestions made by those within the welfare system (Edmonds, 2009).

This perspective denies that traditional science is objective and suggests that research and theory have ignored and marginalized women and feminist ways of thinking. The standpoint theory emerged from the Marxist argument that men and women from an oppressed class have superior access to knowledge that is not available to those from a privileged class. In the 1970s feminist writers inspired by this Marxist insight began to scrutinize how disparities between men and women influence knowledge production.

Smith (1997) and Collins (1997) approach standpoint epistemology as a sociology for people rather than a sociology against certain people. Hekman (1997), Collins (1997)

see both men and women as part and parcel of social cohesion and they outline several dimensions of the idea of standpoint theory. Collins (1997) departs from the idea of a standpoint theory of women and instead discusses a broad standpoint theory. Groups, according to Collins, have features that go beyond the experiences of individuals within them. Standpoint is the historically shared, group-based experiences. Groups can be historically subjected to discrimination or prejudice before and after their members join them.

The standpoint theory has some critiques. Most emanate from the founder of the Socialist/Marxist theory, which only see women as victims of an economic status overlooking the fact that the men and women are all victims; the difference being on the type of vulnerability. Lukács, (1923) and Gramsci, (1971) seem to have conceived of the proletariat as male. Nevertheless, in the 1970s some feminist socialist philosophers began to see the use of Marxist standpoint theory for understanding forms of thought developing from women's exploitation and oppression in a patriarchal sex gender order.

The Standpoint theory has been presented as a way to improve the welfare system by identifying suggestions made by those in groups, in unequal power relations generate similar experiences for their members. As Collins (1997) puts it: "Standpoint theory argues that groups who share common placement in hierarchical power relations also share common experiences in such power relations". Those experiences would also be interpreted in similar fashion by group members and should, thus be as important as issues of individual agency or diversity in social science. This is a repetition of the ideas of Marxist materialism as given by President Harding (1997) and Hartsock (1997), however while not centring that concept on women. Collins (1997) is still able to come

back to gender and stress that this dimension of standpoint theory is particularly pertinent to the female experience since women are located in and across racial, economic, and ethnic groups.

Gramsci classifies slaves, peasants, religious groups, women, different races, and the proletariat as subaltern social groups (Gramsci, 1977). In Uganda, men and women are allocated different tasks. Men mainly concentrate on the cash crop production whilst women are responsible for cooking and other household chores. Men are the ones who are given first preference when it comes to nutritional needs leaving the women and children very disadvantaged. Gramscian concept of subalternity applies to those groups in society who are lacking autonomous political power. Gramsci argued that subalternity existed on a broader scale than this, including people from different religions or cultures, or those existing at the margins of society. The focus here is on the history of union teams and their organised struggle, hence, the stress is essentially white, male-oriented establishments of power. Gramsci argued that form of government didn't exist simply at this level however comes from below, originating within the thoughts, beliefs and actions of everyday people that could or might not see themselves as a part of union teams. Capitalist hegemony "was not" and "is not" possible without a complete identification at the level of the self.

Gramsci describes the global South (Africa, Asia) as a "great agrarian bloc," "of extreme social disintegration" that is divided into social layers: "the great unstructured, disintegrated mass of the peasantry; the intellectuals of the petty and medium rural bourgeoisie; and the big landowners and great intellectuals" (Gramsci 1977: 56). Due to the fact that the great intellectuals have such a incredible influence, middle-ranking

intellectuals, who are linked to the rural bourgeoisie, find support for their reactionary views and antipathies toward the peasantry, which in turn support the status quo.

The standpoint theory has other critiques from the theories like ecofeminism. Ecofeminism is a theory that argues that patriarchal viewpoints are harmful to women, children, and other existing things. Ecofeminism was propagated by Merchant, (1980) and Griffin, (1978), in which earth was seen as a nurturing mother, the conceptions of nature and gender. Parallels are drawn between society's treatment of the environment, animals, or resources and its treatment of women. Women are the ones who are closely linked to the environment since most of their chores are linked to nature. Women need water and biomass for cooking. The eco-feminists feel that the male-controlled philosophy emphasizes the requirement to dominate and control unruly females and the unruly wilderness. Ecofeminism views patriarchal society to be a structure which has developed over the last 5,000 years, while considering matriarchal societies to be the original hierarchy. As much as men are vulnerable to drought, women are the ones affected to a larger extent.

3.3 Intersectionality in the context of feminist scholars

Intersectionality has theoretical similarities with the notion of fault lines; a perspective on group process in which having members with multiple shared characteristics (like age, gender, and nationality) elicits within-group boundaries (Lau and Murnighan, 1998). Rather than being a group level phenomenon *per se*, intersectionality emphasizes the configuration of power, disadvantage, and privileged status at the level of the individual and societal structure.

Sensitivity to such variations enhances insight into issues of social justice and inequality in organizations and other institutions, therefore increasing the potential impact of social amendment. Intersectionality is relevant because it helps individuals, scholars, and practitioners make sense of, and work with, the complex experiences that occur at the juncture of these social categories and systems, and the implications therein.

Although several social scientists acknowledge intersectionality as a crucial step within the history of social movements, theorists have developed different, and generally conflicting, interpretations of the role of intersectionality in society.

Feminist scholars have put together the issues of gender, race, location and class as the factors that affect one's well-being (Moosa and Tuana, 2014). Feminist scholars have observed a tendency in the gender and climate change literature to portray "women" and "men" as homogeneous categories while ignoring differences caused by race, class, geography, ability, and education (Enarson *et al.* 2007). Women and men are both prone to drought, however, social construction makes one group to be more vulnerable than the other. In societies men are the ones who delegate duties about who should do what and who should not. It is mainly the poor who suffer the most from the negative consequences of climate change, and women make up the majority (Arora-Jonsson, 2011). This concurs with what the standpoint theory suggests, the issue of location playing a big role in the issue of vulnerability. Moosa and Tuana (2014) document the growing importance of intersectional and contextual studies that examine how gender interacts with other forms of social difference, such as socio-economic class or rurality, to create different experiences of climate extremes even within the social categories of women and men. Arora-Jonsson (2011) disputed the sweeping and universal statements concerning the

vulnerability of women, calling instead for more contextualized analyses of gender and climate change that address native gender roles and ideologies. Arora-Jonsson (2011) disputes the fact of the overview of women being subjected to unfair treatment as opposed to men, he uproots the fact that vulnerability is there but it depends on the type.

The mother of African feminist theory, Lewis, (2009), criticizes the intersectionality approach as it suggests that the population that is mainly affected is the female race as they are more vulnerable in patriarchy societies. African feminism concerns itself not only with the women who are living in Africa but is also inclusive of those living overseas as many of the contributors to the literature have often lived abroad. Even Africans living abroad, at one point in time would have had lived realities as Africans, so their experiences matter. The African feminists bring up experiences from the African context, and it is far from being constructed in simple opposition to Western feminism. Feminism on the African continent constitutes numerous heterogeneous experiences and points of departure (Goredema, 2014). The fact that the terrain of challenging patriarchal power is overly complex has to be kept alive. Rather, this is a contribution to voices articulating the urgent need to address the inherent vulnerabilities, particularly in African feminism, that may end up opposing the gains already registered and blocking progress as well. African feminism brings in the issue of self-definition, whereby Africans research on their own continent, telling their own stories.

African feminisms address cultural issues that they feel pertain to the complex experiences faced by all women, of all cultures on the African continent. In regards to feminist theorizing, many of the authors of such theories originate from West Africa and Nigeria in particular. In her article, "West African Feminisms and Their Challenges,"

Nkealah (2011), discusses the various forms of African feminisms. First, she points to Walker (1979), who she argues is not part of African feminism, as the theory pertains to African women of the diaspora and not continental African women.

While African women from, for example, Egypt, Kenya, South Africa and Senegal will have some commonalities, there will be variations in the way they understand gender and gender struggles (Kolawole, 2011), therefore, these varying cultures alter the way these African women experience the world. One cannot simply merge all woman under an unrealistic expectation of sisterhood, but instead one needs to recognize and respect the differences that exist as a result of these diversities (Kolawole, 2011).

What happens in the Western countries and in the African countries is not the same so things do not have to be universal. Men have better access to nutritious food than women due to household food hierarchies that ensure the dietary needs of men and boys are met first, in times of food scarcity (WHO, 2011). Food insecurity resulting from recurring droughts severely impacts on women and children (Kimani Murange *et al.* 2011), while lack of family income means children often miss out on school. The future of the children will be affected as they will become dropouts.

African feminists bring up the experiences of women from the African context, their lived realities. The fact that the terrain of challenging patriarchal power is overly complex has to be kept alive (Lewis, 2009). Rather, this is a contribution to voices articulating the urgent need to address the inherent vulnerabilities, particularly in African feminism, that may end up negating the gains already registered and blocking progress as well. African feminism brings in the issue of self-definition, whereby we research on our own continent, telling our own stories. The African feminists' theory plays a vital role as it brings up the

issue of patriarchal relations within the society, the dominance of men over all the things taking place.

3.4 Social construction theory of gender

Pertaining to this study, the researcher used the social construction theory of gender in the grounding of the study. Social construction theory propagated by Butler (1991) supports the issue that men and women are subject to nurturing in accordance with the way the society views as normal. The social construction of gender is a notion in feminism and sociology about the operation of gender and gender differences in societies (Lindsey, 2015). According to this view, society and culture create gender roles, and these roles are prescribed as ideal or appropriate behavior for a person of that specific sex. Knowledge is a social product. According to Marecek *et al.* (2004: 126) knowledge is an "account of reality produced collaboratively by a community of knowers", thus, social constructionists focus on how meaning is created and suggest that knowledge is not only a social product, but a product of a specifically-situated society. The degree to which people are affected by climate change impacts is partly a function of their social status, gender, poverty, power and access to and control over resources (UNDP, 2011). Various accounts of reality depend on place and time; in order to study knowledge as a social product, one has to historicize and contextualize the given description of reality.

Norms and expectations are situational; they differ from one society to the other, hence, there is no universal acceptance of certain traits. All the people in the community suffer as a result of the occurrence of disasters which occur constantly, however, the groups which are more vulnerable to disasters, such as drought, are women and children (Ndenyele and Badurdeen, 2012). During drought, social construction within the homes

also goes beyond affecting the food security and distribution, nutrition and livelihoods (Ndenyele and Badurdeen, 2012). Drought impact the livelihoods of individuals. Lack of food within the family means preference is given to men and the elderly first; women and children are at the bottom. Drought affects peoples' household food security as it changes food choices to less expensive and often less nutritious food. Climate change intervention creates gender inequality because interventions are largely driven by the elite, who are men and they make up the majority in international climate governance (Chanaka, 2014). During droughts, there is a shortage of nutritious food, hence pregnant women are likely to be affected by anaemia. Women supply the bulk of agricultural labour; women are responsible for cooking, cleaning, and taking care of dependent household members (Kasente *et al.* 2002).

Women and men's exposure to the impact of extreme climate events is determined not only by biology but also by differences in their social roles and responsibilities (Easterling, 2000; Wisner *et al.* 2004). The way societies have defined roles between males and females leaves a lot to be desired, as to who assigns them. Whenever disasters like drought strike, they are extremely discriminatory; the effects are shaped by factors like tribal affiliation, religion, caste, location and ethnicity (Ndenyele and Badurdeen, 2012). Such pre-existing social structures and conditions in certain societies determine that some community members will be more affected than the others (Bailey *et al.* 2017). Some of studies have demonstrated the gendered nature of access to material and non-material resources which has implications for the long-term development of sons compared with daughters and to the intergenerational transfer of assets, human resources, privilege and disadvantage (Bird, 2007). Gender, kinship and inter-

generational relations operate within households, markets, communities and states and those groups subordinated in intra-household relations carry disadvantages which translate into power deficits in relations outside the household (Tsikata, 2015). The ongoing construction of distinctions between 'male' and 'female' and the growth of social expectations onto those categories has wider implications (Fenstermaker and West, 1991). Women have less access to decision-making on climate adaptation programs and projects, for example, participating in education programs initiated by the government that are aimed at adapting to climate change through land use management (Chanaka, 2014). Men are the ones who are usually responsible for decision making within the families, this is reflected by the issue of drought on migration. There are some situations where the whole family migrates to the town when they are not able to sustain themselves with farming lifestyles, however, in some cases men leave their wives in search for greener pastures in the urban areas. In some areas, it has led to female-headed households or family disintegration as the family is left to fend for themselves.

The socialisation explanation also fails to account for individual agency in choosing ideas and behaviours, or the influence of gendered-power differentials in diverse environments. That is, it does not explain why gendered behaviors are not consistent, why some boys and girls do not exhibit the characteristics and behaviours ascribed to their sex, or how people are able to act differently according to their changing social contexts, hence depending upon where they are and who they are with.

There are some critiques of the social theory of gender which was propagated by Butler. The theory was founded by someone who was not from Africa so there is an issue of generalizing the concept. The other critique is from Marxist feminist theory. Through the

Marxist theory, we see society as disadvantageous to women when compared to men. For example, in Kamba community, when a woman is married, the husband pays dowry in form of cattle, sheep and goats. After the ceremonies, the woman is seen as a property rather than a wife, so the husband dictates what must be done and how it should be done (Kenya Information Guide, 2011).

Engels (1975), established the theory that the coexistence of class and gender oppression is to explain the subordination of women in society. In support of the above statement, the time women spent in farming, was more than seven and eight hours a day working on the farms and plots; on top of that women had to spend lots of time doing domestic chores like cooking, washing, and fetching water (Ndenyele and Badurdeen, 2012). Similarly, women's unpaid domestic labour also benefits capitalists who can hire workers at lower wages than would otherwise be possible. The domestic mode of production implies that the productivity level within the families is through the labour of the people around the house. It was used to explain how husbands appropriated the labour of housewives without paying its full worth. The Marxist/socialist feminism criticizes both liberal and radical feminism for neglecting the class dimension in women's oppression. The proponents discuss the fact that working-class women are more exploited than middle class women and that the latter sometimes exploit or benefit from the exploitation of the working-class women (Bulbeck, 1998), however, they share with radical feminists the commitment to politicize the private and public spheres of operation (Wawire, 2012).

3.5 Summary

In a nutshell, there are some theories which helped to reconfigure and refocus our arguments as far as drought and gender roles are concerned. The issue of subjectivity and location has been illustrated well by the standpoint theory, however, it also has some shortcomings where it fails to explain why those marginalized people are exposed to such. There was a closer look at other theories like intersectionality theory, African theory and social construction of gender. The intersectionality and social construction of gender have something in common, that is the culture forming part and parcel of whichever inequalities that may be practiced within the society, and however, the African feminist theory is motivated by the issue of patriarchal dominance within the societies.

CHAPTER 4: RESEARCH METHODOLOGY

4.1 Introduction

This chapter outlines the research design and methodology that were used in the process of gathering and analysing the data for the research. Research methodology is a way of systematically solving the research problem (Kumar, 2014) and it clearly describes the approach and strategy. It gives the location of the study, explains how the participants were selected and the ethical considerations applied, states the possible limitations and finally describes how the data was analysed. Methodology decisions depend on the nature of the research question (Creswell, 2016).

4.2. Nature of the study

Qualitative research

Swartz *et al.* (2010) defined qualitative research as research that obtains data in the form of descriptive narratives in order to understand a phenomenon from the perspective of the research participant so as to gain an understanding of the meaning people give to their experience. De Vos *et al.* (2011) also explained qualitative research as referring to research that elicits participants' accounts of meaning, experience or perceptions. It is the kind of research that produces descriptive data in the participant's own written or spoken words and is concerned with non-statistical methods and small samples, often purposively selected. It is a form of enquiry in which researchers make an interpretation of what they see, hear and understand. Kumar, (2014) added that qualitative research is embedded in the philosophy of empiricism, follows an open, flexible approach to enquiry, aims to explore diversity rather than to quantify, highlights description and narration of

feelings, perceptions and experiences rather than their measurement and communicates findings in a descriptive and narrative way rather than analytical manner, placing no or less emphasis on generalizations. Qualitative research focuses on exploring, examining and describing people and their natural environments, the socio-cultural context of complex health behaviours, the diversity and richness of social life (De Vos *et al.* 2011). A qualitative approach was used or adopted in this research study with the aim of exploring gendered-drought effects within family settings.

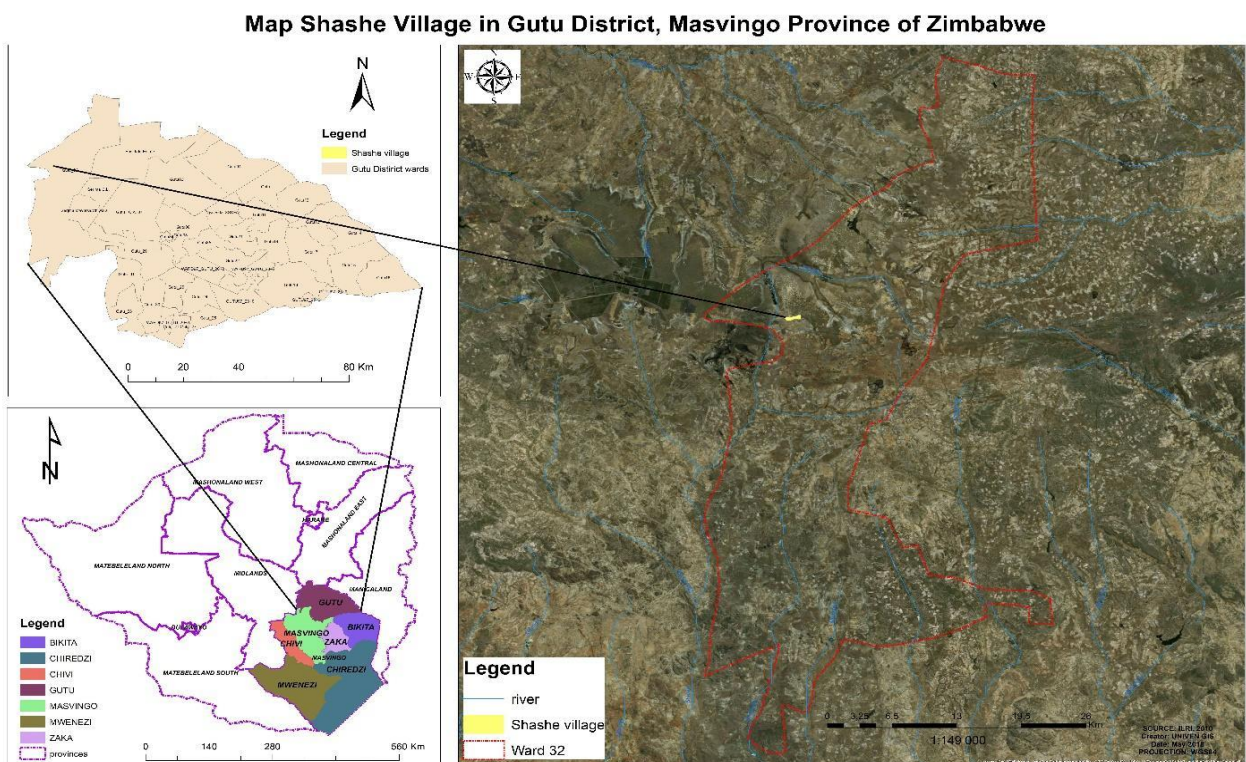
4.3 Description of study area

Shashe village is located in Masvingo Province, Zimbabwe. It is found in the North-Eastern side of Gutu district. Gutu is the third largest district in Masvingo Province, south of Zimbabwe, after Chiredzi and Mwenezi. It is the northern most district in the province. Shashe village is found in Ward 1. Shashe River gives the boundary line between Shashe village and Driefontein Mission. Men and women who live in the area are mainly subsistence farmers.

Shashe village has the savanna climate. Savannah climate is usually warm and temperatures range from 68° to 86°F (20 to 30°C) (Boko *et al.* 2007). Savannah regions experience a 6 - 8 month wet summer season and a 4 - 6 month dry winter season (Scholes *et al.* 2002). However, due to the changes in the weather patterns, the rainy seasons have shifted to less raining days.

Plants of the Savannas are usually grass species which include Rhodes grass, Red Oats grass, Star grass, Lemon grass and some shrubs (Scholes *et al.* 2002). They have long tap roots that can reach the deep water table, thick bark to resist annual fires, trunks that

can store water, and leaves that drop of during the winter to conserve water (Scholes *et al.* 2002). However, due to the evechanging climatic conditions, the survival of flora is at risk. The repeated occurance of drought has caused the plants to weaken. In Shashe village, the trees that are found, are mainly the umbrella shapped and also small thorny shrubs.



Farai Dondofema, Urban and Regional Planning, University of Venda, 30 June 2017.

4.4 Research design

The research design consists of the steps which the researcher chooses to follow during the research journey to answer research questions as validly, objectively, accurately and

economically as possible (Kumar, 2014). The researcher used phenomenological research design since it aligns with the study's objectives and also the nature of the research. This method was used because it allowed the researcher to ask the participants open-ended questions, where respondents were allowed to elucidate their experiences in their own words. Through this approach, first-hand and in-depth information was obtained. The researcher gained extensive understanding of the phenomena, as the approach allowed the researcher to ask participants open-ended questions during the interview process.

The researcher used the phenomenological research design. The fundamental goal of this approach was to arrive at a description of the nature of the particular phenomenon (drought) (Creswell, 2016). In a phenomenological study, participants are asked to describe their lived experiences as they see them (Creswell, 2016). The design allowed the researcher to combine different methods, such as conducting interviews and reading documents as well as bracketing; this is where the researcher does not allow his/her feelings and beliefs to influence the final outcome of the research or phenomenon being studied.

4.5 Population of study

Population refers to the total number of individuals or units of interest to the researcher (Babbie and Mouton, 2011). The targeted population was women and men living in the rural setting of Shashe village who survived on agricultural activities which are farming, fishing and selling the surplus of their produce. They accessed water in *mufuku* (a shallow

well) for household chores, due to the depleting water tables. The limited water sources influenced people to recycle water.

4.6 Sample and Sampling Procedure

A sample refers to a set of individuals or items selected from a population for analysis or a portion that is representative of the entire population, therefore, it is composed of a few individuals from whom one collects the required information (Kumar, 2014). The sample which was chosen consisted of men and women who have experienced drought in their area; these were people sharing the same characteristics. The men and women who were selected were subsistence farmers since they are closely linked to the climatic conditions. The researcher had a total number of 24 participants for the study. 12 individual participants for the interviews and 2 focus groups comprising of 6 men and 6 women were selected from Shashe village in Gutu North district, Zimbabwe. The reason the researcher chose a different set of participants for individual and focus group was because the researcher wanted to have information from a different pool of participants.

During data collection, data saturation was reached. Data saturation refers to the collection of qualitative data to the point where sense of closure is attained because the data was not yielding any new information (Polit and Beck, 2017). It should be noted that a large sample size does not guarantee one will reach data saturation, nor does a small sample size rather, it is what constitutes the sample size (Burmeister and Aitken, 2012). The sample comprised of men and women who were having different age ranges. The researcher reached the total number of 12 individual participants because of data saturation. Data saturation is reached when there is no more new information emerging from the participants.

A non-probability sampling technique was adopted for the study. It is used when the number of elements in a population is either unknown or cannot be individually identified, therefore, its findings are not generalizable due to the small sample size used and its focus on getting in-depth information (Kumar, 2014). In non-probability sampling, participants do not have equal chance of selection (Etikan *et al.* 2016). The sub-type used is purposive / judgemental sampling, which selects elements that contain the most desired characteristics of the population (De Vos, *et al.* 2011).

Purposive sampling was the technique which was used in the selection of respondents. Purposive sampling allows the person selecting the sample to make the sample representative, depending on his/her opinion or purpose, making the representation subjective (Kumar, 2014). With purposive sampling, the researcher is more interested in asking about particular persons or groups and less interested about the central tendency in a group. In this study, the researcher implemented purposive sampling as it best explored the research objectives and was more suited for the the context in which the study was carried out.

The first group that was interviewed by the researcher were the 'key informants'. These were 'vadhumeni' (Agriculture extension officer) who teach other farmers how to farm. The councillor of Shashe village was also interviewed. Key informant interviews have in-depth information since it was with people who know what is going on in the community (Kumar, 2014). The purpose of key informant interviews is to collect information from a wide range of people including community leaders, councillor, professionals, or residents who have first hand knowledge about the community (Maree, 2016). These community experts, with their particular knowledge and understanding, can provide insight on the

nature of problems and give recommendations for solutions. The key informants that were selected were a man and a woman who are agriculture extension officers, they are experts in the issue of farming at the village level. The councillor of Shashe village was also interviewed. The semi structured interviews were used to interview the key informants.

The researcher interviewed the second group of participants through criterion sampling; the researcher approached individuals who met a certain criterion for example, people with similar life experience (Palys, 2008). The researcher, thus approached Shashe farmers, to obtain a sample of men and women who are farmers.

The last group that was interviewed were the focus groups that were men and women farmers from Shashe village. There was two different focus groups, one for the men and the other for the women to allow participants to express themselves freely since there was going to be some restrictions on what to say and what not to say if men and women were in the same group.

4.7 Measures of trustworthy

The researcher used measures of trustworthy for data accuracy. There are measures of trustworthiness which are used in research to provide data which is valid and reliable (Maree, 2016). There are four components of measures of trustworthy - credibility, transferability, confirmability and dependability (Maree, 2016).

- **Credibility** – this says a qualitative researcher should be confident that his or her research findings will be true and accurate. The researcher used triangulation in the analysis of her project findings to make the work credible.

- **Transferability** – The researcher outlined how she identified and chose the participants in the research.
- **Confirmability** – This is the assurance that the outcome of the research was solely from the researcher’s findings and was not distorted from any biasness or personal motivation from the researcher. The researcher did not skew the information in a way that she wanted the findings to come out. The researcher made sure that she kept an audit trail of the data collection process as well as a record of every analysis.
- **Dependability** – This is about the extent to which the research can be repeated by other researchers and they could have the same findings. The concept of dependability was ensured by having an external person examine the researcher’s process of research.

4.8 Data collection

Data collection involves a technique or method that researchers use to gather information from respondents in which they express their views, feelings, or attitudes by for example, conducting an interview. It consists of the final selection of the most relevant methods and measuring instruments to obtain data for the study (de Vos, *et al.* 2011).

The researcher used a semi-structured interview as an instrument for data collection. An interview is a predominant mode of data/ information collection in qualitative research. It is essentially a face-to-face interaction between two or more individuals with a specific purpose in mind. Researchers obtain information through interface with an individual or a group that is known or expected to possess the knowledge they seek (Kumar, 2014).

For the purpose of the study, the researcher used individual semi-structured interviews to collect information from men and women living in Shashe village. This instrument was most appropriate when doing qualitative research because it allowed the researcher to probe for more information. All interview sessions were audio-recorded, verbatim transcribed and analysed according to the emerging themes.

4.8.1 Semi structured interviews

Semi structured interviews are repeated face-to-face interviews between the researcher and the informants, wherein participants will be asked about perspectives on their lives, experiences, or situations and these will be expressed in their own words (Kumar, 2014). A semi-structured interview is an open-ended, discovery-oriented method that is well suited for describing both program processes and outcomes from the perspective of the target audience or key stakeholder. The face to face interview is a conversation with an individual conducted by trained staff. The goal of the interview was to deeply explore the respondent's point of view, feelings and perspectives on the gendered effects of drought. The face to face interviews involve not only asking questions, but also the systematic recording and documentation of responses as well as an intense probing for deeper meaning and understanding of the responses. Thus, the face to face interview often requires repeated interview sessions with the target audience under study. The researcher had some questions on every objective from the research that were guiding the interviews. The researcher used appendix D for the face to face questions with the participant.

The researcher had a systematic way of asking questions that was followed by further probing and clarification. The researcher was attentive and was able to identify new angles to the phenomena. In the course of the interview, the researcher sometimes was side tracked by issues that were not related to the study, but whenever that happened, the researcher would direct the questions back to the purpose of the interview. In some instances, the participants would discuss about the issues of politics which was ongoing in Zimbabwe, the researcher would regain control and steer the interview back to its aim.

4.8.1.1 Procedure followed for recording interviews

The researcher asked for permission from the participants before doing the digital recording. There was a rapport established between the researcher and every participant; this was done through listening and observing the gestures that were being displayed by the participants; the researcher also knew what she was interviewing for, it was through the objectives outlined in chapter 1 of this work. The researcher was also taking notes so that she can review the answers and ask additional questions at the end of the interview. There was a research assistant who was helping with the observing and taking of notes from all the interviews that were done.

4.8.2 Focus group discussions

Focus group engages a group of about 6 to 12 participants and there is facilitation of group discussion among the participants (Rule and John, 2011). A focus group discussion allows a researcher to gain a sense of range and diversity of views, of whose views are dominant and marginal in the group (Rule and John, 2011). When the focus group discussions were being carried out, the researcher made sure that the questions were not directed individually but rather to the whole group. The researcher had a set of

questions initially that were used to direct the discussions. The researcher used appendix E to conduct the focus group discussions. The advantages of using this data collection tool was that the discussions were kept in the right direction and that all participants were encouraged to participate by the moderators. Focus group discussions also enable participants to interact and come up with ideas that they would not have, if interviewed individually (Kabiti, 2017).

When the selection of respondents is underway, there are certain factors that should be taken into account like age, gender and status of participants (Rule and John, 2011). When a researcher is collecting data through focus group, the groups should be smaller to give the participants more time to voice their views and also to provide more detailed information (Moser and Korstjens, 2018). Throughout the focus groups discussions, there was another research assistant facilitating in note taking, audio recording and video recording the meetings.

4.8.2.1 Procedure followed for focus group discussions

The person who was involved in the facilitation of the group discussions was called a moderator. The group moderator was guiding the group discussion making sure that no participant felt left out. The participants were then divided according to the social group they belong to. There were 2 focus groups which were compromised of 6 men and 6 women separately. The participants that were involved were different from the 12 participants from the individual interviews to have new ideas coming from the participants. The separating of participants ensured that the participants answered the questions freely. Women usually give the men the lead in most questions having men ad women in the same group was going to make women inferior to men. The topic was on gendered

drought effects within family settings in Shashe. When questions were being asked in the group, there were being directed to fellow participants and not the moderator.

4.9 Data analysis

According to Creswell (2016), data analysis is the categorizing, ordering, manipulating and summarizing of data to obtain answers to research questions. Data analysis can be in different forms depending upon the nature of the research questions, designs and nature of the study. The researcher used Atlas ti 7.5 in the analysis of data. The researcher added the word document on the Atlas ti 7.5 and analysed accordingly.

The data was analysed thematically using themes that emerged from the data. The researcher familiarised herself with the depth and breadth of the content. The researcher read through the entire data set at least once before beginning to code the ideas. The identification of possible patterns were shaped in the process of reading through the data.

THEMATIC ANALYSIS

Thematic analysis captures something important about the data in relation to the research question, and represents some level of patterned response or meaning within the data set. There are six stages of analysing data [Clarke and Braun, 2013], which are

Stage 1: Familiarisation with your data

It is common to all forms of qualitative analysis. The researcher first immersed herself in the data to the extent that she was familiar with the depth and breadth of the content. The researcher repeated reading of the data, reading the data [and listening to audio-recorded

data] in an active way and noting any initial analytic observations -searching for meanings and patterns.

Stage 2: Coding

This involves generating brief labels for important features of the data of relevance to the search question guiding the analysis. Coding is not simply a method of data reduction, it is also an analytical process, so codes capture both a semantic and conceptual reading of the data. The researcher codes every data item and ends this phase by collating all their codes and relevant data extracts.

Stage 3: Searching for themes

A theme is a coherent and meaningful pattern in the data relevant to the research question. Searching for themes is a bit like coding your codes to identify similarity in the data. This phase begins when all data has initially coded and collated and you have a long list of different codes you have identified across your data set. It involves suiting the different codes into potential themes and collating all the relevant coded data extracts within the identified themes.

Stage 4: Reviewing themes

This phase involves checking that the themes work in relation to both the coded extracts and full data set. The researcher should reflect on whether the themes tell a convincing and compelling story about the data, and begin to define the nature of each individual theme, and the relationship between themes. It is necessary to collapse two themes together or split a theme into two more themes, or to discard the candidate themes altogether and begin again the process of theme development.

Stage 5: Defining and naming themes

This phase requires the researcher to conduct and write a detailed analysis of each theme, identifying the essence of each theme and constructing a concise, punchy and information name for each theme.

Stage 6: Writing up the report

Writing up involves weaving together the analytic narrative and data extracts to tell the reader a coherent and persuasive story about the data, and contextualising it in relation to existing literature. The task of the write-up of a thematic analysis, whether it is for publication or for a research assignment or dissertation, is to tell the complicated story of your data in a way which convinces the reader of the merit and validity of your analysis. It is important that the analysis provides a concise, coherent, logical, non-repetitive and interesting account of the story the data tell.

4.11 Paradigm in research

According to Creswell (2016), research paradigm is an epistemology; the researcher used an interpretative paradigm as an approach to the data collection and analysis. An interpretive paradigm emphasises subjective experiences and the meanings they have for an individual, therefore, the subjective views of a researcher on a situation play a vital part in the study results. An interpretive approach allows a researcher to view the world through the experiences of the participants (Thanh and Thanh, 2015) and its main purpose is to understand and interpret day-to-day activities, experiences and social structures Rubin and Babbie (2010). The subjectivity allows the researcher to have

different or multi views when looking at one specific problem. Wisker (2008:69) and Blumberg *et al.* (2011:17) explain that the social world is constructed and given meaning subjectively by people.

Livesey (2011), explains interpretivism as a method that can be produced and reproduced by people. Things are dynamic in that something that can be holding the truth for the moment may not necessarily hold true tomorrow or in any other society. New knowledge is being developed over time with research projects. Livesey (2011), brings up the point that the social world of people is understood differently, in different situations and in different ways.

Interpretivists reject the notion that research is value-free, since the researcher's interpretation is also socially constructed, reflecting his or her motives and beliefs (Blumberg *et al.* 2011:17). Human interests do not only channel our thinking but also impact how the world is investigated and how the knowledge will be made.

According to Willis (2007), interpretivism seeks to understand a certain phenomenon, the main belief with interpretive paradigm is that reality is socially constructed (Thanh and Thanh, 2015). Protagonists of interpretive paradigm do not accept the issue of universalism, but rather that situations are a product of a particular culture or a group of people (Smith, 1993).

The interpretive approach is grounded in an interactive manner and field-based inductive methodology which is entangled in the practice within specific context. An interpretivist seeks methods that help understand in depth the relationship of human beings to their environment and the part that those people play in creating the social cohesion of which

they are a part of. Interpretive research is more subjective than objective (Thanh and Thanh, 2015).

4.10 Ethical considerations

The research process creates tension between the aims of research to make generalizations for the good of others, and the rights of participants to maintain privacy. Harm can be prevented or reduced through the application of appropriate ethical principles (Cresswell, 2013).

Ethical clearance (certificate number SHSS/17/GYS/05/2306) was sought from the University of Venda Research Ethics Committee. Thereafter, permission to conduct the study was sought from the local leadership of the Shashe community. The permission was sought through the application letter that is Appendix A. Identified people were asked to participate in the study and only those who volunteered participated.

4.10.1 Informed Consent and confidentiality

Informed consent implies that subjects are adequately informed of the type of information the researcher wants from them, why the information is being sought, what purpose it will be put to, how they are expected to participate in the study and how it will directly or indirectly affect them (Kumar, 2014). Inclusion criterion was adults aged 18 or over, whereby the researcher did not need consent from their parents.

The researcher obtained the necessary permission from the respondents after thoroughly and truthfully informing them about the purpose of the interview and the investigation. The researcher asked permission from the chief before carrying out the interviews.

Prior to the interview, the researcher explained the various aspects involved to the respondents. The researcher informed the respondents that participation was voluntary and they were allowed to withdraw from the study at whatsoever time they deemed necessary. The respondents were also told about the purpose of the study and also that the recording of audios and also taking of pictures was done solely for the study.

The researcher's aim of equipping the participants with adequate information was to enable them to make informed decisions. As a result, the researcher worked with willing participants. After thoroughly explaining what their participation encompassed they were asked to sign informed consent papers.

4.10.2 Anonymity

The researcher used pseudonyms and the participants were labelled as participant, A, B, C, D, E, F, G and so on, so that people could not match a given response with a given respondent (de Vos *et al.* 2011). When participants were made aware that their real names were not going to be used, it enabled them to express themselves freely without fear.

4.10.3 No Harm

No harm refers to no injuries to people being studied regardless of their voluntary consent for the study (de Vos *et al.* 2011). For the purpose of the study, the researcher ensured that the participants would not be harmed physically, psychologically or emotionally. If harm had occurred, the participants would have been removed from the study and offered counselling if needed.

In the study, the researcher avoided inflicting anxiety and psychological discomfort by asking questions in an appropriate manner as well as not judging the respondents. The researcher was also very patient with the respondents when they narrated their ordeals as some of the experiences were delicate and painful.

4.11 Summary

This chapter looks at the methodology. It is comprised of the research approach which is qualitative in nature. The study was carried out in Shashe village in Gutu district. The study population was men and women living in Shashe village. Purposive sampling was used in the selection of the participants. Measures of trustworthiness were adhered to, to ensure that the data was collected properly. The data was collected using semi-structured interviews for the 12 individual participants and through focus groups which comprised of men and women having 6 in each group, giving a total of 24 participants. Data was collected with the help of a research assistant for the semi structured interviews and 2 moderators for the focus groups. Data was analysed thematically. An interpretive paradigm was used for the research. Ethical considerations of informed consent, anonymity and no harm were observed.

CHAPTER 5: FINDINGS, INTERPRETATIONS AND DISCUSSIONS

5.1 Introduction

This chapter is based on the findings that emanated from the data collected. In order for the researcher to meet the objectives of the study, semi-structured interviews for 6 women and 6 men living in Shashe village were conducted. There were also 2 focus group discussions which comprised of 6 men and 6 women. The focus groups comprised of subsistence farmers who sell their surplus in the surrounding areas so they can sustain themselves. The participants had a lot of knowledge since most of them grew up practicing farming so they had a lot of experience. The purpose of this study was to examine the gendered drought effects within family settings. Drought is a recurrent climatic phenomenon across the world. It affects humanity in several ways, such as loss of life, crop failures, food shortages which may lead to famine in many regions, malnutrition, health issues and mass migration (Masih, *et al.* (2014). The impacts of droughts are seen at a range of geographical scales. The researcher approached the research project from a gendered perspective, bringing in the social and scientific effects of drought.

The following were the objectives of the study:

1. To examine the effects of drought on women and men.
2. To investigate the distribution of gender roles within families as they respond to the drought.
3. To establish ways to prepare communities during times of drought-related shocks.

Table 5.1 Biography of the participants

Name of participant	Gender	Age	Marriage status	Children	Dependence	Source of income	Years experienced drought	Qualifications
Participant 1	F	86	Widow	6 (4living and 2 dead)	1	SF	2002, 2008	Grade 4
Participant 2	M	62	Married	13	2	SF	1983, 1984, 1993, 1999, 2002, 2008	Grade 6, Master farmer
Participant 3	M	85	Married	13 children alive	0	SF	1992, 2008, 2011	Grade 7
Participant 4	F	28	Married	0	0	SF	2008, 2013	Form 4
Participant 5	M	48	Married	-	2	SF	1999, 2000, 2008	Form 4
Participant 6	M	55	Married	6	4	SF	1992, 2002, 2012	Grade 7
Participant 7	F	68	Married	11 children (9 alive)	3	SF	2008, 2012	Form 2
Participant 8	M	65	Married	13	3	SF	2008	Standard 6
Participant 9	F	54	Married	10 children, (1 died)	4	SF	2002, 2008, 2013,2014	Standard 6, Master farmer
Participant 10	F	48	Married	4	1	SF	2002, 2008, 2014	Form 4
Participant 11	M	84	Married	5	1	SF	2008, 2011	Standard 4
Participant 12	F	72	Married	-	-	SF	1992, 2008, 2010	Standard 3

F = Female, **M**= Male, **SF** = Subsistence Farming

All the participants rely on subsistence farming; through this, they can sell their surplus and make some money. From the participants, child bearing is crucial in Africa; participants 1, 7 and 9 emphasised the importance of child bearing, hence, any deceased

children remain part of the family legacy. When a person dies, his or her spirit is kept within the family at least for four to five generations (Mbiti, 1969). Life is precious and it is important that it is celebrated. Girls are domesticated to doing work like caregiving, cooking, washing and cleaning around the house whilst men are nurtured to do work that is said to be masculine. There are roles expected of girls and boys, respectively. Girls or women are expected to partake nurturing roles, around the house. Social structures of most African families are embedded in patriarchal and hierarchical systems that prevent the possibility of women, who have lower status than men in the society to make deliberate choices on the number of children they want to have (Makinwa-adebusoye, 2001).

The notion of patriarchal dominance was emphasised in the manner in which the two focus groups were gathered - the male group sat close to the communal borehole, whilst the female group gathered at their leader's homestead. In an African cultural context, a man cannot gather at another man's house, hence they had to commune where they all felt they had equal authority. Conversely, control and authority issues are not a consideration among women, such they gathered at the chief's homestead, which was convenient for them to carry out the focus group tasks. The social construction theory of gender highlights that the manner in which people socialise as they grow up, and impacts the way they relate to each other in the society. The manner in which men and women are nurtured prompts how they respond to challenges. In a patriarchal system, men control the 'tongs' of decision-making within the families. The pictures below capture the focus group discussions that were held in Shashe village.



Figure 2. Male focus group at Shashe village



Figure 3. Female focus group at Shashe village

Section 1: Objective 1: The effects of drought within family settings

5.2 Main theme: Environmental effects of drought

5.2.1 Sub-theme: Loss of livestock

During the drought, a lot of animals died in Shashe village. Like any other African community, men and women have different household tasks, and this also applies to animal rearing. One of the participant from the women focus group said,

“during drought, chickens could not lay eggs because of hunger. Aaah. Lack of adequate food negatively affected how the chickens lay eggs.”

Chicken rearing constitutes one of the female household duties, because they are expected to keep small livestock around the house. As a result, women give detailed accounts of what happens to chickens during drought, when compared to cattle issues. In their explanations, chickens do not thrive well when there are water and food shortages. Their explanations are different when they give reference to cattle; they showed little knowledge. Women are the ones who are closely linked to the environment unlike their male counterparts, women need water and wood to cook and also what they cook will come from the fields. The theory of social construction of gender supports the different ways men and women are nurtured by their culture. The girls do duties that are more feminine whilst men do what is masculine. Girls and women are endlessly exposed to roles that make them tired. Walker, (1979) explains that women have both the power and authority to exercise responsibility, individually and they do so alongside men. Walker, (1979) sees women as having power within, despite the social construction that is seen by other African feminists as a hindrance in the society. Womanism accounts for the ways

in which black women support and empower black men and serves as a tool for understanding the Black woman's relationship with men as different from the white woman's. It seeks to acknowledge and praise the sexual power of Black women while recognizing a history of sexual violence.

Participant 4 said,

“Selling cattle constitutes our source of income, hence, when cattle died because of drought, it was difficult for us to raise money to send our children to school.”

Most men and women in Shashe village rely on subsistence farming. As a source of income, cattle rearing also helped them to send their children to school, thus, any challenge in the production or selling of cattle, affected the family's financial stability. (Madzwamuse, 2010). According to the Ministry of Agriculture, in 2015 the country lost twenty thousand cattle, and Masvingo alone lost over three thousand cattle (Nyamanhindi, 2016).

A female focus group participant said,

“Cattle died because of lack of grazing grass and water. Some farmers collected reservoir grass during the rainy season in case of any disaster.”

When there is lack of rainfall, livestock and plants get affected. Where crops have been badly affected by drought, pasture production was also likely to be reduced, although output from natural pastures tends to be less vulnerable to drought than crop production (FAO, 2016). Low rainfall causes poor pasture growth and may also lead to a decline in

fodder supplies from crop residues (FAO, 2016). In Zimbabwe, agriculture contributes nineteen percentage of the country's GDP (Nagombe, 2004). A lot of people who are living in the rural area, approximately eighty percentage, rely on rainfed crops for their livelihoods (Madzwumuse, 2010). Insufficient levels of fodder around the village leads to weight loss in cattle and increased deaths among stock, especially, where immigrant herds put further pressure on limited local pastures (FAO, 2016).

5.2.2 Sub-theme: Wilting of crops

Droughts affect the growth of plants as explained by the following participants.

Participant 1 said,

“Although our crops had grown to a certain level, they wilted because of the, scorching sun. lack of adequate rainfall affected the harvest and also the growth of trees.”

Participant 6 stated that,

“We bought fertilizers and seeds adequate for our family. However, because there was no rainfall we could not put the fertilizers.”

Participant 9 asserts that,

“When drought comes in, it targets farmers because if the rain does not fall, it affects negatively on our production. The sales can even go down it will affect our lifestyles”.

Participant 12 said that,

“The rainfall did not sustain our crops, it only rained for a specific time and it then stopped.”

Crops need both water and sunshine for their growth. The most immediate consequence of drought is a fall in crop production, because of inadequate and disturbed rainfall. Farmers are faced with harvests that are too small to both feed their families and fulfil their other commitments. Increase in water shortages can enhance the possibility of drought periods in many regions worldwide, for example, in Southern Africa, Northern Africa and Southern Europe (Fuchslueger *et al.* 2016); soil microbes can suffer from water and nutrient deficiency (Fuchslueger *et al.* 2016). During times of drought, many crops will reduce their activity and switch to the inactive mode.

This leaves women with the effects of the drought. Women supply the bulk of agricultural labour, women cook, clean, and take care of dependent household members (Kasente *et al.* 2002). In the rural areas of Garo Hills in India, men and women highly depend on biomass, such as wood, agricultural crops, wastes and forest resources for their energy requirements and livelihood (Parikh, 2011).

5.2.3 Sub-theme: Drying up of water sources

Water sources were drying up, because there was no rainfall and the water table was getting low. The girls and women were now forced to walk for long distances looking for water. Water is used in our day-to-day lives so it is very important to have it in large quantities.

Participant 7 said,

“during drought, we rely on Mufuku. Mufuku can be described as man-made fountains, dug close to a river, where sand is used to sift the water. The other way of getting water to use around the house was digging the river banks and the water will be safe to drink.”

Shona culture is like any other culture where the people preserve their cultures. Digging *mufuku* is something that has been practised time immemorial and the existence of such in this village does not mean it does not happen in other villages. Other places where source of water dries up, this is often the alternative.

Participant 1 asserts that,

“We fetched water from far away. We woke up in the middle of the night in search of clean water. The nearby borehole was ideal but the water could not cater for all of us. We travelled in groups of three to five in the early hours of the morning. This gave us a little bit of security.”

Women had to travel for long distances after the water sources they were using had dried up. Women have feminine roles, around the house. The social cognitive theory views gender roles as constructed ideas that are obtained over one's entire lifetime. These gender roles are repeatedly reinforced through socialization (Heather, 2013). Bandura (1997) and Butler (1991), share the same sentiments that culture plays a role in the socialisation of individuals as they grow, however, Butler (1991) could not comprehend

why some girls and boys fail to act in certain ways that they have been nurtured into. It is the mother's instinct to provide for their families. In Garissa, Kenya, younger women are tasked with collecting fodder and occasionally with taking small animals to water points (Ngigi *et al.* 2015). In households where there are men and women, there is division of gender roles where the women do not take all the animals to the drinking points whilst in the lone-parent households, women do everything.

Rearing of animals and planting crops need water; some crops need rainfall whilst others need just water. The lack of rainfall means there will be loss of production; some crops will wilt and others too cannot produce at their best. Lack of water for livestock is also a big problem; livestock can die from dehydration or contaminated water.

5.3 Main theme: Economic effects of drought

Zimbabwe's rain-fed agriculture production is the main driver of the economy (Mamombe *et al.* 2017) and any effort to revive the country's economy can be hampered by erratic rains. All the participants from Shashe village rely on subsistence farming for their income. In times like drought, both women and men look for alternative ways of making money.

Participant 1 stated that:

“Men used to work in the cities as gardeners and manual workers to support their families and provide them with family amenities and necessities like food.”

In this vein, Participant 3 said:

“We were barter trading goods. For instance, we traded 1 turkey for 1 bucket of maize, there are long queues for maize meal sold by some families who were able

to stack bags of maize during rainy seasons, and in such cases, getting maize meal was by luck”.

Similarly, a participant from the men’s focus group said the following:

“Some people benefited from drought. For instance, there are some people who sold at least 1 cow for 3 bags of 50kg maize meal.”

Participant 11 said:

“I can trade cows for an amount of money that can sustain us in terms of shopping for groceries and other commodities needed by the family.”

Shashe village under Masvingo province has many challenges including recurring drought seasons. Poor harvests threaten the food security and livelihoods of people from the household level to the national level, in varying degrees, according to whether the family or nation depends on agriculture for its food and income (Devereux, 2007). According to the Vulnerability Analysis and Mapping (VAM), eighty percent of households surveyed perceived the food-security to be poor or difficult, while only twenty percent of households reported food-security as fair or good. In times of drought, those who can provide for their families, are those who have other means of production which are not linked to rainfall.

According to Mbiti (1969), most traditional African economies are agrarian, pastoral, and hunter-gatherer and some people become specialists to serve special roles in the

community. This means that activities like barter and exchange are not foreign activities in the African context, however, the traditional societies have moved from that into some form of modernisation where one can not overlook aspects like race, socio-economic class, geography, ability, and education which has caused tremendous transformations in the functionality of the 20th century traditional African economy. Feminist scholars have put together the issues of gender, race, location and class as the factors that affect one's well-being (Moosa and Tuana, 2014). Feminist scholars have observed a tendency in the gender and climate change literature to portray "women" and "men" as homogeneous categories while ignoring differences caused by race, socio-economic class, geography, ability, and education (Enarson *et al.* 2007). Drought has affected the people from Shashe village, this has been caused by where there are situated, a place where they receive little rainfall. The participants did not attain advanced level studies; most of them dropped out at primary school level. Its people in these situations who suffer the most from the negative consequences of climate change, and women make up the majority (Arora-Jonsson, 2011).

The other problem with the death of cattle during drought is that many families will not have cattle power to till the soil, instead, they would have to depend on hoes which are not ideal for large hectares of land (Hoogeveen and Özler, 2005). Cattle are used for many functions like paying *roora*, *bira*, funerals as well as tilling the land. The ongoing construction of distinctions between male and female and the growth of social expectations placed onto those categories has wide implications (Fenstermaker and West, 2002).

Participant 4 said:

“due to monetary value instabilities, the Zimbabwean dollar fluctuates. For instance, the dollar would lose value in a period of a day. You would hear there is mealie meal at a certain place, when you get there, someone would tell you that you are late, because prices have increased.”

Participant 4 gave reference to 2008 which was characterised by inflation and erratic rainfalls. The two aspects worsened the situation of the already socio-economically crippled country. This is similar to the Iran situation, where the country have been suffering economically and the drought also came in to worsen the already bad situation. Mealie meal is a staple food in Zimbabwe so people need to have it as part of their meal almost every day although the food preferences are not the same from household to the other. Participant 4 felt that the government let them down because it did not ensure that the people could have reserves of maize meal to protect them against famine or drought.

The 2011 Somali drought illustrates the deadly combination of drought and conflict in a country. In many respects, Somalia is the classic example of a failed state, characterized by clan-based violence (Ferris and Petz, 2012). When there is a political crisis, it can translate into an economic crisis. This is similar to what participant 4 was saying, Zimbabwe was in an economic crisis and people’s lives were deteriorating. When there is famine, the situation becomes untenable as this is a natural calamity. Women have been known to go to extremes so that they can secure food for their family. Women are

the ones who are at the receiving end when there is drought or famine, more so when there is political turmoil. This is what the following participant had to say:

A participant from the focus group of women said:

“It was hard to have cash. Some of us would engage in illegal mining activities especially in Zoma mine. The gold we received would help us to purchase maize meal for our families.”

Another participant from the women’s focus group said:

“The other problem was that our cattle died and when it died, it was hard for us to raise money to send our children to school. Failing to send children to school until the next season is a challenge especially to the young ones who would spend close to a year at home doing nothing.”

One participant from the men’s focus group said:

“During that time of drought, some people benefited a lot; giving 3 bags of 50kg of maize for a cow.”

Participant 9 said:

“brewing beer is my source of income; however, it is a difficult business during drought, because sorghum will be scarce. As a result, we erratically brew beer.”

Participant 11 said;

“Although selling of cows would help during drought, the monetary value is very low. The value of the cows is not even enough to buy anything. After selling that at such a low amount then you go and look for cattle in another place. People resorted to barter trade and sometimes we even give a cow for mealie meal in exchange.”

All the women from the focus group relied on subsistence farming. This meant that during drought, children had to wait until the next season before going to school. This had an adverse effect on their studies. Nyamanhindi shows that during natural calamities, school attendance is given the last priority as this does not have instant gratification (Nyamanhindi, 2016). The women of the household are usually in charge of milking cattle, sheep and goats (but not camels) (Bailey *et al.*, 2017). In female-headed households, women are involved in every aspect of livestock rearing (FAO, 2013). The economic challenges experienced by both men and women were affecting them. For those families that did not store or keep surplus food, their economic challenges become unbearable.

5.4 Main theme: Food scarcity and social movement

5.4.1 Sub-theme: Push factors

During the times of drought, there are hardships that push men and women from their places of residence. They would look for work in places where it is risky and also do work that they are not skilled in.

One of the participant from women focus group said:

“Some of us were close to Driefontein mission where we would do piece job for clothes and even food in return. It was even better to work for food and clothes because it was difficult to get cash. We would even weed the orchard at the mission for fruits and vegetables to feed our children. And sometimes we would get bread from their bakery, it all needed energy because all those things were done in the morning.”

Drought has brought a strain within families; women are caregivers and they will always make sure that everyone has food in their homes. Women are left at home as caretakers or managers of the households, in the absence of their husbands (Mutekwa, 2011). The mother is happy to share whatever that she would have found, sharing it with the children and there is no mention of giving food to the father. Going to places like Driefontein, looking for jobs meant that mothers would have abandoned whatever they would be doing at their homes. During hard times like drought, women do not have options of choosing what work they want to do; participants stated that they would be paid in the form of bread or cash. Food is a prerequisite for survival, according to Maslow’s hierarchy of needs, being paid in food has helped them to deal with the problem of food shortages. Migration increases social conflicts, malnutrition, decreasing income and worsening welfare; these are the other widespread effect of drought on human societies (Udmale *et al.* 2014). Different factors like age, race, social class and geographic location have contributed to the movement of men and women from one place to the other (Moosa and Tuana, 2014).

Whenever disasters like drought strike, they are extremely discriminatory, the effects are shaped by factors like tribal affiliation, religion, caste, location and ethnicity (Ndenyele and Badurdeen, 2012). Such pre-existing social structures and conditions in certain societies determine whether community members will be affected or not (Bailey *et al.* 2017). In one village in Masvingo District, the village chief estimated that approximately 10 percent of families left for South Africa in 2014, including one case in which both parents left behind their two small children with relatives (Thomas and Hollingsworth, 2016). Regular movement and migration are also needed for unforeseen event due to either a deepening of the food crisis or the eruption of political violence leading to a complex emergency.

“It was hard to have cash due to cash crisis in the country. We would go to Zoma where we would mine stones. We had to learn how to do the whole process of sifting stones for the market. Due to drought, we used our earnings from the stones to purchase small flour or mealie meal.” (Focus group for women).

Women were involved in activities that they had not done before; they were risking a lot so that they could provide for their families. They were even going to the mines where they did not know how things were supposed to be done; they had to do something to make ends meet. What mattered to them was to get mealie meal for the family, since it was very difficult to get such from the stores without cash. Sometimes, it would become strenuous and they were situations wherein children were asked to help with some work. The farmers send some of the family members to industrial regions as workers in order

to obtain income to survive (Hayati *et al.* 2010). They send their children to work throughout the year, while moderate-income farmers send their children to work only during school vacations (Hayati *et al.* 2010).

Participant 10 said:

“During drought we were eating chakata and we cooked mukombe wemapfura (marula fruits). In most cases we went to Driefontein Catholic church which is situated in Midlands province, next to Mvuma town as this place had a lot of work opportunities. The inadequate salaries we got as cleaners and house keeper in this mission house helped us to eke out a living.

Participant 10 worked to sustain her family. Women were cooking wild fruits called *chakata* as porridge, and it was fulfilling for them. During drought, most people migrate from communal areas to urban areas to look for better livelihoods (Mutekwa, 2011); men and women in Chipinge South migrated as far as South Africa (Mutekwa, 2011). Migration reduces the risk of drought effects since the migrants get jobs in their new locations and send money home to their families, however, the economy from where they will have come from will be affected since there will be less manpower (Chanaka, 2014). As men migrate to greener pastures, they are leaving women as household heads. Male migrants engage in unprotected sex outside the marriage while they are away from their wives, thus exposing their families to the risks of contracting HIV and AIDS (Chanaka, 2014). Chanaka’s line of arguments is not conclusive, since in Shashe village it is different, there, women are the ones who migrate to other places, unlike men.

The way participants were migrating to greener pasture was not new, such things used to happen in the past, even some quotations from the bible support that. The following quotation supports that:

“And there was a famine in the land ... And Isaac went unto ...Gerar The pressure of famine in Canaan forced Isaac with his family and flocks to migrate into the land of the Philistines, where he was exposed to personal danger, as his father had been on account of his wife's beauty; but through the seasonable interposition of Providence, he was preserved As the head of the family, Isaac felt the need to migrate to greener pastures as the land he was feeling that the land they were in were not satisfying their needs.” (Genesis 26 chapter 25).

Three women from Shashe village talked about migrating from Shashe village, to neighbouring places like to Gweru province in search of jobs for them to feed their families, however, in this situation men do not migrate to neighbouring places. Men did not talk about migrating during drought. Men were engaging in beer drinking, unlike their female counterparts since the Shona culture does not accommodate women in the rural settings to engage in drinking beer. Women in rural areas are considered to be misbehaving when they drink alcohol.

5.5 Main theme: Health effects of drought

5.5.1 Sub-theme: Psychological effects of drought on women and men

During drought, there are different psychological problems that affect both men and women. Some of the problems can cause dysfunctionality in the family.

Participant 10 said:

“The effects of drought was hurting. It did not sit well with us.”

Similarly, Participant 3 asserted:

“During drought there was no recreating. This is what my wife would do, when we were having many children we would stock up mealie meal in the children’s room so during the drought time, she would come with a 50 kg and put it close to where I sleep on the bed.”

Putting a sack of meal mealie against the wall, was to serve as a reminder to the husband not to go and spend money needed for buying food at the bottle store or misuse it in another way. With a total number of, for example, thirteen children, there was need for the mother to take initiatives to make sure that misconducts are contained. It worsened farmers’ psychological health conditions that were already being affected by other problems, such as family, financial or health challenges before the onset of droughts (Jordaan, 2017). The onset of drought causes stress to the farmers, and those who were already desperate or hopeless before the drought have less capacity to cope with drought impact. In Australia, during times of drought, farmers sell properties hoping to make ends meet, some end up taking their lives in these desperation situations (Aslin and Russell,

2008). It was established that psychological stress makes farmers more vulnerable to drought (Jordaan, 2017). Some of the results highlighted in studies on climate change/drought impacts are: mental health problem and suicide in Australia (Alston and Kent, 2008). Men persist with their work even if the work will affect their well-being, they will persist (Alston and Whitenburry, 2012). Butler (1991) supports the notion of man having psychological problems during adverse times. Men have been nurtured to be tough and being the leader. The social construction in society make them take all the burden that is exerted on them, overlooking the effect on their well-being.

“The mother went around looking for piece jobs. She did that, I did not. Women cry a lot, that’s why I say the mother is the one who faces a lot of challenges. I drank beer, and it made me forget some of the serious things that I was supposed to do for the family like going for gold panning.” (Men group)

Women suffer the most at home with their children when there is no food. The husband has a way of refreshing himself, for example, through drinking beer and it even makes him forget about some problems he might have. The beer can only help to forget problems at a certain time and whatever that was a problem will come back and haunt them when they are now sober; it can only be a temporary relief. Sigmund Freud described the mother as the child's primary love object and the parent most responsible for his/her optimal development; the mother will do all in her ability to make sure that the child gets what he/she needs. Klein (2003) further explains how mothers make unconscious

decisions for their children. Mothers take the duties supposed to be done by men and do that themselves.

Participant 5 said:

“It was terrible. There was no one who checked the progress of work at home because of moving around from one place to the other looking for some work.”

Participant 5 further said:

“My wife can give me a list on what is required, if I do not buy anything it will not be of any problem. The other thing that will be convenient for women will be gardening. It will be easier to do the gardening closer to the homes so they can manage what happens at their homes.

Participant 5 is a man who is married and who is also a subsistence farmer. When he is given a list on what to buy, he chooses what he wants to buy and leaves what he feels he does not like. No one will question him on the decision made. Men expect women to look after their home whilst men can go away from home looking for jobs. Drought has brought changes in that, instead of women doing gardening close to their homes, they are now looking for work and other opportunities away from home, thus posing a challenge to their husbands.

Rainfall shortages mean that some of the work that used to be done at home was no longer done at home. Women are caregivers and responsible for the upkeep of their

homes; droughts, takes away such responsibilities from women since they have to look for jobs. This also compromises the safety of children at home since she has to move away from home; men usually work away from their homes unlike women.

Participant 2 said:

“As for me I drink beer. When I drink beer problems seemed to have vanished, although they come back hitting hard. Well, the other advantage of beer is that, it is food because it is made from mealie meal, which is starch, the only thing that was missing was meat.”

Participant 4 also said:

“The woman is the one who is mostly affected. The man would just come back from bars and shebeens to gaze into his wife’s eyes and ask for food.”

Participants 2 and 4 are male and selfish in that during drought, they drink beer whilst the wife and the children have nothing to eat. Husbands can go away and get involved in the drinking of alcohol and forget about their worries. The only thing that will be left for them after drinking beer will be meat or any other protein, for them to have a balanced diet.

5.5.2 Sub-theme: Sanitation and hygiene

Hygiene is necessary in all spheres of life. In households where there are children, there is need to have water since children very often become unhygienic

Participant 7 stated:

“Where there is water crisis, hygiene is at risk. It will be a problem for children because you need to bath them always. Women couldn’t go to the river to wash at the river because of the water which was muddy. Girls ended up washing at home.”

Participant 7, who is a married woman with nine children, knows the importance of water and how shortage of water can affect her family. Women are closely linked to water because of the traditional roles they perform, that is cooking, washing and cleaning the house. Any strain in the availability of water means it will also affect the production level at the house. Children always get dirty when they are playing around so the mother needs to bath the children twice or more during the day; this will also prevent the children from having diseases like scabies. Stagnant and muddy water is not good for bathing and such water would have diseases like bilharzia. It will complicate the finances in the house, in a country (Zimbabwe) where medical facilities are not offered for free but one has to pay. Water sources across the region dried up and a lack of access to safe water and sanitation led to an increase in deadly diseases such as scabbies and diarrhea (Fragar *et al.* (2008). Water shortages are linked to increases in diarrhoea and cholera incidences, among children and the elderly, since hygienic practices are commonly sacrificed to more pressing needs for water, such as drinking and cooking (WHO/UNICEF, 2015). Children bathed once a week; this posed risks to the children as they always play with dirt (Nyamanhindi, 2016). Children do not understand the importance of water in the day-to-day wellbeing.

Section 2: Objective 2: To investigate the distribution of gender roles within families as they respond to the drought.

5.6 Main theme: Distribution of gender roles in the family

5.6.1 Sub-theme: Culture

Every society has its belief systems that are the end product of culture, Shona culture is no exception since it has its own belief system that has to be followed. The belief systems may be mythological or superstitious. It is still expected for anyone in the community to observe these beliefs because deviation from that can cause complications.

In this regard, Participant 1 said:

“We used to travel to a place called Detete, which meant “a place of abundant water”. This river never dried out and there were tales of a big snake that lived in it they believed it those fetching water in this river should not use a black calabash as this would attract this monster. These were trying times for us. We used to watch our children swim in this river, hoping that nothing bad would happen to them.”

Whenever people in the community experience drought, women strive a lot to make ends meet. *Detete* was a scary place to be. But women risked their lives to make sure that their families would have water. It was also impacting on the mothers since it was now making them unhappy with all these changes. During drought, social construction within the homes also goes beyond affecting the food security, food distribution, nutrition and livelihoods (Ndenyele and Badurdeen, 2012). Mutekwa shows that there are some scared places that was believed to have mermaids and whoever dared to swim in this river, would

not come out alive (Mutekwa, 2011). Norms are crucial in every society for them to define the community. Every community have common belief systems that have to be followed for everything to run smoothly. The social construction of gender explains how girls and women, boys and men become who they are. Bandura (1997) also supports that when children are growing up, they learn through their elders, this is not only with what they are taught by word of mouth, but they also imitate what their elders do.

During droughts, there are a lot of changes regarding food availability. Food can be available but only to a limited degree. Many children also suffer from malnutrition.

In this respect, Participant 1 stated:

“We did not have enough money but we survived on wild fruits and a staple food called ‘chakata sadza’ in 2008. ‘chakata’ is made out the chakata fruit. We would pound ‘chakata’ (tree barks and roots) to make beer out of it.”

Similarly, participant 11 said the following:

“There were food shortages and hunger. Money was difficult to get in 2018, and most of the basic commodities were difficult to access without money. Hence, people were surviving on wild fruits and improvising on what they were having by growing more fruits trees for survival. In most cases men are away from home, so it meant the woman had to face all the challenges alone. Children suffered a lot because they got little food”

Participants 1 and 11 expressed how men and women were suffering during the drought. It is normal for men and women in African societies to eat wild fruits for survival, however, this drought was extreme since men had to make beer from the tree barks. Children are always the most vulnerable during famine or food crisis. If they do not receive the right amount of nutrients in their diets, they are at high risk of malnutrition (Penrose, 2012). Malnutrition affects children by causing developmental challenges which will be both physical and mental, a condition that is known as stunting (Penrose, 2012). Child malnutrition is a major health issue in the Marsabit district of Northern Kenya, in whose remote hotspots one of every four children are malnourished (UNICEF, 2013; KNBS, 2015). Low performance of children at school can have detrimental effect on their future livelihoods. In Zimbabwe, between 1982 and 1984, drought was accountable to almost seven percent loss in lifetime earnings, delayed school enrolment (3.7 months), and lowered grade completion (0.4 grades) (Ferris and Petz, 2012).

All the people in the community suffer because of the re-occurrence of disasters which happen occasionally, however, the groups which are more vulnerable to the disasters, such as drought, are women and children (Ndenyele and Badurdeen, 2012). During drought, social construction within the homes also goes beyond affecting the food security, food distribution, nutrition and livelihoods (Ndenyele and Badurdeen, 2012). Drought has impacted the livelihoods of individuals. The social construction theory of gender explains how gender roles within the society nurture individuals to being the persons they will be in future. Lack of food within the family means that preference is given to men and the elderly and women and children are at the bottom. Drought affects

people's household food security as it changes the food choices to less expensive and often less nutritious food.

When children get affected by malnutrition, they are risking being affected by deadly diseases and which can lead to death (Hayati *et al.* 2010). Poor rains, increasing market prices and insecurity had caused widespread food shortage by deepening the underlying malnutrition that existed even before the food crisis struck in East Africa. As the drought in 2011 deepened, millions of children, already weak, became malnourished. In comparison with other types of disasters, World Bank (2007) found that droughts produce the largest declines in GDP and exacerbate conflict.

Participant 5 said:

“During drought, food was just not enough at all. Men or family fathers are served first or any male figure in the house, followed by elder women and children. This has disadvantaged children since they are the last ones to be served.”

In rural settings, like Shashe village where people's beliefs are deeply rooted in traditional values, the presence of elders is well observed in the families, for example during giving of food. It is unfortunate for those who will be given food after everyone else because sometimes there will lack of nutrients in the remaining food. In South Asia, social and cultural gender discrimination that pervade numerous cultural and religious practices suggest a reasonable pathway by which discrimination against women leads to them not receiving their fair share of food (Harris-Fry *et al.* 2017). For instance, young women often stay at home and avoid moving around or networking with the community. Women often

describe their husbands as their God, and it is common for women to serve men first and themselves last (Harris-Fry *et al.* 2017). There are cases, where short-term ‘transitory’ states, such as menstruation and illness are perceived to make a person unclean (*‘jutho’* (Nepalese), were reported to cause inequity in food allocation (Gittelsohn *et al.* 2017). Due to lack of availability of food, that women will suffer more. Pregnant women are also most likely to be undernourished since priority is given to men. However, participant 5 indicated that there are families which share food amongst the children and parents, hence, sometimes the economic standing of the family determines the rationing of the food amongst the siblings.

Participant 12 further said the following:

Mothers knows how best to dish out food to children. She is the one in charge of serving food. And she knows the dietary needs of the active and inactive children. As a result, even in times of drought, mothers make surviving decisions for their families. Thus, in times of lack, elders do not always get first preference or a fair share of food in the house”.

Participant 12 added by saying the following:

“Drought has exposed the families to hunger and also it has impacted on the seasons that follow since they cannot know whether there will be rain. It is difficult to buy seeds without food. When people face famine or hunger, they do not think about the future but the immediate problem associated with drought. This means

that drought exposes families to perpetual struggle to provide food which is the basic need of everyone.

Participant 12 acknowledged that it is not always the case that women and children are the last to be served. In the rural settings, families are not the same and the issue of culture will be confined to certain families and not from the community's perspective. There has been some shift in the culture and how things are being carried out.

Every human being should be catered for in terms of food. It is the government's responsibility to make sure that if there are any shortages of food, governments and non-governmental organizations should see that there is an effort to provide food to the vulnerable and marginalized.

Articles 25 of the Universal Declaration of Human Rights (UDHR) and article 11 of the International Covenant on Economic, Social and Cultural Rights (ICESCR) guarantees the right to food. The principle of non-discrimination, protected by these two instruments, also applies to the right to food.

Men have better access to nutritious food than women because of household food hierarchies that ensure the dietary needs of men and boys are met first in times of food scarcity (WHO, 2011). Every human being should be catered for, in terms of food.

A male participant from the focus group said the following:

“During drought, you will be weak. You will not have power at all. The feeling is not good at all, you will think of other things except making love to your woman. There are some conjugal rights that have to be fulfilled by those who are married.”

In the focus group the men revealed that when they are hungry, things are not the same and their rights would not be fulfilled.

Participant 11 added the following sentiments:

“life was difficult during drought. People were begging for food. Some of us were loaning bags of maize meal, and promised to pay back after the next harvest, which we assumed would rain.”

Participant 11 is a married man who relies on subsistence farming, if a drought strikes then he is left with nothing to eat or little to eat. Begging for food is one thing that bruises the ego of men. Some men who are struggling feel they are incompetent, since the Shona culture expects men to be the providers for the family.

Participant 2 stated:

“I recall in 2008 , my wife had to carry bricks for a bag of mealie meal. From this I say women suffers the most. When we go to the fields, girls will do what guys do; ploughing and herding cattle. The truth is anyone can do everything; however people say they cannot do so until someone fell sick.”

In hard times, there are things that women end up doing so they can produce for their families. Women can even do things that they are not experienced in. They undertake risky jobs so that they can take care of their families. The husband saw that the wife was trying to make ends meet, doing work that was strenuous. Girls and women go and plough in the fields. The shift in gender roles has also happened with planting in the fields. Women are now doing even what men were doing. Women doing household chores has changed since the women can go somewhere else and there will be someone to fill in the gap and do the household chores.

Traditional gender roles are changing in Nkoilale village in western Kenya, as men and women work together to save the community from drought (Lang'at, 2018). There are some roles that were known to be done by men and not women and vice versa; now women and men have maintained the shift in the gender roles.

Participant 1 said,

“In 2009, we had bumper harvest; it was a rainy season and we no longer walked for long distances to fetch water. Yes, there was water, we ploughed around the house and we also have a garden of vegetables.”

The periods after the drought had occurred to the time when things were normal, the issue of walking for long distances looking for food or water was resolved, since men and women could do everything from their homes.

Participant 4 said:

“during drought, the most important thing was to have something to eat. Buying clothes or building houses was a luxury.”

During drought times, the main worry that men and women had is availability of enough food. Whatever money they get families will direct it to food; when the drought is over, the families can develop themselves with projects or even with infrastructure. Women can only do so much because of their limit to land access; most of the land is controlled by the men and not women, (Lang’at, 2018 and Mushtaq *et al.* 2013).

Participant 5 said,

“we do fishing, however, during droughts we could not go for fishing instead we went to drink beer.”

The depleting water sources affected the issues of fishing. When the rivers are running dry, fish will go down the stream where they will survive. In addition, fish cannot survive in muddy water so they end up dying. When men are deprived from what used to be their source of entertainment, they adopt to new ways, like drink beer.

Participant 7 noted:

“Girls and boys helped each other to fetch water. Usually, girls fetch water but during drought they would help each other.”

Similarly, one participant from the men’s focus group said:

“roles that changed include fetching water where fathers and not children went all out to fetch water because of the distance. We would fetch a lot of water so that the mother can be able to do the cooking, bath children and do household chores.”

For the work around the house to be progressive, there was a need to help each other, some of the roles that are ascribed to certain genders were no longer being adhered to. There was need to help each other. Sometimes, the father realised that if they do not help the women pertaining to fetching water from those faraway places then it meant that some of the duties supposed to be done at home would not be done. Women and girls must fetch water for their families and they spend significant amounts of time daily hauling water from distant sources (Fletcher, 2013). This was a change since, it is girls and woman who fetch water, now women and men are coming together in terms of who will go to fetch water or even collect firewood (Wang 'at, 2018).

Participant 6 said,

“Drought brought good things, which is the boys were now learning to do duties that were meant for women. Because the mother sometimes would go away for a long time and such things as cooking and cleaning the house which should be done on a daily basis, were to be done by those that would be home otherwise people will end up starving.

There are some good things that have changed in the society; the helping of girls and women in doing different jobs. There is a need to push aside the patriarchal attitudes and involve women in decision-making (Lang'at, 2018).

Culture has impacted on women, it has left them vulnerable because of lack of education. The vulnerability within households can be caused by how individuals are educated.

Participant 4 stated:

“It is because as a woman you wouldn’t know how cattle fodder is mixed. It is much different with chicken feed, which I collect mesh from the grinding mill and then mix it with concentrate.

Shashe village is a rural area that is marginalized in terms of communication. Cockburn (2015) asserted that the way women and men are vulnerable to natural disasters is because of their location and their position in the society. Most of the residents do not have smart phones and television sets in Shashe village, and do not have formal education. It is difficult for them to get information on how to manage animals like goats, cows and sheep. This means they take them out into the bush for the whole day to fend for themselves, and later in the evening take them back to their kraals.

This has been passed on from one generation to the other (Fafunwa,1974: 48). Fafunwa further writes that:

children grow within a culture. He or she imbibes it. Culture, in traditional society, is not taught; it is caught. Children observe, imbibe and mimic their elders and siblings. They watch the naming ceremonies, religious services, marriage rituals, funeral rites. They also witness the coronation of kings or chiefs.

This shows that every human being is nurtured with the culture of his or her society, knowingly and unknowingly during the process of social interaction. Such things like

rearing of cattle by men, happens through observations in the society. This has also led women to take roles like childbearing and raising of children in addition to doing household chores. The low level of education and illiteracy persist in other countries like South Africa, where Limpopo has the highest proportion of people over 20 years old with no schooling (17,3%), followed by Mpumalanga and North West province (14,1% and 11,8% respectively) (Statistics South Africa, 2012). In Zimbabwe, it is a different case, since there is reasonable higher literacy level but drought still poses a threat (Mutekwa, 2011).

During times of drought, there are a lot of crisis, the water will dry up from its sources and food is insufficient. Men and women end up going to far places to look for food and would stock up if by any chance they got any food in excess.

Participant 5 also echoed the same sentiments by saying the following:

“girls and women were living in fear, there are cases where there were verbally and physical abused.”

In Kenya, women and girls are walking up to 3 or 4 miles looking for water for their nearest rivers have dried up and when river banks are dug up, muddy water will come out (Fritz, 2017). In Ethiopia, women and girls would travel for a day and sometimes they would spend a night and children would starve as they search for food and water (UNICEF, 2011).

Participant 10 stated the following:

“We would go for long distances looking for food so it affected the productivity of the work at home.

Similarly, Participant 11 said:

“Women would walk for long distances looking for food to feed their families that ended up affecting the work at home since it would tire them.

During drought, food security is a big problem so people would go wherever they would have heard there was food. Drought also meant that people who had strained relationships would now communicate. The downside of this is that those families that stored enough food, would be inundated with requests to a point where they were overwhelmed because all of the relatives would come to them to beg for food.

5.6.2 Sub-theme: Patriarchy

Regarding ownership of livestock and assets, Participant 1 stated:

“wives own chickens and men own cattle. But this changes during drought.

Concurrently participant 7 said the following:

(with Laughter) We start off with the chickens around the house and then we eat goats then we would eat cattle as the last resort., when famine and hunger hits, we start off with eating the small livestock are for the women and later on eat the cattle when there nothing else to eat. It is because of the respect that is given to the man and his livestock. Women are the ones who own livestock that can be consumed whenever there is hunger.

Cattle are associated with wealth in the Shona culture. According to Mbiti (1969) African society is hierarchical, and actions undermining the chain of authority are taboo. The norms in the society should be well observed. The more the cattle that one owns, the wealthier you are presumed to be as a man. In Garissa, Kenya, younger women are tasked with collecting fodder and with taking small animals to water points (Ngigi *et al.* 2015). The women of the household are in charge of milking cattle, sheep and goats as a sign of serving their man (Ngigi *et al.* 2015).

However, Participant 3 stated the following:

“Cattle, chickens, goats and turkeys belonged to us (me and my wife). When I go to drink beer I leave the livestock with my wife. She is the one who takes care of the family when I am not around.” The issue of ownership is used by men when it suits what they want.

Participant 7 further said the following:

“The chickens are for the mother, but I can say the husband and wife because when people get married whatever that there might have, belongs to both. When you want to eat, you can’t wait for the father to ask for permission to cook. When he comes back, he will find food ready for him. If there is no meat left, we can slaughter another chicken.

Participant 9 interjected by saying the following:

“I keep chickens. Chickens are for women and children. Chickens are for the children and wife. My wife does not have any say for the cattle which were bought by the husband. The wife’s cattle will be those which will be brought by the sons-in-law during the lobola negotiations, meaning that if you do not have a daughter then you cannot have any cattle that belongs to you except if you can be able to buy. Even in times of drought when things are not looking good, the wife cannot have any say pertaining how cattle should be used.”

A female Focus group participant further said the following:

“women are mostly affected in droughts, because men resort to beer.”

Similarly, a male focus group participant indicated that:

“When drought struck, it was hard for us to be free and entertain ourselves as we used to during rainy days. I use the little money that I have for alcohol and fun.

Men show their dominance in the house in different spheres, like the possession of wealth but because of the food crisis, wives end up discussing with their husbands how they were supposed to behave in the household; however, men still continue to please themselves even in times of a crisis like drought. The mother and the children will be more vulnerable to hunger, compared to the father.

When the father goes to drink, it does not mean the situation does not affect them; it can be a way of them running away from stress and depression arising from hunger and

poverty at home (Makinwa-adebusoye, 2001). In traditional rural societies in most sub-Saharan societies, women are voiceless and powerless in a customary marriage. They go to an extent of keeping quiet even if the man continues to destroy himself with, for example, narcotics.

Participant 2 said:

“If there is someone that wants to buy a cow. My wife accompanies us into the kraal to see which one should be sold. This is not only my duty as a man. The money would not be mine. It will belong to the entire family, to the children who will need to be taken to school. We will need to pay school fees for our children.”

Participant 2 accommodates the wife in the process of decision-making in the house, so when they are about to sell cattle, they would have consensus before making the final decision, however, there is a contradiction to what men put into practice. Men delegate duties to everyone at home, in a way they are comfortable with. Going to the hospital or doing anything around the house is feminine work; that is how women have been nurtured.

Participant 2 further said:

“If I found my wife selling chickens, I would not question this at all. If there is someone that wants to buy a cow from me, we can come together as a family and agree on which one to sell.”

Women have some control in the household, however it is limited since with some things need consent. Selling the chickens is managed by women, however, for such things as cattle, there is a need for the men to be present so that they can make informed decisions.

During drought, there is a lot of suffering that occurs in households. It has impact on mothers, fathers and children in terms of how you are treated at home or how vulnerable you are to drought. The participant's quotations below clearly showed how the drought has brought suffering upon their households.

Participant 5 said:

"In the past you see it as a great thing to have shoes because most of the times you would walk barefoot."

Participant 6 said:

"The woman is the one who suffers most because everyone in the house looks at her for food."

Participant 11 said:

"We couldn't do anything it was hard there was nothing we could do. It was a huge problem. It was a problem because children couldn't get what they used to get in terms of food."

Participants 13 said:

“the mother is the one who gets affected because she is the one who gets the food and give it to children.”

Women and children suffer the most during famine or drought, while men drown their sorrows in alcohol. Women work extra hard to eke out a living for their children, because during the focus group discussions the men reported children pester their mothers for food whenever they are hungry. They always run to their mothers for food whenever they feel hungry. Beside the children, in most cases, husbands as well, will come back home and stare in the eyes of the women when they are hungry.

Women and men are vulnerable during times of drought. During famine, most families would go into the bush to look for wild fruits; those who were lucky, get more fruits. The fruit that was commonly eaten is *chakata* which can be eaten in the form of porridge or bread. Families could not buy seeds for the next season because they had to deal with the food crisis at home. Although every human being has the right to food, there are circumstances which made it hard for them to have the food. From the male focus group, there was an emphasis on the lack of intimacy with their wives since they did not have much ‘energy’ to be active in bed.

Patriarchy continues to play a major role in many communities in Shona culture. Women are given small livestock to take care of and the animals like cattle are for men. The social construction of gender theory states how socialisation contributes to the interaction of individuals in the society. Women have been raised to understand that in a household

when there are cattle, they belong to the father. This accounts for the reason why students are not women are not interested in rearing cattle, thus limiting their knowledge of farming in livestock rearing.

5.6.3 Sub-theme: Wealth

In terms of wealth creation, many families kept livestock to help generate wealth. They sold these livestock out whenever they were in need of clothes and they also used some of the money to pay for their children's school fees.

In this vein, Participant 6 said:

“Oh yes” we had another way of earning money. We had livestock and sold the cattle. During drought, one would make good profit by selling livestock. Those without resources continued to suffer.

The scarcity of food in the market causes food prices to hike (Dube, 2012). The social construction theory of gender supports the fact that gender roles are nurtured. The nurturing of men, is what makes them to believe that when one has a lot of cattle, it shows you are wealthy. Those who are from the lower class are the ones who are mostly affected by the hiking of the price therefore, the ones who own the means of production will be in control.

Participant 9 stated the following:

“However, men were mostly affected by livestock issues in drought. If there are cattle in the kraal then he has no choice but to sell them to curb hunger and starvation. Cattle in the Shona culture is a symbol of wealth.”

Participant 9 is a woman who is married and has 10 children. She sees the father as the one who is mostly affected by drought because of the sacrifices he makes. The selling of cattle is a big sacrifice that is made so that the family will be well looked after, however, there is still an ongoing debate on who suffers the most between the woman and the man in the household.

Section 3: Objective 3: To establish ways to prepare communities during times of drought-related shocks.

5.7 Main theme: Coping strategies

5.7.1 Sub-theme: Coping strategies as a family

Shashe village has been experiencing drought over the past years and they have devised some coping mechanisms. During the various seasons, the drought has never been the same in nature, every time it will come with different challenges. One initiative that was practised in 2018 was the irrigation scheme; all the past years that they had experienced drought, they had water sources near them.

A man from the focus group asserted:

“The other thing we learned was that, during drought, I can sell even the smallest thing you can think of. We also plant trees for fruits around the yard so that when there is little or no rainfall we can have fruits. Even if trees do not bear fruits all year round it can be that that particular season will be the time that the trees will produce something. The fruit trees cannot go for 3 seasons producing nothing, it is rare”.

Another male participant from the focus group said:

“It will be also good to have different livestock like cattle and donkeys. Donkeys can work for a long time during the drought period without getting tired. You can have 1 or 2 donkeys to help fetch water.”

During drought, there are fruit trees that produce fruits. More drought resistance fruit trees, must be grown so that when a drought strikes, families will sustain themselves on these fruit trees that do not need a lot of water to grow. The good thing in having different livestock is that some animals can survive during drought while others die because of lack of water and grass. Donkeys are very resistant to shortages of water and grass. They can carry goods for long distances without tiring. Measures to reduce the impact of drought includes growing vegetables and fruit trees (Mutekwa, 2011). During drought, social construction within the homes also goes beyond food security, food distribution, nutrition and livelihoods (Ndenyele and Badurdeen, 2012). Drought has impacted the livelihoods of individuals. Walker (1979), sees the importance of each and everyone in the society, she does not side-line males as other feminists suggests but she sees the

male as an important part of the society as the women. The importance of men is evident as they are the ones who came up with most coping strategies.

Participant 6 indicated the following:

“As farmers we have to make sure that at the end of the year, we have to prepare for drought even by keeping fodder for cattle with maize stalks, to feed 1 or 2 cows with the stored feed to prepare them for the market.”

Farmers have to keep fodder for their cattle for the next seasons. During the harvesting time, when the maize stem are available, there is a need to keep the excess maize stalks for the next seasons and not to let the animals eat them. Keeping maize stalks can also help to feed cows so that they can be marketable. This can also help families to sell their livestock on the market during hard times. There is also a need for government to restock for families after drought to support communities who lose their animals during drought (Mutekwa, 2011).

Participant 4 from the focus group said the following:

“When drought strikes, we move from one village to another in search of food to buy. When we find at least a bag of maize meal, my wife made sure she rationalized the food to cover everyone. Sometimes we go to harvest wild fruits to supplement the food at home so that the maize can last longer.”

In supporting the above sentiment, Participant 1 said:

“I still remember when my family used to go out in search of “Chakata” (a delicious fruit full of nutrients) during the time of drought. This was ideal in terms of survival and our children had no option but eat it”.

During drought, the man sees it important for the woman of the household to do the cooking and sharing of food in the household. If food is not distributed on average proportions, it means that the household would run out of food. Wild fruits are also a source of food people can rely on. During drought, men and women can supplement their meals with wild fruits (Dube, 2012).

The Non-Governmental Organisations often intervene during drought. For instance, the United States Agency for Development (USAID) committed \$1.2 million to support Oxfam/GB and its local implementing partners to continue emergency food-security interventions in Masvingo’s Gutu District and Matabeleland South Province’s Matobo District (USAID, 2016). Bailey *et.al.*, (2017) the NGOs and its partners ensured that households can meet immediate food needs. They also help protect livelihoods by distributing seed vouchers, training communities in conservation agriculture techniques, increasing access to veterinary care, and providing supplementary feed for livestock (Bailey *et.al.*, 2017).

Participant 3 said the following:

“God is the one who gives rainfall so if he says no then that will be trouble for us.”

In times of drought, men and women have different coping mechanisms. Women, in most instances, call for interventions from God while men just sat silently hoping it will rain. Mbiti (1969), sees the importance of maintaining our traditional beliefs as opposed to what we have now invested our energy in, the Gods from the Western countries.

5.7.2 Sub-theme: Coping strategies against drought as a community

In light with the theme above, Participant 1 said the following:

“Farming tomatoes or vegetables and sharing the surplus may be helpful. We also grow vegetables in the wetlands before we harvest from the field.”

Similarly, participant 2 from the focus group said the following:

“During drought there are vegetables which are drought resistant and are easy to plant. I have known potatoes during starvation because they can grow in droughts.”

There are wetlands that are close to Shashe village. Wetlands can be used to grow crops for subsistence during drought. Rice is one of such crops that needs a lot of water.

Participant 2 said the following:

“Keeping of surplus food will help manage the situation until you have the harvests the following year.” Irrigation can help. The other thing that can be done is rearing of goats and chickens”.

Participant 9 stated that:

“These days we have irrigation so it is better. We do gardening which is harvested and used during drought.”

Introducing irrigation in 2018 has helped the residences in Shashe village to plant throughout the year, even in dry spell seasons.

Participant 3 followed by saying:

“I had no choice but to cut my drinking habit. I was a heavy drinker and this affected my family very much during drought. I was so abusive towards my wife and kids, such that there was no peace at all. I had to cut the habit because every time I got home, a bag of maize meal will be strategically placed by the door so I could not miss it every time I entered the house. This in a way was a reminder not to waste my money on booze but to purchase more food for the survival of my family”.

Participant 6 stated that,

“In this community, I didn’t see much effect of the drought on us because we have irrigation schemes. We had irrigation since 2018. Before the rain season starts, we are always ahead of the season.”

Irrigation is very effective because it allows farmers to plant ahead of seasons, and also allows farmers to have good harvests before the next season. Irrigation is one effective way of ensuring that farmers can plant ahead of seasons and to produce good harvests (Mutekwa, 2011).

5.8 Summary

There are paradigmatic shifts in terms of gender relations regarding drought in many villages, towns and cities today. Cultural patterns are changing where patriarchal relationships are accommodating newer forms of relationships which are not gender-sensitive. These have greatly influenced gender patterns of association, cultural, economic and societal relationships, as well as environmental changes from droughts. A lot of changes like the social movements of different family members from the house has caused a change in some gender roles. There are myths in the Shona culture that need to be observed.

In the Shona culture, cattle symbolises wealth. The more cattle one has, the bigger his/her status in the community. Rearing of animals and planting of crops need water. When there is lack of rainfall it means there will be loss of production. During the drought, some crops wilt while others cannot produce, some people lose their status in the community because of the dwindling sizes of their livestock. Agriculture remains a bastion of the Zimbabwean economy. Any decline in the distribution of rainfall undoubtedly affects the country negatively. Gender relations suffer immensely as a result of stress and depression caused by drought and famine. It is in such seasons that men have been reported to be abusive towards their partners. Gender-based violence rises during drought. This therefore, behoves on governments to intervene by way of giving alternative strategies towards food production during drought.

CHAPTER 6: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

6.1 Introduction

The previous chapter discussed the findings on the gendered effects of drought within family settings. This chapter begins with a summary of the thesis, followed by the conclusion. The last section deals with recommendations for policy designs and implementation as well as future research.

Droughts affect men and women differently. Male farmers from developed countries suffer as a result of droughts which impedes them from providing their families with sustainable livelihoods. This strain has been noticed on men in countries like Australia and America where men are suffering because of the drought pandemic. Most of these men feel hopeless and have developed some low self-esteem because of their inability to provide for their families since they largely depend on agriculture to eke out a living. In Prairies of the United States for instance, there is always lack of water during times of drought. Methods used to survive this is by the adoption of strategies such as drilling some boreholes to ensure that there is enough water for everyone.

In India, the livelihoods of people in the rural areas is dependent on biomass and also agricultural activities. Women's multiple roles of caring for their families and tilling the land for agricultural purposes can be cumbersome (Hornby *et al.* 2016). Women and children are closely related to water. They need water in most of the duties that they carry out at home. Children are vulnerable to human trafficking as they go for long distances to fetch water. The government of India also implemented some mitigation measures on reducing

the effects of drought; it included supplying fodder and food grains and also drilling of boreholes.

In Uganda, men and women are allocated different tasks. Men mainly concentrate on cash crop production whilst women are responsible for cooking and other household chores. There are ways that have been put in place to manage drought, such as bringing in seeds that are drought tolerant (DT) and because of their resistance to dry weather has increased yields (Fisher and Carr, 2014).

In Kenya, men and women are vulnerable to drought and the way they are affected is subjective to their location, gender and other factors. There is an increase in conflicts when it comes to the grazing land as the nomads are moving from one place to the other. Similarly, in Uganda, India and Zimbabwe children are affected by drought as they lack nutrition in their diets thus leading to malnutrition. In Turkana and Wajir, there has been a shift in gender roles; men have decided to look for wild fruits although it is something culturally practiced by women. However, the issue of gathering wild fruits is traditionally done by women.

In Zimbabwe, men and women are affected socially and psychologically by draught. Maize crop is the staple food in most of the countries in sub-Saharan Africa. Lack of rain is therefore posing a serious health hazard, hunger and starvation. Erratic rainfall can also affect crop production thereby causing distress for men and women. There is an issue of girls being married off at a young age because the family would not have enough

food as staple food is expensive. This leads to the girl child suffering the deprivation of going to school. When it comes to sanitation, women are the ones who suffer more since they are the ones who closely work in traditional roles. When it comes to nutrition within the family, men are not usually affected by diet since they are the ones who control food and are prone to eating more than women.

Table 6.1: Overview of study findings

Research Question	Themes	Sub-themes
What were the effects of drought?	Environmental effects of drought on men and women within families Economic effects of drought on men and women within families Food scarcity and social movements Health effects of drought on men and women within families	Drying up of water sources loss of livestock wilting of crops Push factors Psychological effects Sanitation and hygiene

<p>How were the distribution of the gender roles within the families?</p>	<p>Distribution of gender roles</p>	<p>Culture Patriarchy Wealth</p>
<p>What were the coping mechanisms for men and women during and after drought?</p>	<p>Coping strategies of men and women before, during and after drought</p>	<p>Coping strategies as a family Coping strategies as a community</p>

These themes were derived from the discussions of all the twenty four participants. The researcher employed the 6 steps in thematic analysis by Clarke and Braun, 2013 to come up with the themes above.

6.2 Conclusions

The conclusions are based on the issues that have emerged from the findings and also from existing literature. The findings are based on the research objectives, which are:

1. To investigate the effects of drought on family settings;
2. To investigate the distribution of gender roles within families as they respond to drought
3. To establish ways to prepare communities during times of drought-related shocks

The findings are in line with the objectives and also the research questions. The purpose of the study was to unpack the gendered drought effects within family settings in the rural area of Shashe village, Masvingo. Literature sources were also used to corroborate the findings and also to disagree with some of the findings.

6.2.1 Objective 1: Investigating the effects of drought on family settings

Unequal distribution of rainfall has affected the lifestyles of men and women negatively. In this instance, some crops end up not growing well. This leads to harvests which are not pleasing at all. The crops that are mainly grown by the subsistence farmers are the rain-fed crops. Lack of rainfall has a negative impact on the economy of families since a large number of the farmers from Shashe village rely on subsistence farming. Zimbabwe depends largely on agriculture so any disturbances in rainfall distribution affect the economy, badly. This in turn affects both men and women negatively.

Due to lack of availability of resources to sustain families, men and women opt to go and look for jobs so as to sustain their families. In many cases, they would go in towns and to mines where they could secure jobs which do not need rainfall for their sustainability. There is a need to secure jobs because whenever there is no rainfall, the families will be under a lot of strain since most of their sources of income comes from agricultural activities.

The health challenges faced by women and men during drought are psychological problems and diseases. Women and men suffer from psychological problems due to the loss in crop production and also the death of their animals. In some cases, women are left to take care of the children while men will be drowning their sorrows in alcohol. There are instances where women would torture men by leaving mealie meal on the side of the bed so that the men would see how fast the mealie meal was being used in the house. When there is no water, people are prone to diseases like typhoid and cholera. Men are

also affected but to a lesser extent because they spend most of their time away from home. These challenges affect both men and women.

6.2.2 Objective 2: Investigating the distribution of gender roles within families as they respond to drought.

The distribution of gender roles is not uniform. During tough times, there are some chores that are historically meant for men which women end up doing in order to provide for their families. Some women reported going for gold panning in some places so that they can have money to buy food for their families. Household chores which are mainly done by women, tended to be left abandoned since women have to go somewhere in search of opportunities.

Lack of education among the women affected makes them vulnerable. There is lack of education of women in terms of the knowledge they have in the rearing of cattle. Since most of the duties are carried out by women, when meetings on keeping of cattle are being carried out, they are mainly dominated by men who keep the knowledge to themselves rather than disseminating it. This often leaves other groups disadvantaged.

There are beliefs that have been passed from one generation to another on certain aspects of culture. Superstitions are beliefs that have not been approved scientifically but these are deeply rooted, hence, some community members believe some draught may be as a result of witchcraft or a curse from God.

In some cultures, when it comes to the distribution of food, priorities are given to the elderly and the least priority is given to children. In such situations, the children will end

up being affected by malnutrition, their performance in school work will also be affected. Women are the ones who take care of the small livestock while men are the ones who rear essential livestock, like cattle.

6.2.2 Educating women and men on agricultural activities

Women and men should be educated about agriculture, therefore, workshops on farming should also be made available to women. Women's participation may increase their knowledge about farming thus, they should not be left out in such meetings so that they will be able to contribute to the farming techniques. Even with the agricultural activities that are seen to be masculine, women can also be included and be allowed to try. Men can be trained on agricultural activities that are feminine so that they have something to do in times of drought.

6.2.3 Objective 3: Establishing ways to prepare communities during times of drought-related shocks

There is need to have indigenous trees which can resist the harsh climatic conditions. The introduction of DT maize by subsidised Government as done in Ghana, will be a good initiative for farmers to access maize at low cost. The maize is drought-resistant and it can withstand high temperatures. Little rainfall can really help the DT maize plants to grow well.

There are coping strategies that women and men practice as families. One of the strategy is keeping of livestock including donkeys which can work for a very long time without eating, hence, they can be utilized for farming and doing other work for the upkeep of the

family. The planting of variety of trees can also help in that, they will be producing fruits at different times of the year.

6.3 Recommendations

The following are recommendations are based on the findings that were drawn from the interviews. The recommendations will help in issues pertaining to gendered drought effects especially in developing countries:

6.3.1 Alternative jobs besides the jobs linked to agriculture

In Shashe village, the participants who were interviewed rely on rain fed agriculture. It will be ideal that they also embrace other skills like knitting, keeping poultry and also fishing. It is evident that it is hard to be solely dependent on agriculture. A participant who depended on agriculture as her sole source of income suffered a lot when she wanted to brew beer to sell to the community as all her maize was damaged from lack of rainfall. There is need to have other means of production than to depend on those that are from the rain-fed crops. Many people, mostly men, seek alternative livelihood options away from home; women have reported both positive and negative shifts due to this (CARE – ALP, 2011). An example of this is the situation where both girls and boys from Saamini in Ghana are increasingly moving to town for casual labour as a coping mechanism, which in turn increases their vulnerability, adding to the breakdown of families (CARE – ALP, 2011).

6.3.3 Drought-resistant crops and livestock

There are crops that are drought resistant which can survive without a lot of water. Women and men should be encouraged to grow such crops, whether it is during drought

periods or not because no one knows when the drought strikes. It is important that there is some conservation of indigenous trees, such that in times where there is food scarcity, there can be some alternatives. Women and men in Shashe village should keep on planting trees for the future generation such that when some trees are growing old and falling down, there will be some which will be standing. It is important to have different kinds of animals, the ones which can be used as food and also the ones which can be used in times of draught.

6.3.4 Recommendation for future researchers

Future research in varieties of crops that can be grown in savannah climatic conditions which are resistant to drought should be considered. Also, any proposed research should include animals that are resistant to drought and which can be reared during drought times and also when there is no drought. The findings in this regard will go a long way in preparing Southern Africa with regard to drought and how it can be combated; they can improve food security in the households. Researchers should produce improved and more efficient vulnerability assessment methods that can aid during drought as a way of preparing communities for sustainable livelihoods. The researcher would like the future researchers to look at the impact of drought and youth.

6.3.5 Recommendation for policy makers

Zimbabwe Agenda for Sustainable Socio - Economic Transformation (Zim Asset) 2013 - 2018 is the key strategy to the country. The policy encourages women to participate in the economic decisions and politics. They do not address how rural women need to be included also.

6.4 Limitations of the study

The researcher faced a lot of challenges in collecting data from Shashe village in Masvingo province. The time the researcher went to the area of study it was towards the July 2018 presidential elections, there was unrest in the area. The day that the researcher went for the data collection, there was a funeral, the villagers observe such moments and respect them and could not carry out the data collection. The reason why the assistant could not communicate in advance was because of network problems.

6.5 Summary

The chapter sought to give summary, conclusions and recommendations on gendered drought effects within family settings. Drought is a global issue that affects individuals from different spheres of life. The extent to which drought affects individuals is not universal, individuals from different locations are affected differently. There are recommendations on the farmers so that they can be able to sustain themselves like having more than one job for source of income.

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List of Appendices

Appendix A: Letter for permission.

Councilor X

P Bag X

Gutu

10 April 2017

I humbly request access to your village to interview men and women on gendered drought effects within family settings.

This is part of my studies for a degree in Doctorate in Gender Studies at University of Venda. I need to conduct face to face interviews with farmers in your village.

Participation is completely voluntary and the men and women are not compelled to participate.

I would appreciate your positive response.

Kind regards

Takayindisa Flora Maruva

078 0533 138

Appendix B: Consent Form

I am Flora Maruva Takayindisa, currently doing Ph.D. in Gender Studies at the University of Venda. My research topic is “Gendered drought effects within family settings in Masvingo”.

I would like you to participate in my research. Any information obtained from you will be confidential and your names will remain anonymous. Several steps will be taken to protect your anonymity and identity. Interviews will not mention your name, and any identifying information will be removed. Your participation in this study is voluntary and you are free to pull out of this project at any time. Your decision to participate in this study will have no negative impact on your life or health. A tape recorder will be used to record this interview. Pictures will be taken if you do not mind and they will be used in the writing of the report.

This interview will require about 1-2 hours of your time. During this time, you will be interviewed about your experiences before, during and after the drought. It will be conducted wherever and whenever you are comfortable.

There are no anticipated risks, harm or discomfort related to this research. By participating in this research, you may assist others to better understand gendered drought effects. Participating will also help you to better understand the vulnerability of

both women and men in drought so as to come up with coping strategies for drought situations.

The results from this study will be used to write up my PhD thesis and also to publish journal articles. The outcomes of the study will be presented to you and the rest of the participants so that you access the new knowledge generated. The policy recommendations will be disseminated to relevant institutions through a policy brief, and at all these stages, names of the study participants will not be mentioned.

Researcher signature _____ Date _____

Participant: I _____ have read through the content of this form and hereby voluntarily consent to participate in this study.

Appendix C: Guided interview

Section 1

Biographical data

1. Male Female
2. Age
3. Marital status
4. How many years have you stayed in this area?
- 4 Where were you born?
5. Where did you grow up?
6. How many children do you have, If any?
7. What is your highest educational qualification?

Section 2

Economic status

1. Are you employed?
2. What is your source of income?
3. How many dependents do you have?

Section 3

(2). Effects of drought

How were you affected by drought? (Environmentally, economically and socially) as an individual, family and community?

(3). Distribution of gender roles within families during drought

Have things changed within your family after being exposed to drought?

In your own view, how do you feel about the way things have evolved within your family?

(4). Ways to prepare communities for equitable distribution of gender roles during times of drought related issues.

What are measures which were implemented to mitigate the effects of the drought?

(Individually, family and communally).

Appendice D: Translation from English to Shona

Murume Mukadzi

Makore ekuberekwa

Kuroorwa

Mave nenguva yakadii muchigara munzvimbo

Makaberekerwa kupi?

Makakurira kupi?

Mune vana vangani kana munavo?

Chitupa chefundo yepamusoro chamunacho ndechipi

Section 2

Mune kwamunoshanda here?

Mari yamunoshandisa inobva kupi

Mune vamwe vamunogara navo vasiri venyu here?

Section 3

(2). Nhau yekusanaya kwemvura yakakubatai sei (nemagariro) imi mbune, semhuri kana sevagari vemuno?

(3). Munguva yekushaikwa kwemvura, zvii zvaisanganikwa nemhuri yenyu?

Nokunzwisisa kwenyu, zvii zvachinja mumusha wenyu?

(4). Zvii zvingaitwe pechezvenyu, semhuri nemunharaundo muno kuti mugadzirise nyaya yekushaikwa kwemvura.

Appendix E: Focus Group Discussion Interview Guide

Group facilitator:

Venue:

Social Group:

Number of participants:

Discussion questions

You are kindly requested to discuss and answer the following questions with a view in mind that gender roles are shaped by natural, physical, financial, social, and human capital.

Describe the gendered drought effects within families (before, during and after drought).

Appendix F: Participant register DATE: June 2018 Event: Community Entry

Activities Venue: Shashe village

Surname & Initials	Male or Female	Community structure(s) you are a member of	Cell phone number	Email
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				
12				
13				

Appendix G: CHECKLIST

CHECKLIST

Item	No or Yes