

**Assessing the implications of Covid-19 pandemic to household food security status
among women-headed families. A case of Goromonzi District, Zimbabwe.**

**A dissertation submitted in partial fulfilment of the requirements for the Master of
Science Degree in Food Security and Sustainable Agriculture**

(Production)

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DECLARATION

I hereby declare that the research project entitled “**Assessing the implications of Covid-19 pandemic to household food security status among women-headed families. A case of Goromonzi District, Zimbabwe.**” submitted to Bindura University of Science Education, Department of Agriculture Economics, Education and Extension is a record of an original work done by me under the guidance and supervision of **Dr Renias Chivheya** and this work is submitted in partial fulfilment of the requirements for the award of a Master of Science Degree in Food Security and Sustainable Agriculture. The results embodied in this thesis have not been submitted to any University or Institute for the award of any degree or diploma.

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DEDICATION

All the work contained herein is dedicated to my late father Moses.H.Matore may his soul REST IN PEACE and my loving mother L.Sagita for her unwavering support to my education, morally and emotionally may the Lord continue blessing her.

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Abstract

Women-headed household face greater constrains on household food security than any other social groups in Goromonzi district due to their exclusion from numerous factors such as institutional and socio-economic. The global outbreak of Covid-19 pandemic has significantly impacted their socio-economic and food security status due to the imposed lockdowns policies and health restrictions measures in trying to control the pandemic. The main objective of this study was to assess the implications of the Covid-19 pandemic on household food security status of women headed families. A case of Goromonzi district, Zimbabwe. A purposive sampling method was used to select 6 wards and then a simple random sampling method was employed to identify 90 women- headed households from wards lists. The pre-tested personal structured and (FAO) HDDS questionnaires were administered to the women-headed household. The data was analysed using descriptive statistics, Pearson X^2 (Chi-Square) statistic, 5-point Likert scale and the multinomial logistic regression model. The study revealed there is a significant difference in HDD (food security) before and during COVID 19 ($\chi^2=96.8$; $P<0.0001$). The challenges being faced by women-headed households in improving livelihoods revealed that the travelling ban was a very big challenge amongst other with (100%) of respondents. The multinomial logistic regression model revealed that the socio economic and institutional factors significantly affected ($P<0.05$) food security status of women headed households. To improve the food security status of women-headed households the Government and local Council should create space for informal traders mainly (women) to continue engaging in their socio-economic and livelihood activities in a safe and secure environment.

Keywords: Household, Women, Food Security, Livelihoods, Covid-19, Agriculture.

LIST OF ACRONYMS AND ABBREVIATIONS

AGRITEX	Agricultural Technical and Extension Services
FAO	Food and Agricultural Organisation
WHO	World Health Organisation
SPSS	Statistical Package for Social Scientists
NGOs	Non-Governmental Organisations
HDDS	Household Dietary Diversity Score
WHH	Women Headed Household
WFP	World Food Programme
ILO	International Labour Organisation
PDL	Poverty Datum Line
MDD	Medium Dietary Diversity
LDD	Low Dietary Diversity
SSA	Sub-Saharan Africa
GBV	Gender Based Violence
SRHR	Sexual Reproductive Health and Rights
IPV	Intimate Partner Violence
IPC	International Poultry Council

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CHAPTER 1

INTRODUCTION

1.1 Background of the study

In 2019 the Coronavirus (Covid-19) pandemic was first discovered in Wuhan City, China. Subsequently a few months Covid -19 had spread to other regions. It has not only caused considerable changes to the world health system but also on socio-economic, transportation, food systems, education systems and household food security at global level. The World Health Organisation (WHO) declared the novel Covid-19 pandemic as an emergence on the 30th of January 2020 (World Health Organisation, 2020). Even though the Covid-19 pandemic is a public health disaster the main concern which rose is on its potential implications both local and global food systems and their capability to guarantee affordable, accessible food and sufficient incomes mostly to those in the informal sector mainly women and WHH has no exception. According to Mazwi and Mudimu (2000) Zimbabwe's household food system is sustained by subsistence small scale agricultural activities.

The number of Covid-19 confirmed cases sharply increased globally thus, in order to control the spread of the virus nations began imposing the lockdown restrictions which comprised of social distancing, curfew, self-isolation, ban of public gathering and travelling. The restrictions greatly disturbed the chains of production from the primary sectors to manufacturing and services thus, making the second (2nd) Sustainable Developmental Goal susceptible in ending hunger through achieving food security and improved nutrition (Nicola *at al*, 2020).

The World Food Programme (WFP, 2020) predicted that the Covid-19 pandemic could lead to a double of the number of people who are acute food insecure in Low and Middle-Income Countries (LMICs) and Zimbabwe has no exception. Moreover, (Wolfson and Leung, 2020; Arndt et al., 2020) put forward that lockdown measures which were imposed to the public in trying to lessen the spread of Covid-19 pandemic will tremendously affect poor households which are characterised by low incomes, jeopardise household food security status of WHH.

The majority of WHH are into informal and precarious employment which is highly vulnerable during the Covid-19 pandemic era as compared to their men counterparts (IASC, 2020). The women's type of jobs is characterised by absence of institutional protection which include pension, social insurance and health insurance, thus leaving rural women insecure in cases of illness or unemployment. Women generally earn less, saves less and live closely to poverty

than men, are more likely to be affected by the socio-economic impacts of Covid-19. Since they are also constrained in their access to finance, technology, extension service, agricultural land, social assistance and public works due to mobility restrictions, cultural norms, illiteracy and limited access to information to related structures. The conditions of cash transfers can worsen women's poverty and limit their capability to participate in income-generating activities (FAO, 2018).

The Covid-19 Lockdown damaged the market linkage between rural women producers and urban markets thus, negatively affecting producer's incomes. Since, these rural-urban linkages are mainly dominated by women traders, who are frequently unaccounted for in times of shocks and are as well un-noticed by government support mechanisms. The Covid -19 restrictions affected the women's agricultural activities from production to marketing. Consequently, women were incapable of paying back loans from their savings groups, due to negative implications of Covid -19 pandemic on their socio-economic and livelihood activities (CARE, 2020). Ngema et al. (2018) and Nwaka (2019) have put forward that an increase in food-security is linked to increased household incomes.

1.2 Problem Statement

Women-headed household faces greater constrains of food security than any other social groups due to several institutional and socio-economic factors which comprise low education attainment, financial exclusion, marital status, lack property rights, market exclusion, institutional exclusion, lack of agricultural technology, lack of productive assets and gender-gap. Thus, the outbreak of Covid-19 pandemic exacerbated their household food insecurity status due to the lockdown measures which were imposed in trying to contain it. The Covid -19 containment measures which comprise of social distancing, lockdown, travelling ban and curfew pose new challenges to women-headed households with regard to their roles in sustaining household food security. The Covid-19 lockdown regulations affected excessively women-headed family's agricultural production and income generating capabilities since it negatively affected their livelihood activities. Women are essential in agricultural food production, processing and preparation. Therefore, if the gender gap is sealed it can boost their household food security and bridge them from poverty.

1.3 Objectives of the study

1.3.1 The main objective

To assess the implications of Covid-19 pandemic to household food security status among women headed families. A case of Goromonzi District, Zimbabwe.

1.3.2 Specific Objectives

1. To examine the characteristics of women-headed households relating to demographics, socio-economic status, and institutional representation during Covid-19 era in Goromonzi district, Zimbabwe.
2. To compare the women-headed household food security status before and during Covid-19 era in Goromonzi district, Zimbabwe.
3. To examine the challenges being faced by women-headed households in improving livelihoods during Covid-19 era in Goromonzi district, Zimbabwe.
4. To determine socio-economic and institutional factors which affect food security status among women-headed households in Goromonzi district, Zimbabwe.

1.4 Research Questions

- i. What are the socio-economic, institutional and demographic characteristics women-headed in the Covid-19 era?
- ii. Is there any difference in Household food security status before and during the Covid-19 pandemic period?
- iii. What are the challenges being faced by women-headed households in improving livelihoods during Covid-19 era?
- iv. Which factors that affect food security status among women-headed households on both socio-economic and institutional in Goromonzi district, Zimbabwe.

1.5 Justification of the Study

In Zimbabwe house-hold food insecurity had been a challenge already before the outbreak of Covid-19 pandemic, Zimbabwe was experiencing climate Change effects mainly droughts amongst other factors. Thus, the outbreak of Covid-19 pandemic did not only affect healthy systems, but global food chain systems and Zimbabwe has no exception since it depends most

on imports. There is scarce empirical documentation and studies specifically on implications of Covid-19 to household food security. Thus, it is imperative to assess the implications of Covid-19 to women-headed household food security since it is a more vulnerable social group already experiencing the impacts of erratic rainfall patterns on agriculture production hence, food insecurity as compared to their male counterpart. The outcome of this study will help to give actual information and evidence of household-food security status of women headed households in Goromonzi District before Covid-19 and during Covid-era. Moreover, the study will assess the socio-economic and institutional implications of Covid-19 pandemic on WHH food security status, so a gender-sensitive approach can be adopted in addressing vital policy issues related to the operational of food systems and rural economies with special attention to women. The outcomes of this study will also provide tangible policy recommendations to mitigate and adapt to the impacts of the Covid-19 pandemic.

1.6 Scope of the study

It is the first study to focus on implications of Covid -19 to female-headed household food security status under Goromonzi District, Zimbabwe. The study employed Household Dietary Score (HDDS) before and during Covid-19 era which also captured the food groups consumed by the respondents than simply measuring the food insecurity status. Thus, it also acts as an early warning indicator to food insecurity due to the emergency of Covid-19 pandemic.

1.6.1 Limitation of the study

The study has the primary limitation of only covering six wards in Goromonzi district thus the findings cannot be generalised to the whole of Zimbabwe. However due to lockdown and health restrictions it is difficult to physically study a large area. Therefore, the sampling may be bias by unintentionally excluding those without full network coverage on telephone interview. The HDDS questionnaire is subjected to problem of recall failure by respondents especially on food groups consumed before the outbreak of Covid-19 pandemic.

1.7 Outline of the thesis

The rest of the thesis is as follows:

Chapter two presents a review of the literature on other studies done by other scholars on the implications of Covid-19 pandemic to household food security status among women headed families. The socio-economic, institutional and demographic characteristics of WHH, the comparison of household food security status before and during Covid-19 era, the challenges

faced by WHH in improving their livelihoods during the Covid-19 era. This chapter is important because it presents the basis of research findings.

Chapter three (3) provides description of the study area. In addition, the chapter describes the methodology of the study. It focuses on research design, sampling procedure, data collection procedure, data analysis procedure and ethical considerations. Details of the analysis per individual objective are given in the following chapter four, five, six and seven.

Chapter four (4), examines the characteristics of women-headed households relating to demographics, socio-economic status, and institutional representation during Covid-19 era in Goromonzi district, Zimbabwe.

Chapter five (5), compared the women-headed household food security status before and during Covid-19 era in Goromonzi district, Zimbabwe. The FAO, (HDDS) structured questionnaire was used with 12 questions of food groups.

Chapter six (6), examined the challenges being faced by women-headed households in improving livelihoods during Covid-19 era in Goromonzi district, Zimbabwe using a 5 point Likert scale ranging from 'not a challenge' to 'a very big challenge'.

Chapter seven (7), determined the socio-economic and institutional factors which affect food security status among women-headed households in Goromonzi district, Zimbabwe. The factors comprise of household size, type of business, marital status, institutional representation among others analysed by the multinomial logistic regression model.

Finally, chapter eight (8) combines the results, conclusions and policy recommendations of the previous chapters. The chapter bring into the socio-economic, demographic and institutional representation of women headed households, the food security status before and during Covid-19 pandemic, the major challenges faced by women headed household in trying to improve their livelihood during Covid-19 era, the institutional and socio-economic factors which affect food security factors among women headed households in Goromonzi District, Zimbabwe.

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CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter, gives a comprehensive outline of theoretical and empirical literature of the demographic, socio-economic and institutional characteristics of women headed-household. The gendered issues of food security, the challenges faced by women headed household for their livelihood during Covid-19 era. The chapter also, presents the theoretical/conceptual framework used in the thesis and lastly, the summary of literature review of the thesis.

2.2. The characteristics of female headed families

2.2.1 Socio-economic characteristics of WHH.

Table 2. 1 showing countries where 50-54 % of the poor are Female Headed Households

AFRICA	ASIA	LATIN AMERICA & CARIBBEAN	DEVELOPED REGION
Burkina Faso	Bhutan	Mexico	Bulgaria
Zimbabwe	Bangladesh	Colombia	Belgium
Kenya		Haiti	Spain
Guinea		Jamaica	Hungary

UN. (2009). The World Bank, Socio-economic Data for Asia, Latin America and the Caribbean. London: UN Statistics Division.

Poverty remains as a major problem that is affecting millions of women headed-households in different parts of the world. The international communities, governments and stakeholders have been working tirelessly to eradicate poverty and Zimbabwe has no exception, but the problem still persist (World Bank, 2016). About 3 billion people globally consume less than USD 2,50 per day while 1.3 billion live on less than USD 1,25 a day. Thus, almost half of the world's population is characterised by poor people. Most of the people affected by poverty in the world today are women and a large proportion of them live in Sub-Saharan developing countries (UNDP 2014).

Demographics of WHH

According to Indexmundi (2019), the world population on women-headships fluctuates. In year 2007, 49.40% of women-headed households were recorded in Ukraine. In Namibia year 2003 it was 43,90% and in year 2015 in Zimbabwe was 40,6% of household had female heads. About 40% of households in rural areas are headed by women (Agritex ,2002), commonly this is caused by numerous factors which comprise of widowed, separation and labour migration to towns, commercial farms and mines.

Due to deteriorating economy and consecutive years of drought about 5.5 million people in the rural areas and additional 2.2 million in urban areas are facing severe food insecurity (FAO, 2020). At the same time as women constitute the majority of those living in rural areas and female headed households thus, they facing serious acute food insecurity compared to men. This situation is likely to be further worsened by the national lockdown restrictions which leads to food price increases, and automatically lead to a reduction in the purchasing power and affects the food security pillar of food accessibility.

Marital status

The household head gender is also a frequently recognised variable that affects the socio-economic and food security status of a household especially in developing countries were gender issues are seriously overlooked. The male headed households are less prone to food insecurity since they are recognised in socio-economic activities, institutional representation and culturally Delvaux and Paloma (2018). However, this has been argued by other scholars like (Ngema et al., 2018; Nwaka, 2019), who found gender disparity insignificant.

Education

Women are generally characterised by low education attainment due to social, religious and cultural misinterpretations thus making their household more food insecure. In Kenya and Pakistan there was a study by Mutisya (2016) and Zhou et al. (2017) revealed that, households with higher education attainment are more productive and efficient, which directly benefit households in improved food security due to knowledge sharing and access to new technology.

Institutional Representation of Women

Women face numerous institutional constrains due to their poor social economic characteristics which comprise of low education attainment, lack of land, lack of information and lack of

assets, thus they will be excluded financial packages (credit) due to lack of collateral security. Women encounter persistent barriers to their land rights including legal barriers. Moreover, if male relatives succumb to the pandemic, women's tenure security may further weaken due to limited legal rights, lack of credentials, obstructive social norms (World Bank, 2020).

The women also face challenging working conditions globally, after they opt for embarking in formal productive activities for them to be economically liberated then they face work burdens, exploitation, and social violence, unsafe working conditions and unfair remuneration as compared to their male counterpart (Akter et al, 2020). Moreover, if they opt for running their enterprises, they face gender unjust situations which include discriminations and stoppages relating to the division of labour, by-laws, freedom of expressions, decision making, political rights and sexual harassment. Thus, these issues are the consequences of gender gap and misconstruction of cultures, norms, values and religion.

2.2.2 WHH and Household Food Security (HFS)

According to (WFP, 2020) Household food security is defined as when altogether members of a given household have physical and economic access to adequate, safe and nutritious food at all times that can meet their dietary needs and food preferences for an active and healthy life. Household Food Security is strengthened by four pillars which comprise of food availability, accessibility, utilisation and stability.

Moreover, households that have access to food and meet the accepted definition of household food security are classified as food secure. Then the household with less uncertainty experience of food insecurity are considered to be mild food insecure. The moderately food insecure households have coping strategies like lessening food portions, skipping of meals and it is characterised by monotonous diets. Finally, the household that go for the whole day without food and some members often go to bed hungry are classified as severely food insecure.

In Sub-Saharan Africa (SSA) food insecurity remains as one of the most essential social and economic challenges in the twenty-first century. The prevalence of food insecurity and people who were undernourished increased between the year 2015 and 2016 regardless of the region having achieved significant progress in the mitigation of food insecurity since year 2000 (FAO, 2017). In SSA an estimate of 22.7% of the people were malnourished between the year 2015 and 2016 up from 21% which was recorded in 2014 (FAO, 2017). Furthermore, the FAO food security report specifies that there was an increase in the number of acute food insecure people in the region. However, the rise in food insecurity and malnutrition is also ascribed by adverse

climate effects, which harshly disturbs agricultural production. In addition, the region's conflicts and a difficult global economic environment attributes food insecurity problems.

2.2.3 Livelihood challenges of WHH during Covid-19 era

Globally, women's livelihoods are concentrated in informal sectors with lower-paid jobs. These jobs are more susceptible to disturbances during public health emergencies and lack legal and social protections (CARE, 2020). Women in Kenya account for 60% of job loss recorded since the beginning of the COVID-19 crisis (UN Women, 2020). A rapid assessment of the effects of COVID-19 in East Africa shows that women workers, often the main household earners, lack job security and legal rights (Wahome, 2020). More than 50% of Ugandans, are employed in the informal sector with limited financial safety nets. The majority are women, due to the pandemic have lost earning potential (World Vision, 2020). In Kenya, the horticulture sector, which has 75% female employees, has laid-off thousands of workers, mostly women, due to the outbreak (Wahome, 2020).

Exclusion from extension service

Women dominate in the agricultural production as their source of livelihood. However, they face several constrains which comprise of exclusion from extension services and even though their seriously involvement in agriculture they generally do not own land or other agricultural assets. It has habitually been tough for women to access bank loans or other forms of credit through the banking system. The land tenure system in the country is largely by inheritance and due to lack of title to land and unjust customary laws the women will loss the agricultural land (Famoriyo, 1979).

Travelling ban

The Covid-19 lockdown measure of traveling ban has not only affected the food security status of households but it has affected the all the sectors of production in the value chain system. In Zimbabwe it has caused serious food shortages since the country relies more on food imports. The woman failed to access to markets to sell their perishable horticultural produces and there was a serious post-harvest losses and since their livelihood option has been affected and as well their food insecurity status increases. Moreover, due to regional trade disruption, the women farmers faced the scarcity of agricultural inputs like pesticides, fertilizer, herbicides and seeds.

Thus, their agricultural activities were also affected. The lockdown travelling ban also affected China as the largest fertiliser producer in the world (Marlow S, 2020).

Gender Based Violence (GBV)

Due to lockdown restrictions women become susceptible to many forms of violence due to insecurity of risky environments they live in. They are involved in daily domestic chores like fetching water and fire wood over long distances that may expose them to sexual violence. The previous reports exemplify that GBV often goes significantly underreported and ineffectively addressed during times of crisis. For instance, during the Ebola virus disease outbreak in Central Africa in 2013-2015 the GBV issues increased and victims were regularly uncounted and remain unnoticed as these issues were largely overlooked during the crisis response, leaving women highly vulnerable to abusers (Korkoyah and Wreh, 2015).

2.2.4 Socio-economic and institutional Factors which affect women

According to the World Bank (2014) women constitute a significant proportion of SSA's farmers and contribute most of the agricultural labour. Though, there are drawbacks towards gender equality in the region which include access to agricultural land, productive assets, credit facility, extension services and markets which limit agricultural productivity (World Bank, 2014). In addition, women are more vulnerable to poverty and conflicts especially in fragile states. The socio-economic and institutional factors challenges prevent women from using the agricultural and non-agricultural opportunities due to gender gap. Thus, the household food security of WHH will be affected.

In Kenya, rural women contribute a large number of small scale farmers and their engagement in agriculture production plays an essential role in rural economies, food security and nutrition (USAID, 2017). However, gender inequality, culture and less access to employment, land and education demoralize women's contribution to agricultural and non-agricultural activities.

Financial Exclusion

Women faces massive financial exclusion from the formal microfinance and bank institution than their male counterparts due to lack of productive assets, education, particulars amongst other credit requirements. However, in Nigeria, Ibrahim, Adeola, and Ibrahim (2016) argued that an intensification of women in access to credit can reduced the numbers of households that food insecure to availability of start-up capital for investment.

Food Shortages

According to Barrett, (2020) the world food supply chains has been affected by the lockdown restriction measures in trying to mitigate the spread of Covid-19 pandemic which have affected the availability, pricing, and quality of food. The closure of food industry and food service facilities led to high demand for perishable foods, including dairy products, meat and horticultural products (Lewis, 2020).

School Closure

The lockdown restrictions measure has also affected the social protection programmes, which worsened the household food insecurity and malnutrition. School closure was also considered as a lockdown measure, thus resulting in the loss of school meal social programmes in both developed and developing nations. An estimate of 370 million school children has lost access to free school meals due to school closures as a lockdown measure to control the spread of Covid-19 pandemic (WFP, 2020). The unpaid work for women has also been exacerbated since they will need to take care of their school children on top of their household chores.

Inflation

The Covid-19 pandemic and lockdown restrictions has also led to food price increases in some countries, especially those countries that depend on food imports (Espitia *et al.*, 2020) and Zimbabwe has no exception. In Venezuela and Guyana the food price increased by nearly 50% as of late July in year 2020, while Kenya food price increased by 2.6 % (FAO, 2020). Inflation resulted from disrupted supply chains that have affected the cost of shipping (FAO, 2020). Therefore, food price increases directly impact household food security and nutrition since low income households (WHH) will fail to access the nutritious food items.

2.3 Conceptual framework

In this study, focuses on the implications of Covid-19 on WHH food security status. However, it was revealed that Covid-19 is not only a global health problem but it affects the whole chain of production and food systems. Figure 2.1 shows the conceptual framework of how WHH food security is affected Covid-19. The flow from the Covid-19 outbreak then, the institutional factors like government, health department and law enforcement structured a health policy in trying to reduce the spread of the virus. The Lockdown and health restriction which comprise of (curfew, travelling ban, business operational hours, social distancing, school closure) were imposed thus causing some challenges like loss of jobs, increase on GBV issues, food

shortages, inflation automatically leading to disruption of household income and increases food insecurity. However, it shows that WHH are more susceptible particularly in time of crisis like this Covid-19 era due to their poor socio-economic characteristics (lack of productive assets, education, credit, land, legal rights) which can only bridge them from food insecurity if gender gap is sealed.

Figure 2. 1Conceptual framework

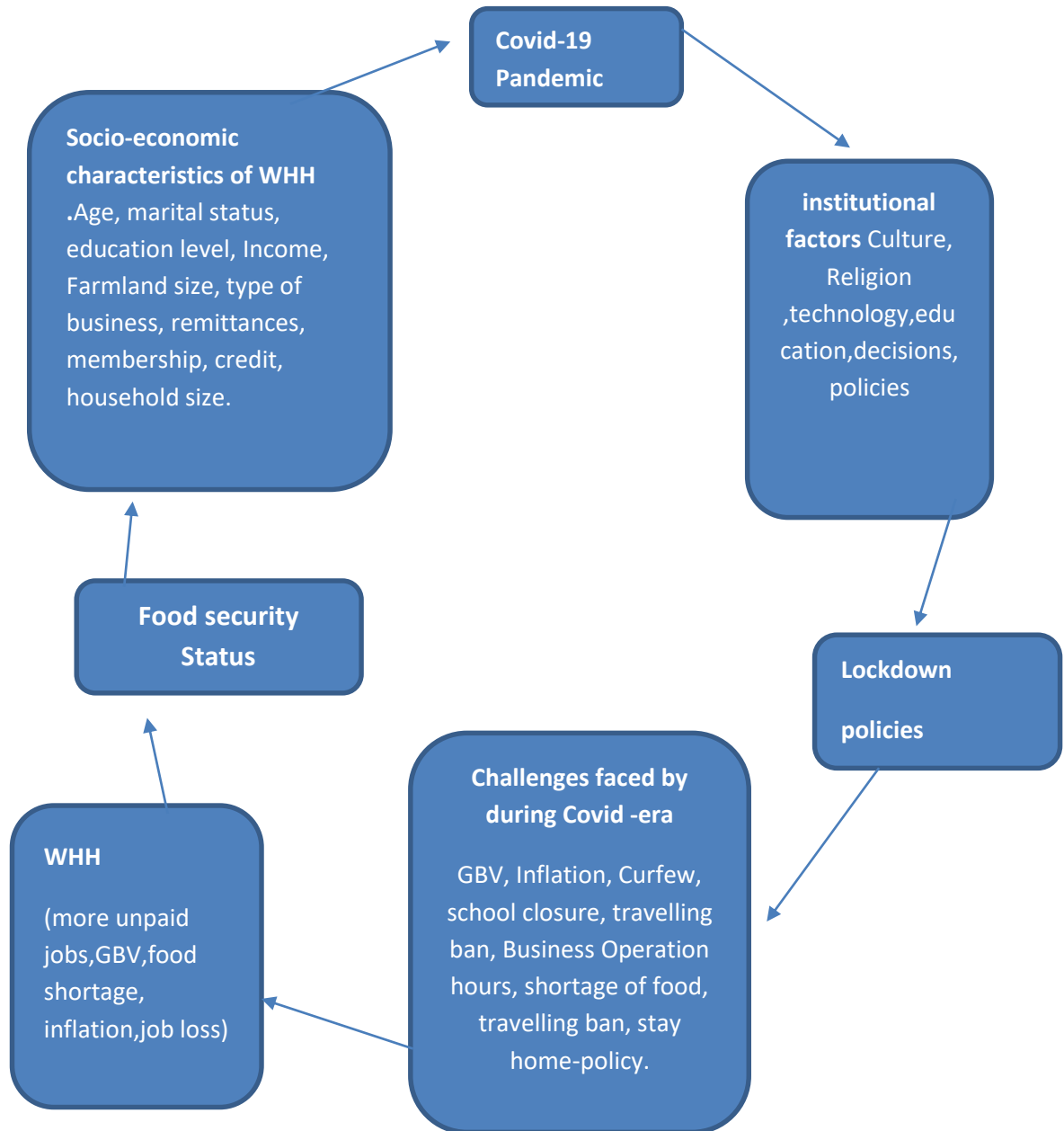


Figure 2.1 showing the Conceptual framework on the implication of Covid-19 on household food security on women headed families.

2.4 Summary of literature Review

The chapter began with theoretical and empirical literature review on research studies regarding the implications of Covid-19 pandemic to WHH. Then the characteristics of WHH on socio-economic, demographic and institutional representation. Due to gender-disparities among other factors the socio-economic status of women is very low and poor as compared to their male counterparts. The number of WHH is increasing globally due to factors like separation and widowed. The WHH considered to be poorest social group globally due to gender-gap. Then, food security status before and during Covid-19, the literature reveals that WHH were facing food insecurity before the outbreak of Covid-19 due the Climate Change effects. Finally, the literature reveals, the socio-economic and institutional factors which affect household food security of WHH. Women have no access to agricultural land, productive assets, credit facilities, knowledge, new technology and extension service which make them more vulnerable to food insecurity in times crisis, like the outbreak of Covid-19 pandemic. The lockdown measures in trying to contain its spread it significantly affected all sectors of production including the livelihood options of informal workers (WHH) thus worsening their household food insecurity, malnutrition and GBV issues.

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CHAPTER 3

METHODOLOGY

3.1 Introduction

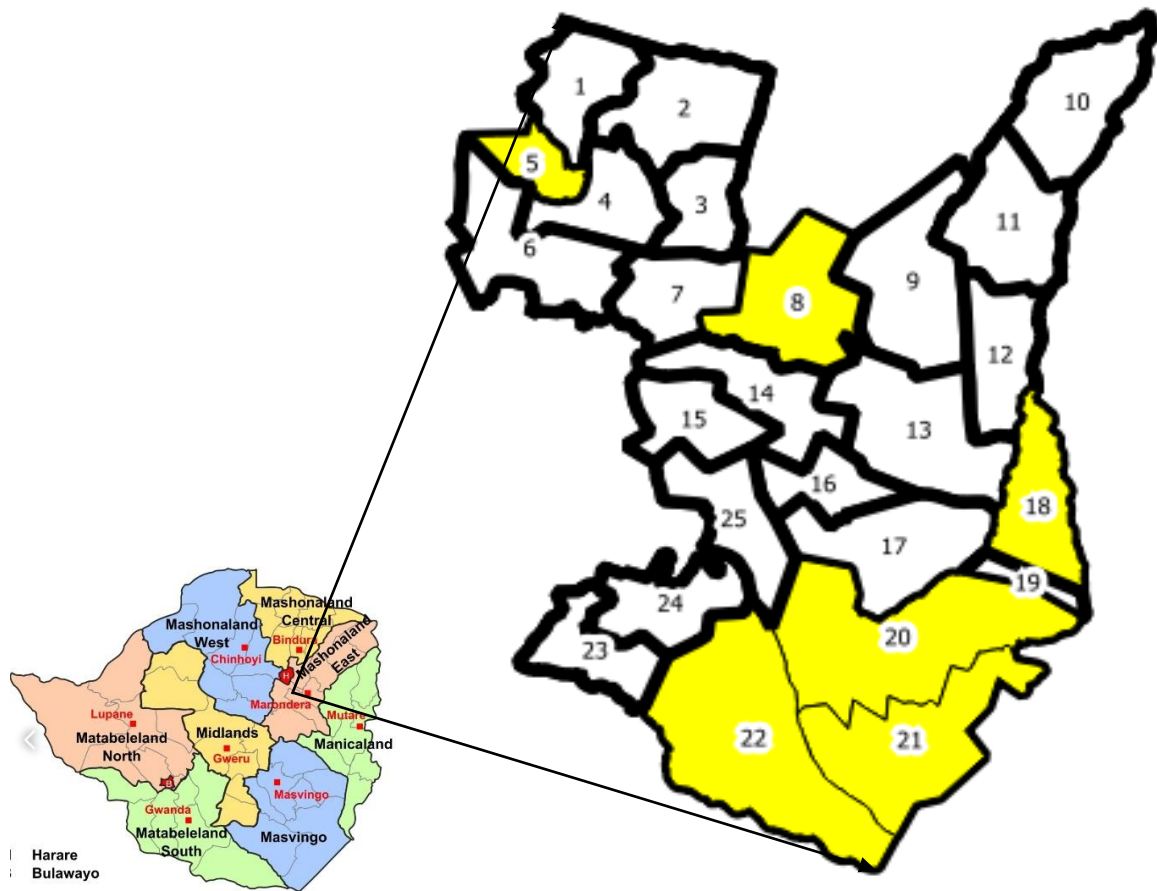
This chapter gives an overview of the research methods, which delineates whether the research is quantitative or qualitative. The chapter furthermore explicitly defines the study area, present the research design, as well as the target population and the study unit. It is also made up of sampling methods in terms of the sampling technique, sampling procedures and sample size. Data analysis methods and its framework. The chapter is capped off by presenting the ethical considerations and finally, research methodology summary

3.1.2 Description of study area/sites

3.1.2 Study site

This study was conducted in Goromonzi district under Mashonaland-East province, located in the eastern part of Zimbabwe, with a general population of 224 987 (Zim-Stat, 2012). The district is predominantly rural (75%) and the remaining 25% making up the urban population. It covers an area of approximately 9100 km², (Davies et al, 1982). The district has geographic coordinates of 17° 51' 22' S and 31° 22' 48' E. The district borders with Shamva district to the north east, Mazowe district to the North West, Bindura town to the north, Murewa district to the East, Marondera district to the South, Seke district to the South West and Harare on its western boundary. The main economic activity is agriculture. The major farming activities comprise of horticulture, tubers, livestock rearing, dairy production and the most farming practise is subsistence which primarily depend on rain-fed. The soils vary from predominantly pale sand soils to deep red-soils. The average temperature varies from 15 to 20 degrees Celsius. The two major seasons are summer (October-March) which is normally hot and wet, Winter (April-September) which is normally very cold and dry. According to (ZNVAC, 2002), the district's communal areas constitute about 35% of the arable land and large scale farming about 40%. The district is in agro ecological regions IIa, characterised by good rains for cereal production averaging between 650 mm and 900 mm per season. Crop and livestock production can be practiced all year round but is limited by irrigation water shortages mostly in communal wards.

Figure 3. 1 showing Goromonzi District map and wards under study shaded in yellow colour.



Source: www.en.wikipedia.org/wiki/Provinces_of_Zimbabwe

3.3 Research Design

The study employed survey research design to scrutinise the women headed household’s food security status before and during the Covid-19 era using the Household Dietary Diversity Score (HDDS), examine the characteristics of women headed households relating to socio-economic status, demographics and institutional representation in Goromonzi District. examined the challenges faced by women headed households in improving livelihoods during Covid-19 era. A quantitative approach was used. This design involved collection and gathering of data from a specified population (women headed households) on a specific subject with the intent of making things easier from a sample population.

3.3.1 Target Population

The target population of the current study was focusing on women-headed household only, under Goromonzi district from the age of 18-years and above. This population purposively drawn from the 6 wards.

3.4 Sampling Procedures and Sample Size

Goromonzi district, was purposefully selected based on closeness to the researcher, so as to enhance movement during data collection process. The Six (6) rural wards which comprise of Rusike, Melfort, Remari, Bromley, Great Bromley and Pote was selected through the use of purposive sampling because that is where female-headed households are predominantly found and is the permissible operational area of the researcher. The study respondents were identified from the Women Affairs District Coordinator's (WADC) women-head list through a simple random sampling.

The formula below was utilised to account for the sample where a probability sampling method is used (Fowler FJ ,2009).

$$n = \frac{N}{1+N(e)^2}$$

Where n = sample size; N = population size 130 in this case and e = degree of precision (95%).

$$n = \frac{130}{1+130(0.05)^2}$$

$$n= 90$$

Table 3. 1 showing sample distribution within 6 wards of Goromonzi District

District	Wards	Sample size
Goromonzi	5	15
	8	15
	18	15
	20	15
	21	15
	22	15
Total		90

Source: Women Affairs District Coordinator's 2021 own calculations

3.5 Data collection methods

All data for the four specific objectives was collected using structured questionnaire. The questionnaire contained questions relating to examine the characteristics women-headed households relating to demographics, socio-economic status and institutional representation, their household-food security status using the HDDS before and during Covid-19 era, examine challenges on livelihood improvement during Covid-19, and determining factors which affect women-household heads on socio-economic and institutionally in Goromonzi District. They were administered to women-headed households only. During administering process, some sections of the questionnaire was translated into the local ChiShona language for ease understanding by the household. The questionnaire for data collection was pre-tested before actual data collection.

3.5.1 Validity and reliability of survey instrument (Questionnaire)

The validity of the questionnaire was tested through expert opinion from supervisor's guidance and the researcher also used literature (journals, theses and papers) to determine how the research instrument meets quality standards.

3.5.2 Pre-testing

Twelve respondents' (women-headed household) were selected randomly in ward 16 (Majuru) outside the targeted study area to detect the errors of the questionnaire before the actual survey. The total time to complete questionnaire was also averaged to 12-15 minutes for an effective data collection. The pre-testing was done to ensure on applicability and relevance, and also to obtain feedback on the suitability of the content and accuracy of the translations. Blurred questions were rephrased, irrelevant questions were removed from the questionnaire and appropriateness approved. After pre-testing the instrument, the researcher and assistance collected the data.

3.5.3 To examine the characteristics of women headed households relating to demographics, socio-economic status, and institutional representation during Covid-19 era in Goromonzi district, Zimbabwe.

A personally administered questionnaire with 10 various questions was used as the main primary tool for data collection. The structured questionnaire included the characteristics of women-headed household relating to their socio-economic status, demographic and

institutional representation in Goromonzi District. The socio-economic status was captured directly connected to household livelihood activities which comprised of (on) and (off-farm) that is horticulture, poultry, buying and selling, membership of savings group, remittances, employment status, farm size, access to credit and total house-hold income. On demographic the all women-headed household were asked structured questions which comprise of family size, age, level of education, Marital status. The institutional characteristics included extension service delivery (AGRITEX) and NGOs, participation in community development programs, involvement of women in local leadership roles. The questionnaire was designed mainly to ticked however also required some fill-in space.

3.5.4 To compare the women-headed household food security status before and during Covid-19 era in Goromonzi district, Zimbabwe.

Household Dietary Diversity Score (HDDS) was used as a measure of household food security status. It is the number of food groups consumed by by members of the household inside the home over a reference time period. The HDDS also measures the economic capability of a household to access and availability of a variety of foods (FAO, 2008). According to (WFP, 2005) there is indications that HDDS is widely accepted as a suitable measure of food security especially on food access and availability aspects.

Why HDDS?

- Monitor seasonal fluctuations in food access.
- Measure the impact of a project on household food access.
- Serve as an indicator within an early warning system.

The HDDS reflect the actual figure of different food groups consumed calculated and the quality of diet within a house-hold, rather than the number of different foods consumed. For instance, an average of four different food groups implies that their diets offer some diversity in both macro- and micronutrients. This is a more eloquent indicator than simply knowing that households consume four different foods, which might all be cereals. The following set of 12 food groups on (table 3.2) is used to calculate the HDDS (FAO ,1992).

Table 3. 2 showing the food groups for HDDS

1. Cereals	7. Fish and seafood
2. Root and tubers	8. Pulses/legumes/nuts
3. Vegetables	9. Milk and milk products
4. Fruits	10. Oil/fats
5. Meat, poultry, offal	11. Sugar/honey
6. Eggs	12. Miscellaneous

3.5.5 Household Dietary Diversity Score Calculation

The structured Household Dietary Diversity Score (HDDS) was used and it was calculated by summing up the number of food or food groups eaten in January 2020 (before Covid-19) in Zimbabwe and over the past 24-hours (during the Covid-19 era). The study allocated values for each food group as ‘0’ for the negative answer (not consumed) or ‘1’ for the positive answer (consumed). Higher dietary diversity was indicated by a higher score, ranging from 0 to 12.

The HDDS was also used as a categorical variable for analyses. For categorical HDD, scores will divide into three categories specifically High-dietary diversity, (7–12), Medium-dietary diversity (4–6) and Low-dietary diversity (0–3).

3.5.6 To examine the challenges being faced by women-headed households in improving livelihoods during Covid-19 era in Goromonzi district, Zimbabwe.

A personally administered questionnaire was used as the main primary tool for data collection and asked information on the challenges assumed by scholars to be faced by women headed households during the Covid-19 era in trying to improve livelihoods in Goromonzi District. The questionnaire was structured so that it took account of nine (9) challenges assumed by researchers during the Covid-19 era.

The women-headed household challenges for improving livelihoods was measured using a 5-point Likert scale ranging from “not a challenge” to “very big challenge”. The challenges are shown in the (Table 3.3).

Table 3.3 showing the challenges of WHH during Covid-19 era and a 5-point Likert scale ranges.

Women-headed Challenges	5-point Likert scale range				
	Not a challenge	A challenge	A minor challenge	Big challenge	Very big challenge
Curfew from 6pm - 6am ?					
travelling ban?					
Business operation hours from 8am-1500Hrs					
Ban of public gatherings					
Stay home policy					
Inflation					
Shortage of food					
School Closure					
Gender Based Violence					

3.5.7 To determine socio economic and institutional factors which affect food security status of women headed households in Goromonzi district, Zimbabwe.

A personally administered questionnaire was used to ask information on socio-economic and institutional factors in Goromonzi District. A total of 12 questions were included in the questionnaire on the socio-economic and institutional factors which affected food security of

women-headed households. The respondents answered (Yes) or (No) for each variable. The (table 3.4) shows the questions which will be asked on objective 4.

Table 3. 4 Showing the socio-economic and institutional factors which affect WHH.

C1) Women access to credit from Formal Finance Institutions(FFI)	YES	NO
C2) Women access to farm-land	YES	NO
C3) Women access to market	YES	NO
C4) Women access to Education	YES	NO
C5) Women access to capital	YES	NO
C6) Women access to extension services	YES	NO
C7) Women access to new technologies	YES	NO
C8) Women access to information	YES	NO
C9) Women in leadership positions	YES	NO
C10) Women participation in decision making / community development programs	YES	NO

3.5.8 Organisation and implementation of the field work

The study team for data collection comprised of one research assistance an under-graduate student on attachment and the researcher himself. The team worked together on the study design, data collection and data analysis. At community level, consent was sought first from ward Councillors and the village heads. Before signing of the consent form, participants were informed about the purpose of the research and were made to understand the nature and purpose of the research for them to participate without coercion.

In this study, participation was voluntary, based on participants' knowledge of research processes and the consequences of such processes on their well-being as well as the freedom to withdraw from the research process.

3.6 Data analysis methods

This section describes the analytic tools to be used in the research project on each objective. For objective 1, a personal structured questionnaire was coded and entered and descriptive statistics. For objective 2, the pre-tested (FAO) HDDS questionnaire with 12 questions was used and (1) will placed for consumption of food groups whilst (0) will be placed for non-consumption and Pearson X^2 (Chi-Square) statistic was employed. For objective 3, the 5-point Likert scale ranging from “not a challenge” to “very big challenge” was used and the

descriptive statistics. Lastly, on objective 4 the multinomial logistic regression model was employed.

3.6.1 To examine the characteristics of women-headed households relating to demographics, socio-economic status, and institutional representation during Covid-19 era in Goromonzi district, Zimbabwe.

The data that was collected using a structured questionnaire was coded, entered, cleaned and run in Statistical Package for Social Sciences (SPSS Version 20) software and Microsoft Excel 2016 program for analysis.

3.6.1. Analytical presentation

On the characteristics of women-headed households in Goromonzi district related to demographics (age, educational attainment, family size, marital status), descriptive statistics was used in form of a tables and percentages. Then socio-economic status which comprise of (membership to societies, type of business, remittances, credit, house-hold income) Lastly on institutional representation of women-headed to examine categorically the representation.

3.6.2 To compare the women-headed household food security status before and during Covid-19 era in Goromonzi district, Zimbabwe.

On objective two (2), the structured HDDS questionnaire was used with 12 food groups which were consumed by the household before Covid-19 and in the last 24 hours during the Covid-19 era. It was coded in relation to 12 questions where one (1) was placed when the household consumed whilst zero (0) was placed when the household did not consume that specific food group. The HDDS variable is calculated for each household. The value of this variable will range from 0 to 12.

HDDS (0-12) Total number of food groups consumed by members of the household. Values for A through L will be either “0” or “1” for instance:

$$\text{HDDS} = \text{Sum} (A + B + C + D + E + F + G + H + I + J + K + L)$$

3.6.2.1 Analytical presentation

The Pearson X^2 (Chi-Square) statistic will be used as a tool to compare women-headed household food security status before and during Covid-19 pandemic in Goromonzi District.

Equation: (Moore JF, 1994)

$$X^2 = \sum_i^K \frac{(O_i - E_i)^2}{E_i} O_i$$

O_i = Observed variables

E_i = Expected variables

Hypothesis

$H_0 : O_i = E_i$

$H_1 : O_i \neq E_i$

3.6.3 To examine the challenges being faced by women-headed households in improving livelihoods during the Covid-19 in Goromonzi District.

The data was collected using questionnaire and coded, entered in cleaned in Statistical Package for Social Sciences (SPSS Version 20) software and Microsoft Excel 2016 program for analysis.

3.6.3.1 Analytical Presentation

Descriptive statistics will be used which will be presented by tables and percentages on (Travelling ban, operational business hours, curfew, access to farm land, GBV, access to credit and access to new technology). A 5-point Likert scale ranging from “not a challenge” to “very big challenge”, was employed to analyse the challenges being faced by women-headed households in improving livelihoods during Covid-19.

3.6.4 To determine the socio-economic and institutional factors which affect food security of women-headed households in Goromonzi district during Covid-19 era.

The data that was collected using questionnaire was coded, entered and cleaned using Statistical Package for Social Sciences (SPSS Version 20) software and Microsoft Excel 2016 program for analysis. The table was completed by data on socio-economic and institutional factors of women-headed household during Covid -19 era.

3.7 Analytical presentation

The dichotomous responses of YES or NO was used to determine the socio-economic and institutional factors which affected food security status of women-headed household in

Goromonzi District. The multinomial logistic regression model was employed as a tool to analyse the socio-economic and institutional factors.

Equation: $Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \dots + U$ Hosmer, D. W., & Lemeshow, S. (1989)

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \beta_7 X_7 + \dots + U$$

Where:

Y = Food Security of Women-headed households

X_1 = Age

X_2 = Marital status

X_3 = Education level

X_4 = Household size

X_5 = Type of business

X_6 = Farm size

X_7 = Total Income per month

X_8 = Institutional representation

β_0 = Constant

$\beta_1 - \beta_8$ = Coefficients of explanatory variables

U = Error term.

3.8 Ethical Considerations

The purpose of research ethics is to protect the welfare of the research participants (Blanche *et al.* 2009). They added the claim that research ethics also include not only the well-being of the informants but stretches to areas of scientific transgression and plagiarism. The nature and determination of the study and methods of data collection was addressed in detail to all the respondents. The study followed an informed consent protocol so that all the participants verbally agreed to the terms of the study before data collection commenced. The respondents were given the choice to discontinue the process if they feel uncomfortable during the

interview. The permission was acquired for all the snaps to be captured and electronically record in the interview. The household survey was conducted at a suitable and convenient location and time to the respondents. The moral, ethical and social norms of the respondents was highly respected. All information collected will be strictly confidential and no name that will appear in the final report and measures will be taken to avoid information to be referred back to any of the respondents.

3.8 Chapter Summary

The chapter has examined the research methodology by first describing the Goromonzi District study area. Then the research design, sampling procedures, data collection and data analysis for each of the the four specific objectives of this study. This chapter extensively examined the data analysis methods and analytic presentation for each objective in the study. The chapter as well absorbed on the coding, entering, cleaning and processing of data using the Statistical Package for Social Sciences (SPSS Version 20) software and Microsoft Excel 2016 to analyse data. Moreover, the chapter presented the descriptive statistics of the characteristics of women-headed household relating to (demographics, socio-economic and institutional representation). Lastly how the multinomial logistic regression model was employed to analyse the socio-economic and institutional factors which affect women-headed households in Goromonzi district.

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CHAPTER 4

The characteristics of women headed households relating to demographics, socio-economic status, and institutional representation during Covid-19 era in Goromonzi district, Zimbabwe.

Abstract

Women-headed household face greater constrains on household food security than any other social groups in Goromonzi district. The global outbreak of Covid-19 pandemic has significantly impacted their socio-economic and food security status due to the imposed lockdowns amongst other health restrictions measures in trying to control the pandemic. The objective of the study was to examine characteristics of women-headed households relating to demographics, socio-economic status, and institutional representation during Covid-19 era in Goromonzi district, Zimbabwe. A purposive sampling method was used to select 6 wards and then a simple random sampling method was used to identify 90 women- headed households from wards lists. The data was analysed using descriptive statistics (table) and percentages. The results revealed that the the majority of the women headed households were widows with (34.4%) whilst the least was not married with (1.1%). The majority of respondents (78.9%) earn between USD 50 and 100 per month while the lowest is 2.2% earning between USD 150 to 200. The majority of women-heads had the highest (91.1%) which do not have institutional representation and the least with (8.9%) have few institutional representations. To improve the food security status of women-headed households the Government and NGOs should build women's and girls' economic resilience to copy with the crisis and future shocks.

Keywords: socio-economic, women, household, income, on-farm, Covid-19

4.1 Introduction

There are two groups of female-headed households which are firstly, the household comprise of a woman who is (single, divorced, widowed or separated). Secondly, it comprises of (wives of a male migrants or woman who play the fundamental role even with presence of a male partner in their lives), (Chant, 2003). The conception of female headship appears as challenging, transitional, and biased. The other factor which may make someone household head is the socio-economic status.

The global outbreak of the novel Covid-19 pandemic has a significant impact on the livelihood and economic security of women. According to ILO (2018) in the Asia-Pacific an estimate of (68%) of people who are employed work under informal sector which is dominated by a high number of women and WHH has no exception. The majority of women in formal sectors such as industries which comprise of as travel, hospitality, textile manufacturing and retail sales, were severely affected by the Covid-19 pandemic lockdown measures in trying to mitigate the spread of the disease, World Bank (2020). A big number of women who are informally employed are seasonal agricultural workers.

There is a gender wage gap and lack of improvement in opportunities of women in these vulnerable forms of work which also increases their susceptibility to poverty. In Thailand and Cambodia, more than 60 % of women are not medically protected which can directly lead to economic insecurity, UN Women (2020). Moreover, their lack of formal employment bars their access to social and legal protection mechanisms, which have proven to be vital concern in a crisis such as the current COVID-19 pandemic.

Women are living in massive poverty since they are excluded and denied access to critical resources and services such as land, credit, inheritance, education, technology, formal employment amongst other things thus, it makes it very difficult for them to be separated to poverty and food insecurity (UN Women, 2000). According to Chant, (1997) the prevalence of women-headship has increased globally in both developed and developing nations. A high percentage of these households are found to be below Poverty Datum Line (PDL).

The women socio-economic development and empowerment needs a thrust and a willingness for transformation of the women themselves, which encompasses their aptitudes and self-confidence, restructuring the institutions and the communities following revision in norms and culture with gender-gap and enabling economic environment with favourable value chains and markets and supportive legal and political environments (Golla et al, 2011).

4.2 Material and Methods

The details concerning the study area and the methodology which comprises sampling procedures, questionnaire design, methods of data collection and data analysis are described in chapter 3. For the purpose of this chapter, only a summary is provided.

4.2.1 Descriptive of the Study area

The study was conducted in Goromonzi district in Mash-East Province of Zimbabwe. The details on the description of the study area are given in Chapter 3 section 3.2.

4.2.2 Research Design

The study employed mainly survey research design comprising use of individual (women-headed household) interviews through use of personally administered questionnaire in the collection of data. Details regarding the research design is given in Chapter 3 section 3.3.

4.2.3 Sampling Procedure

Women headed households were randomly selected from six wards of Goromonzi district then interviewed by the researcher in April 2021. Details regarding the sampling procedure are given in Chapter 3 section 3.4.

4.2.4 Data Collection Procedure

The study employed a personally administered pre-tested questionnaire and observation techniques for data collection through personal interviews in April 2021. More details concerning data collection procedure are given in Section 3.5 of Chapter 3.

4.2.5 Data Analysis Procedure and Methods

Descriptive statistics was applied to analyse the characteristics of women headed households relating to demographics, socio-economic status, and institutional representation during Covid-19 era in Goromonzi district, Zimbabwe. Section 3.6 of Chapter 3.

4.2.6 Challenges encountered during data collect

The study come across several challenges during data collection due to Covid -19 global pandemic. There were health restrictions to mitigate the spread of the virus which comprised of travel ban, social-distancing, stay home policy, curfew amongst others thus made it so

difficult for the data collection since everyone was in fear of this deadly Covid 19-pandemic. The distribution of respondents in the Goromonzi District especially in ward 21 and ward 22 were remote spaced and haphazard due to resettlement. The researcher also has tried to use the telephone interview but some of the wards do not have full coverage of mobile network.

4.3 Results

4.3.1 The characteristics of women headed households relating to demographics, socio-economic status, and institutional representation during Covid-19 era in Goromonzi district, Zimbabwe.

(Table 4.1) results reveals that, the majority of the women headed households were widows with (34.4%). Most of the respondents were between 31 and 40 years of age with (31.1%). Most respondents have attained primary education (51.1%). The majority of the households had more than 6 people with (47.8%). The dominant business practised by women headed households is on-farm with (80%). The majority of women headed house households have small plots of less than one hectare (73%). The majority of the women heads had the highest with (77.8%) which belonged to co-operatives. The majority of respondents (78.9%) earn between USD 50 and 100 per month. The majority of women heads had (91.1%) which do not have institutional representation.

Table 4. 1 showing the characteristics of women headed households relating to demographics, socio-economic status, and institutional representation during Covid-19 era in Goromonzi district, Zimbabwe.

Demographic Characteristics	Category	Number of respondents	Percentage respondents
Marital status	Divorcee	20	22.20%
	Husband away	8	8.90%
	Not married	1	1.10%
	Separated	30	33.30%
	Widow	31	34.40%
Age (years)	18-30	21	23.30%
	31-40	28	31.10%
	41-50	17	18.90%
	51+	24	26.70%
Level of education	None	11	12.20%
	Primary	46	51.10%
	Secondary	32	35.60%
	Tertiary	1	1.10%
Household size	≤3	13	14.40%

	4 to 5	34	37.80%
	6+	43	47.80%
Socio-economic			
Type of business	Off-farm	18	20.00%
	On-farm	72	80.00%
Farm size (Hectare)	≤1	73	81.10%
	2 to 5	13	14.40%
	5+	1	1.10%
	None	3	3.30%
Membership to cooperatives or savings group	No	20	22.20%
	Yes	70	77.80%
Total Income Per Month (USD)	≤50	5	5.60%
	50-100	71	78.90%
	100-150	12	13.30%
	150-200	2	2.20%
Institutional representation	Few	8	8.90%
	None	82	91.10%

The Marital status

The results of the study show that the majority of the respondents were widows whilst the least were not married. However, female headship has been also increased by deadly disease like HIV/AIDS since Zimbabwe has an estimate of 33% of 15-49 years old being infected. Thus, leaving grandmothers heading the households (ZNVAC, 2002).

Type of business

The results show that the majority of Women-headed households are into on farm activities (agriculture) as livelihood option. This was argued by (Iram and Butt,2004) that when a household has a consistent income it is much easier for it to be food secure but in Zimbabwe only a small percentage of people are employed in the formal sector. The majority of people are involved in agriculture which is dominated by women and their income depends on a good harvest.

The results show that, the majority of women-headed are members of associations or commodity groups this has greatly improved in many Zimbabwean communal areas in trying to financially involve women without collateral security. It also supported by UNESC (2012) since it plays a crucial role in bridging the gender gap that exists within such an important factor as information dissemination.

Institutional representation

The results of the study showed that, the majority of women headed households lacked institutional representation. According to Folasade (1991) emphasized that due to a very low number of women who have security of tenure, they will be excluded from extension service and new agricultural technologies. Moreover, due to the emergency of Covid-19, there were very low number of institutions which represented women on Covid-19 task force and response, since they are the large group of people who are on the front line in health sector (Care, 2020).

Household size

The results of the study show that, the majority of the households had more than 6 people per household, concurring with Maonga *et al.* (2013) that household size decides gender roles on agricultural activities in Malawi and the larger household size is a form of cheap family labour as compared to smaller household size where family labour is in limited and depends on labour hiring. The other reason of big family size maybe due to extended families structures.

Level of education

The majority of the women headed attained primary school level and only 1 from the respondents attained tertiary level. This may be due to financial status, religious belief and early marriages amongst others.

4.4 Summary

The results reveals that, the majority of the women headed households were widows with (34.4%). Most of the respondents were between 31 and 40 years of age with (31.1%). Most respondents have attained primary education (51.1%) whilst the lowest was only one with (1.1%) who attained tertiary level. The majority of the households had more than 6 people with (47.8%). The dominant business practised by women headed households is on-farm with (80%). The majority of women headed house households have small plots of less than one hectare (73%). The majority of the women heads had the highest with (77.8%) which belonged to co-operatives. The majority of respondents (78.9%) earn between USD 50 and 100 per month. The majority of women heads had (91.1%) which do not have institutional representation.

4.5 Conclusions

In Zimbabwe, female-headed households suffer the similar problems as the poor more commonly and poverty alleviation policies should benefit the female-headed household as much as the male counterpart. one. However, female-headed households are not strangely income poor but they do lack assets, predominantly those assets needed for agricultural production. This limits their ability to diversify both in terms of the types of crops grown and in taking advantage of any local labour market options. But they don't excessively lack income or education. Therefore, with more resources, technology, information and support from extension services they may be well placed to improve their food security status, through agriculture as business and crop diversification.

4.6 Recommendations

- On education, women should receive adult education, even the dissemination of new technology in vernacular (Shona) using virtual platforms so they understand sustainable Agriculture (Climate Smart Agriculture) and post-harvest management to mitigate the impacts of climate change which leads to poor yields and losses.
- On type of business, the Government and Council should create space for informal traders mainly (women) to continue engaging in their socio-economic and livelihood activities in a safe and secure environment to improve their household food security during the Covid-19 era.
- On household size, the Government and NGOs should provide affordable health services and awareness to rural women especially on contraceptives methods sexually reproduction health and rights (SRHR).
- On land size, The Government should consider equal allocation of agricultural land, inputs and extension services between men and women.
- On total income per month, NGOs and Government should assist on community resilience building aftershocks and pandemics with supporting resilience project like home gardens, apiculture and keeping of small livestock.
- On institutional representation, the female legislatures in parliament should be involved in making decisions and ensure that the public policies are gender sensitive from grass root level. Moreover, Government and NGOs should develop gender-responsive social

protection programs such as cash transfers and trainings on community identified home income generating activities like poultry to help vulnerable women-headed.

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CHAPTER 5

The women-headed household food security status before and during Covid-19 era in Goromonzi district, Zimbabwe.

Abstract

Women-headed household face greater constrains on household food security than any other social groups in Goromonzi district. The global outbreak of Covid-19 pandemic has significantly impacted their socio-economic and food security status due to the imposed lockdowns amongst other health restrictions measures in trying to control the pandemic. The objective of the study was to compare women-headed household food security status before and during Covid-19 era in Goromonzi district, Zimbabwe. A purposive sampling method was used to select 6 wards and then a simple random sampling method was used to identify 90 women- headed households from wards lists. The structured FAO (HDDS) questionnaire was employed to the respondents' (women headed household). The data was analysed using Pearson X^2 (Chi-Square) statistic and descriptive statistics (bar-graph) and percentages. The results revealed that there was a significant difference on dietary diversity (food security) before and during Covid-19 ($\chi^2=96.8$; $P<0.0001$). For women-headed households to improve the food security status, women should practice sustainable Agriculture (Climate Smart Agriculture) and post-harvest management to mitigate the negative impacts of climate change promotes food insecurity.

Keywords: food security, women, household, agriculture, Covid-19

5.1 Introduction

Food security by definition is “a situation that exists when all people, at all times, have physical, social, and economic access to sufficient, safe, and nutritious food that meets their dietary needs and food preferences for an active and healthy life”. This definition is made up of four fundamental parts namely availability, accessibility, utilization and sustainability. A food system is said to be vulnerable when one or more of the four components of food security are uncertain and insecure (FAO, 2008).

Food-security is a multi-dimensional conception since it integrates all its aspects than being solely measured (Chung, Haddad, Ramakrishna, & Riely, 1997). Though, household food-security is well-defined as sustainable access to sufficient quantity and quality of food to ensure adequate dietary intake and a healthy life for all household members (FAO, 1992). Though, food supplies are satisfactory at cumulative level there are various factors which avert poor households from accessing food. The factors include lack of purchasing power, lack of access to land for own cultivation, lack of assets, financial exclusion and public assistance programs exclusion (Sen, 1995).

The women-headship is when a woman is in charge of managing the family in terms of all the household expenditures and making decision. It is generally caused by a variety of factors which encompass divorce, spouse death, migration, abandoned by the husband or disability of the husband. The number of female headship has increased drastically in the recent half century especially in the developing countries (Rafii F *et al*,2013).

In situations of shocks frequently lead to food shortages, thus food prices bound to increase, specifically for the nutritious food will experience the highest spike. The food prices increased by 8 to 10% between April 2019 and April 2020 following the outbreak of Covid -19 pandemic, driven mainly by shortages related to disruptions in the supply chain (UN-Habitat and WFP, 2020).

The novel Covid-19 pandemic has the potential of impacting Household Food Security by not solely the disturbing of food systems but as well affecting household incomes due to unemployment and physical access to food due to home quarantine and restriction orders.

Food security is a serious issue for women and girls as they face increased burdens for domestic responsibilities during the pandemic (CARE, 2020). The Covid-19 might double number of people suffering from acute food insecurity, increasing from 135 to 265 million (WFP, 2020).

Before the outbreak of Covid-19, about 45 million people in Southern Africa were recorded to be food insecure as the region entered the peak of the lean season, between January and March 2020. Thus, a situation has been worsened by Covid-19 (CARE, 2020).

5.2 Material and Methods

The details concerning the study area and the methodology which comprises sampling procedures, questionnaire design, methods of data collection and data analysis are described in chapter 3.

5.2.1 Descriptive of the Study area

The study was conducted in Goromonzi district in Mash-East Province of Zimbabwe. The details on the description of the study area are given in Chapter 3 section 3.2.

5.2.2 Research Design

The study employed mainly survey research design comprising use of individual (women-headed household) interviews through use of a FAO, HDDS questionnaire in the collection of data. Details regarding the research design is given in Chapter 3 section 3.3.

5.2.3 Sampling Procedure

Women headed households were randomly selected from six wards of Goromonzi district then interviewed by the researcher in April 2021. Details regarding the sampling procedure are given in Chapter 3 section 3.4.

5.2.4 Data Collection Procedure

The study employed a pre-tested questionnaire and observation techniques for data collection through personal interviews in April 2021. More details concerning data collection procedure are given in Section 3.5 of Chapter 3.

5.2.5 Data Analysis Procedure and Methods

Descriptive statistics (bar graph) was applied and the Pearson X^2 (Chi-Square) statistic was used as a tool to compare women-headed household food security status before and during Covid-19 pandemic in Goromonzi District. The procedure was given Section 3.6 of Chapter 3.

5.2.6 Challenges encountered during data collect

The study come across several challenges during data collection due to Covid -19 global pandemic. There were health restrictions to mitigate the spread of the virus which comprised of travel ban, social-distancing, stay home policy, curfew amongst others thus made it so

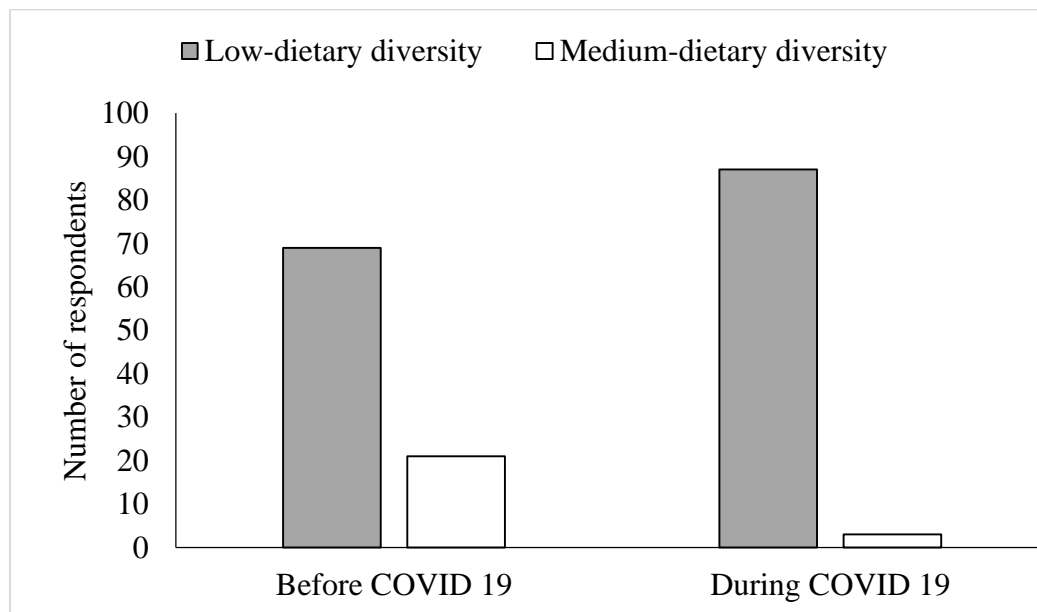
difficult for the data collection since everyone was in fear of this deadly Covid 19-pandemic. The distribution of respondents in the Goromonzi District especially in ward 21 and ward 22 were remote spaced and haphazard due to resettlement. The researcher also has tried to use the telephone interview but some of the wards do not have full coverage of mobile network.

5.3 Results and Discussions

5.3.1 To compare the women-headed household food security status before and during Covid-19 era in Goromonzi district, Zimbabwe.

The results (Figure 5.1) reveals that there was a significant difference dietary diversity (food security) before and during Covid-19 ($\chi^2=96.8$; $P<0.0001$). Before COVID-19, (77%) of respondents were on Low Dietary Diversity (LDD) while (23%) were on Medium Dietary Diversity (MDD) representing a (54%) difference and none (0%) of the respondents was on High Dietary Diversity (HDD) (food secured). During COVID 19 those on (LDD) increased significantly to (97%) while those on (MDD) decreased to (3%), corresponding to a (94%) difference and (0%) of the respondents was on HDD (food secure).

Figure 5. 1. showing Food security status before and during Covid-19 era, measured as HDDS.



Food Security Status before Covid-19

The results show that there was a large number (77%) of respondents were food insecure before the outbreak of Covid-19 in Goromonzi district. Additionally, none of the respondents was recorded for HDD (food secure) since (0%) was recorded on that category. A related study was done by (FAO *et al.*, 2020) in the latest report on State of Food Security and Nutrition. It stated

that about two billion people face food insecurity. From the year 2014 the numbers of food insecure people have been rising by 60 million in a period of five years particularly in developing countries and Zimbabwe has no exception.

Food Security Status during Covid-19

The results show that the food security status was significantly affected by the emerging of the Covid -19 pandemic, because there was an increase of respondents in LDD (food insecure) category from (77%) to (97%) as shown by (Figure 5.1) before and during Covid-19 era in that order. This may be caused by imposed lockdown measures in Zimbabwe. Similar studies by (Naja F and Hamadeh R, 2020) in Bangladesh it shows that household food insecurity increased by (51.7%) during the COVID-19 home quarantine lockdown period. WFP, (2020) also predicted that the food insecurity will double during Covid-era especially in developing countries of Southern Africa which was for the past years affected by drought and Climate Change effects. The majority of women have informal jobs like vending and agriculture (UN Women, 2020). The other reason for the high level of food insecurity is due to lack of legal and social protections in times of crisis (CARE, 2020).

5.4 Summary

The results reveals that there was a significant difference dietary diversity (food security) before and during Covid-19 ($\chi^2=96.8$; $P<0.0001$). Before COVID-19, (77%) of respondents were on Low Dietary Diversity (LDD) while (23%) were on Medium Dietary Diversity (MDD) representing a (54%) difference and none (0%) of the respondents was on High Dietary Diversity (HDD) (food secured). During COVID 19 those on (LDD) increased significantly to (97%) while those on (MDD) decreased to (3%), corresponding to a (94%) difference and (0%) of the respondents was on HDD (food secure).

5.5 Conclusions

A disturbance of livelihood options will lead to a reduction in the total household income and significantly increases the probability of a household to experience acute food insecurity during the Covid-19 pandemic. However, food insecurity has been an issue way back before the Covid-19 outbreak. Therefore, previous problems like climate change should be addressed and its mitigation or adaptation measures taken into action. Since women are the food producers and processors they should be supported and equipped with adequate knowledge, start-up

capital, land and new technology like their male counterparts to improve their household food security status.

5.6 Recommendations

- On food insecurity, government and local councils should create market space for informal workers and traders which is largely dominated by women so that they continue engaging in their socio-economic activities during the Covid-19 era whilst observing health regulations.
- On food insecurity, the Government should monitor and ensure the availability of basic commodities.
- On food insecurity, the social protection programs such as cash transfers, should be gender sensitive.
- Moreover, women should practice sustainable Agriculture (Climate Smart Agriculture) and post-harvest management to mitigate the negative impacts of climate change promotes food insecurity.
- There should be equal allocation of agricultural land, inputs and extension services between male and females so to boost food security.

5.7 References

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CHAPTER 6

Challenges being faced by women headed households in improving livelihoods during Covid-19 era in Goromonzi district, Zimbabwe

Abstract

Women-headed household are considered to be the poorest social group globally. They face greater constrains like social and financial exclusion for their livelihood improvement as compared to their male counterparts. Due to the global outbreak of Covid-19 pandemic their situation has been exacerbated including their food security status due to the imposed lockdowns amongst other health restrictions measures in trying to control the spread of pandemic. The objective of the study was to examine the challenges being faced by women-headed households in improving livelihoods during Covid-19 era in Goromonzi district, Zimbabwe. A purposive sampling method was used to select 6 wards and then a simple random sampling method was used to identify 90 women- headed households from wards lists. The personal structured questionnaire was employed to the respondents (women headed household). The data was analysed using descriptive statistics (table), percentages and the 5-point Likert Scale ranging from “not a challenge” to “a very big challenge” was also employed. The results revealed that the travel ban was a very big challenge amongst other with (100%) of respondents, the stay home policy with (97%), Gender Based Violence (GBV) 96%, curfew with (91%), Inflation with (73%), shortage of food with (58%) and school closure with (51%). To improve the food security status due to travelling ban restrictions, women-headed households should intensify indigenous food system.

Keywords: livelihood, women, household, Covid-19, challenges, curfew

6.1 Introduction

The enforcement of the harsh Covid-19 lockdown measures has accidentally disturbed people's livelihood with cascading effects on household food security and the economy. This is predominantly factual in Southern-African region which is already struggling with extreme poverty, hunger and malnutrition due to several shocks. The reports show that the region will face disturbances in three ways which comprise of the loss of income for especially people in the informal sector who often survive on daily hand to mouth wages, reduction in income from remittances and disruption of food systems (WFP, 2020).

In addition, it can be noted that, the movement of food through the channels of international trade was especially affected by lockdown measures. As borders closed and demand for certain food items dropped, food producers reliant on selling their crops via distant export markets were highly vulnerable, particularly those producers focused on perishable food and agricultural products, such as fresh fruits and vegetables or specialty crops, such as cocoa (Clapp and Moseley, 2020). In the early months of the outbreak of COVID-19, some food exporting countries also imposed export restrictions on key staple food items like rice and wheat, which led to some disruptions in the global movement of these staples as well as higher prices of these crops relative to others (Laborde et al., 2020). Certain countries, including those with high prevalence of food insecurity, are highly dependent on imported food and on commodity exports, which may make them particularly vulnerable to these types of supply chain disruptions (FAO, 2020).

The roles of women in the economy has often been undervalued and their work in food production, preparation and processing has long been invisible. Women are the productive agent of agriculture but they face difficulties in accessing resources, land, credit and inputs. According to (Blackden and Wodon ,2006) there will be improvement in food security and nutrition if gender discrimination against women is eliminated in terms of access to productive resources).

The novel Covid-19 pandemic has activated a global economic depression which drastically led to loss of livelihoods and income (World Bank, 2020). The consequential drop in the buying power amongst women-headed household has been exacerbated by the imposed health restrictions and policies in trying to mitigate the spread of Covid-19. These measure greatly affected the household food security and nutrition of women headed as compared to their male counterpart due to the lack of assets and resources. A case in point, in Latin America, above

50% of employment is in the informal sector (FAO, 2020). As a result of the Covid pandemic more than 400 million formal workers lost their jobs in the second quarter of the year 2020 in countries where lockdown measures were enforced. The developing countries in particular have been deeply affected, as they were already entering economic recession by year 2019. A number of severe hunger have arisen to about 45 million people are acute food insecure between February and June 2020 the highest recorded in Asia and Sub-Saharan Africa (UN, 2020).

6.2 Material and Methods

The details concerning the study area and the methodology which comprises sampling procedures, questionnaire design, methods of data collection and data analysis are described in chapter 3.

6.2.1 Descriptive of the Study area

The study was conducted in Goromonzi district in Mash-East Province of Zimbabwe. The details on the description of the study area are given in Chapter 3 section 3.2.

6.2.2 Research Design

The study employed mainly survey research design comprising use of individual (women-headed household) interviews through use of a personal structured questionnaire in the collection of data. Details regarding the research design is given in Chapter 3 section 3.3.

6.2.3 Sampling Procedure

Women headed households were randomly selected from six wards of Goromonzi district then interviewed by the researcher in April 2021. Details regarding the sampling procedure are given in Chapter 3 section 3.4.

6.2.4 Data Collection Procedure

The study employed a pre-tested questionnaire and observation techniques for data collection through personal interviews in April 2021. More details concerning data collection procedure are given in Section 3.5 of Chapter 3.

6.2.5 Data Analysis Procedure and Methods

Descriptive statistics (table) and the 5-point Likert Scale ranging from “not a challenge” to “a very big challenge” was also employed was employed as to find the greatest challenge being faced by woman headed households in improving their livelihood in Goromonzi District. The procedure was given Section 3.6 of Chapter 3.

6.2.6 Challenges encountered during data collect

The study come across several challenges during data collection due to Covid -19 global pandemic. There were health restrictions to mitigate the spread of the virus which comprised of travel ban, social-distancing, stay home policy, curfew amongst others thus made it so difficult for the data collection since everyone was in fear of this deadly Covid 19-pandemic. The distribution of respondents in the Goromonzi District especially in ward 21 and ward 22 were remote spaced and haphazard due to resettlement. The researcher also has tried to use the telephone interview but some of the wards do not have full coverage of mobile network.

6.3 Results and Discussions

6.3.1 Challenges being faced by women headed households in improving livelihoods during Covid-19 era in Goromonzi district, Zimbabwe

Table 6.1, shows the challenges faced by women headed in improving their livelihoods during Covid-19 era in Goromonzi district, Zimbabwe. These challenges included the travel ban which was a very big challenge with (100%) of respondents, the stay home policy with (97%), Gender Based Violence (GBV) 96%, curfew with (91%), Inflation with (73%), shortage of food with (58%) and school closure with (51%).

Table 6. 1 showing the challenges being faced by women headed households in improving livelihoods during Covid-19 era in Goromonzi district, Zimbabwe

Challenge	Level of challenge									
	Not a challenge		Challenge		Minor		Big		Very Big	
	n=90	%	n=90	%	n=90	%	n=90	%	n=90	%
Curfew	0	0	0	0	2	2	6	7	82	91
Travelling ban	0	0	0	0	0	0	0	0	90	100
Business operation hours from 8am-1500Hrs	0	0	0	0	0	0	89	99	1	1

Ban of public gatherings	78	87	0	0	9	10	3	3	0	0
Stay home policy	0	0	0	0	3	3	0	0	87	97
Inflation	0	0	0	0	18	20	6	7	66	73
Shortage of food	0	0	0	0	0	0	38	42	52	58
School Closure	15	16	0	0	3	3	27	30	46	51
Gender Based Violence	0	0		0	0	0	4	4	86	96

Travelling ban

The results show that travelling ban was a very big challenge with (100%) of the respondents recorded, this may be due to the women's transportation disruption of their farm produce to the market place which led to post-harvest loses. Similar studies in Bangladesh shows that, the disruption in transportation systems has caused the abandoning of the horticultural perishable food produce and dramatic price reductions, affecting food security for rural producers (FAO, 2020). Moreover, the travelling ban in many countries has affected distribution of breeding stock of poultry projects. The International Poultry Council (IPC) has cautioned that there will be no breeding stock and hatching eggs if such travel restriction continues (Vorotnikov V, 2020).

Gender Based Violence (GBV)

The results reviews that GBV was a very big challenge with (96%) of the respondents. The main reason might be that since all the lockdown restrictions paved a way for the abusers due to the stay home policy. The similar survey by OCHA, (2020) reviews that there was an increases in psychological, physical, economic and sexual violence which have been reported in Zimbabwe. The intimate partner violence (IPV) is the most commonly reported form of violence against women and girls during the pandemic, with intimate partners representing

69.5% of identifiable perpetrators in SAFE's (2020) analysis of GBV data between March and May 2020.

Curfew

The results reviews that curfew was a very big challenge with (91%) of the respondents, restriction works in hand with the operation of business from 0800 to 1500Hrs which was cited as a big challenge by 99% of respondents. These restrictions limited the number of market participants at a time and reduce operating hours for food markets. Thus, limited disposable income to spend on food, as well as disruptions in food supply chains, resulting in possible food shortages and higher food prices (FAO, 2020).

Inflation

The results show that inflation was a very big challenge with (73%) of the respondents, their house food security and nutritional needs was affected due to high prices of food. Therefore, the respondents could not access the food due to their low incomes. Similar studies by Katsoras, (2020) shows that there was a rice price increase (32%) Thailand, (25%) in Vietnam and (10%) USA, between February and April 2020. However, currency devaluation in countries which were affected by the global recession also contributed to hike of food prices especially for countries that rely on food import (UNCTAD, 2020).

School Closure

The school closure was also considered as a very big challenge by (51%) of the respondents since children will need more attention and care from their mothers. Thus, the women unpaid labour increases resulting to a burden on their livelihood means. Van Lancker & Parolin (2020) argued that, having children at home due to the closure of schools is more likely to worsen food insecurity because for some students are living in poverty and schools are not only a place for learning but also for consuming nutritious food.

6.4 Summary

The challenges faced by women-headed households in improving livelihoods during Covid-19 era in Goromonzi district, Zimbabwe revealed that the travel ban was a very big challenge amongst other with (100%) of respondents, the stay home policy with (97%), Gender Based Violence (GBV) 96%, curfew with (91%), Inflation with (73%), shortage of food with (58%) and school closure with (51%). Then, the operation of business from 0800 to 1500Hrs was

cited as a big challenge by 99% of respondents. Only the banning of public gatherings was considered by (87%) of respondents as not a challenge.

6.5 Conclusions

The objective of the study was to examine the challenges being faced by women-headed households in improving livelihoods during Covid-19 era in Goromonzi district, Zimbabwe. A purposive sampling method was used to select 6 wards and then a simple random sampling method was used to identify 90 women-headed households from wards lists. The data was analysed using descriptive statistics (table), percentages and the 5-point Likert Scale ranging from “not a challenge” to “a very big challenge” was also employed. The results revealed that the travel ban was a very big challenge amongst other with (100%) of respondents. The lockdown restrictions and health policies did not only negatively affect the livelihood activities of women headed households, but it also increased the GBV cases and food insecurity. However, these lockdown restrictions paved a way for the promotion of healthier indigenous food systems.

6.6 Recommendations

- Due to travelling ban restriction women headed households should intensify indigenous food system for instance as a substitute of bread for breakfast they can cook sweet potatoes.
- For the challenge of shortage of food and inflation, women should improve on post-harvest management by avoiding food wastage and promote food storage. Moreover, they can opt for value addition practices like drying of vegetables which has great shelf life.
- Due to stay home policy, women headed households should embark on home nutritional gardens and small livestock projects like poultry and rabbit keeping
- On the challenge GBV, there should be community awareness and involvement of NGOs in training and support of Gender Champions at village level.
- The government should promote these home or community projects in form of inputs, services, resources and support to fight against the food insecurity and the Covid-19 pandemic.

- On inflation, the government should enforce price stabilization through price control, market monitoring and awareness campaigns to the public on food hoarding so to avoid food scarcity and inflation.

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CHAPTER 7

Socio economic and institutional factors which affect food security status among women headed households in Goromonzi district, Zimbabwe

Abstract

Women-headed household face greater constrains on household food security than any other social groups in Goromonzi district. The global outbreak of Covid-19 pandemic has significantly impacted their socio-economic and food security status due to the imposed lockdowns and health restrictions measures in trying to control the spread of pandemic. The objective of the study was to determine socio-economic and institutional factors which affect food security status among women headed households in Goromonzi district, Zimbabwe. A purposive sampling method was used to select 6 wards and then a simple random sampling method was used to identify 90 women- headed households from wards lists. The data was analysed using descriptive statistics (table) and multinomial logistic regression model was employed. The model revealed that all the socio economic and institutional factors significantly affected ($P < 0.05$) food security status expect the level of education ($P < 0.619$). To boost the food security status of women-headed households, the Government and local Council should create space for informal traders mainly (women) to continue engaging in their socio-economic and livelihood activities in a safe and secure environment.

Keywords: socio-economic, women, household, gender, culture, Covid-19

7.1 Introduction

Like most African countries, Zimbabwe is a patriarchal society where women bear a significant heavier burden within households. In rural areas, women conduct most of the labour including agricultural and securing food for the family at household level. However, women are rarely included in decision making concerning better farming strategies to adopt, issues to do with land allocation, ways to dispose surplus produce and how to spent money within the home (Essof S., 2005).

Rural women continue to face exclusion due to this patriarchy society and also based on the socio-cultural norms and gender roles which eventually restrict them access to decision making, development and empowerment (Isran, S and Isran, M ,2012). They are disadvantaged to their basic legal rights of participation in socio-economic activities, restriction on work outside the home, low education attainment and skills, burden domestic chores, and the lack of awareness about the market makes them more reliant on their male counterparts (Butt et al, 2010). Pakistan's Gender-related Development Index (GDI) is ranked at 120th out of 146 countries, and its gender empowerment measurement (GEM) is ranked 92 out of 94 countries (Jamali, D, 2009). This is because women in Pakistan are mostly engaged in voluntary and unappreciated activities that lead them to be the most underprivileged group with no compensation or recognition (Arshad, et al 2008). In the same way, women are often excluded from grassroots community level decision making and governance structures that shape the response strategies during humanitarian crises (IASC, 2018).

(Moghadam, 2005) noted that due to gender disparities and bias political systems, women headed households are more susceptible to poverty and food insecurity than their male counterparts. This entails that women are likely to suffer social exclusion amongst other factors. The majority of rural women do not participate in community, social and political activities since they will be occupied to their unpaid labour to meet their daily needs. In addition, the level of poverty tends to erode one's self confidence and this enforces their exclusion. Therefore, the social exclusion continually affects the well-being of women and forces them in poverty which makes it so difficult for them to find their way out.

7.2 Material and Methods

The details concerning the study area and the methodology which comprises sampling procedures, questionnaire design, methods of data collection and data analysis are described in chapter 3.

7.2.1 Descriptive of the Study area

The study was conducted in Goromonzi district in Mash-East Province of Zimbabwe. The details on the description of the study area are given in Chapter 3 section 3.2.

7.2.2 Research Design

The study employed mainly survey research design comprising use of individual (women-headed household) interviews through use of structured questionnaire in the collection of data. Details regarding the research design is given in Chapter 3 section 3.3.

7.2.3 Sampling Procedure

Women headed households were randomly selected from six wards of Goromonzi district then interviewed by the researcher in April 2021. Details regarding the sampling procedure are given in Chapter 3 section 3.4.

7.2.4 Data Collection Procedure

The study employed a pre-tested questionnaire and observation techniques for data collection through personal interviews in April 2021. More details concerning data collection procedure are given in Section 3.5 of Chapter 3.

7.2.5 Data Analysis Procedure and Methods

Descriptive statistics (table) was applied and the multinomial logistic regression model analysed the socio economic and institutional factors which affected the food security status of women headed in Goromonzi district. The procedure was given Section 3.6 of Chapter 3.

7.2.6 Challenges encountered during data collect

The study come across several challenges during data collection due to Covid -19 global pandemic. There were health restrictions to mitigate the spread of the virus which comprised of travel ban, social-distancing, stay home policy, curfew amongst others thus made it so difficult for the data collection since everyone was in fear of this deadly Covid 19-pandemic.

The distribution of respondents in the Goromonzi District especially in ward 21 and ward 22 were remote spaced and haphazard due to resettlement. The researcher also has tried to use the telephone interview but some of the wards do not have full coverage of mobile network.

7.3 Results and Discussions

7.3.1 To determine the socio-economic and institutional factors which affect food security status among women-headed households in Goromonzi district, Zimbabwe

Table 7.1 shows the results of the socio-economic and institutional factors that significantly affected ($P < 0.05$) food security status of women headed household in Goromonzi district, Zimbabwe except for education with ($P = 0.619$). Socio-economic factors (marital status, age, household size and total incomes) significantly affected ($P < 0.001$) food security status, the type of business ($P = 0.006$), Farm size ($P = 0.048$) and institutional representation ($P = 0.005$). The respondents on Low Dietary Diversity (LDD) were mainly those widowed with (28%), separated with (27%), those in the 31 to 40-year age group (27%). Those with big household numbers of more than 6 individuals (44%).

Table 7. 1 The socio-economic and institutional factors which affect food security status among women-headed households in Goromonzi district, Zimbabwe

	Category	Low-Dietary Diversity	Medium-Dietary Diversity	Total	Wald χ^2	P
Marital status	Divorcee	14	6	20	36.92	<0.0001
	Husband away	5	3	8		
	Not married	1	0	1		
	Separated	24	6	30		
	Widow	25	6	31		
Age (years)	18-30	16	5	21	30.01	<0.0001
	31-40	24	4	28		
	41-50	12	5	17		
	51+	17	7	24		
Level of education	None	7	4	11	0.96	0.619
	Primary	37	9	46		
	Secondary	25	7	32		

	Tertiary	0	1	1		
Household size	≤3	6	7	13	34.26	<0.0001
	4 to 5	23	11	34		
	6+	40	3	43		
Type of business	Off-farm	13	5	18	7.45	0.006
	On-farm	56	16	72		
Farm size (Hectare)	≤1	57	16	73	5.67	0.048
	2 to 5	10	3	13		
	5+	0	1	1		
	None	2	1	3		
Total Income Per Month (USD)	≤50	4	1	5	40.42	<0.0001
	50-100	60	11	71		
	100-150	5	7	12		
	150-200	0	2	2		
Institutional representation	Few	4	4	8	8.03	0.005
	None	65	17	82		

Marital Status

The results reveal that marital status significantly affected ($P < 0.0001$) food security status, since women headed household have many domestic unpaid roles and heavily burdened by caring for children due to school closure. However, their male counterparts engage in paid manual work and improve their household food security. The similar findings by Kassie et al. (2014) argued that households headed by females were likely to negatively observe their households as food secure compared to the male-headed counterparts.

Household size

The study show that the household size significantly affected the food security status ($P < 0.001$) this may be due to the high demand of food quantities since they have many household members. The big household is generally caused by extended families. These results agree with the findings reported in Zimbabwe by (Mango et al, 2014). However, Cox and Fafchamps

(2008) argued that extended families offer support to households during hardship times, enabling such households to sustain their food security.

Type of business

The study reveals that (80%) of respondents were into on-farm business whilst (20%) were into off-farm business. The type of business significantly affected ($P < 0.006$) food security status. However, women face several challenges in agricultural production and their yields are generally poor for household family consumption. This finding is in line with the study results reported by Mishra *et al* (2015) in Bangladesh.

Farm size

The results revealed that farm size significantly affected ($P < 0.048$) food security status, it may be the reason that since rural people depends more on subsistence agriculture for household food security and women headed households possess very small acreages of land to sustain their household food security. Folasade (1991) gave an emphasis that lack of separate land for women and inadequate contact with extension agents are serious constraints faced by women farmers in Nigeria women rarely own land due to culture and inheritance.

Less than 5% of land in Kenya is owned by women farmers, which is attributed to cultural factors that favour men in terms of land inheritance. Additionally, Githinji *et al*, (2014) observed that women in Kenya have fewer land tenure rights and own small plots, forcing them to engage in less valuable farm enterprises.

Institutional representation

The study reveals that the institutional representation of women significantly affected ($P < 0.005$) household food security status. The women are seriously excluded from formal banking institution for credit since the majority of them lack assets and collateral to qualify for credit facilities, this situation will negatively affect their food security status due to lack of capital to bridge them from poverty. Similar results were reported by Ngema *et al*, (2018) in a study in a local municipality in South Africa on perceptions of the role of credit in household food security.

Moreover, Folasade (1991) argued that religion and tradition beliefs hitch the improvement of women headed household food security status since they are excluded from agricultural extension services, knowledge and technology in Nigeria.

Pudup, M.B, (1990) argued that gender disparities favour men in every sphere of life with better opportunities that include food security, education, ownership, decision making, and the power of the resources, thus women will be left being food insecure. The recent Global Rapid Gender Analysis on Covid-19 found that most decision making bodies established in response to the outbreak break of Covid-19 were dominated by men (CARE, 2020).

7.4 Summary

The results revealed that the socio-economic and institutional factors significantly affected ($P<0.05$) food security status of women headed household in Goromonzi district, Zimbabwe. The Socio-economic factors (marital status, age, household size and total incomes) significantly affected ($P<0.001$) food security status, the type of business ($P=0.006$), Farm size($P=0.048$) and institutional representation ($P=0.005$). The respondents on Low Dietary Diversity (LDD) were mainly those widowed with (28%), separated with (27%), those in the 31 to 40-year age group (27%). Those with big household numbers of more than 6 individuals (44%).

7.5 Conclusions

The study determined the socio-economic and institutional factors which affected food security status among women headed households in Goromonzi district, Zimbabwe. A purposive sampling method was used to select 6 wards and then a simple random sampling method was used to identify 90 women- headed households from wards lists. The data was analysed using descriptive statistics (table) and multi nominal logistic regression model was employed. The model revealed that all the socio economic and institutional factors significantly affected ($P<0.05$) food security status expect the level of education ($P<0.619$). To improve the food security status of women-headed households the institutional representation and socio-economic factors should be gender-sensitive from grass root level.

7.6 Recommendations

- On marital status, the Government and NGOs should promote awareness gender issues
- On education, women should receive adult education, even the dissemination of new technology in vernacular (Shona) using virtual platforms so they understand

sustainable Agriculture (Climate Smart Agriculture) and post-harvest management to mitigate the impacts of climate change which leads to poor yields and losses.

- On type of business, the Government and Council should create space for informal traders mainly (women) to continue engaging in their socio-economic and livelihood activities in a safe and secure environment to improve their household food security during the Covid-19 era.
- On household size, the Government and NGOs should provide affordable health services and awareness to rural women especially on contraceptives methods sexually reproduction health and rights (SRHR).
- On land size, The Government should consider equal allocation of agricultural land, inputs and extension services between men and women.
- On total income per month, NGOs and Government should assist on community resilience building aftershocks and pandemics with supporting resilience project like home gardens, apiculture and keeping of small livestock.
- On institutional representation, the female legislatures in parliament should be involved in making decisions and ensure that the public policies are gender sensitive from grass root level. Moreover, Government and NGOs should develop gender-responsive social protection programs such as cash transfers and trainings on community identified home income generating activities like poultry to help vulnerable women-headed. There should be equal participation of men and women on Government agricultural programs like Command Agriculture. The Government should promote the development of bank which offer favorable financial services to women like the Zimbabwe Women's Microfinance Bank. On religion and tradition, the Government should support gender just by laws through the traditional and religion leaders.

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CHAPTER 8

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

8.1 Introduction

This Chapter sums-up the research proceedings and outcomes from Goromonzi District in Mashonaland East Province, Zimbabwe. The main objective of the study was to assess the implications of Covid-19 pandemic to household food security status among women headed families, a case of Goromonzi District, Zimbabwe as articulated in the introductory chapter of the study. The descriptive statistics, Pearson X^2 (Chi-Square) statistic, 5-point Likert scale and the multinomial logistic regression model were methodologies used to analyses the specific objectives of the study. The results from a sample of 90 women headed families who were interviewed using FAO (HDDS) and personal pre-tested structured questionnaires are explained as stated in Chapter 4, 5, 6 and 7. Moreover, these chapters provided results and discussion, summary, recommendation and conclusions of the study. Finally, this chapter summarises, concludes, makes policy recommendations and looks at areas for further research.

8.2 Research Summary

The first Chapter comprise of the introduction and objectives of the study, the second chapter was the literature review and, the chapter began with theoretical and empirical literature review on research studies regarding the implications of Covid-19 pandemic to WHH. Then, the characteristics of WHH on socio-economic, demographic and institutional representation. Due to gender-disparities among other factors the socio-economic status of women is very low and poor as compared to their male counterparts. Finally, conceptual framework of the Covid-19 pandemic.

Chapter (three)³ has examined the research methodology by first describing the Goromonzi District study area. Then the research design, sampling procedures, data collection and data analysis for each of the the four specific objectives of this study. This chapter extensively examined the data analysis methods and analytic presentation for each objective in the study. The chapter as well absorbed on the coding, entering, cleaning and processing of data using the Statistical Package for Social Sciences (SPSS Version 20) software and Microsoft Excel 2016 to analyse data.

Chapter four (4), examine the characteristics of women headed households relating to demographics, socio-economic status, and institutional representation during Covid-19 era in

Goromonzi district, Zimbabwe. The results reveals that, the majority of the women headed households were widows with (34.4%). Most of the respondents were between 31 and 40 years of age with (31.1%). Most respondents have attained primary education (51.1%) whilst the lowest was only one with (1.1%) who attained tertiary level. The majority of the households had more than 6 people with (47.8%). The dominant business practised by women headed households is on-farm with (80%). The majority of women headed house households have small plots of less than one hectare (73%). The majority of the women heads had the highest with (77.8%) which belonged to co-operatives. The majority of respondents (78.9%) earn between USD 50 and 100 per month. The majority of women heads had (91.1%) which do not have institutional representation.

On Chapter five (5), the specific objective of the study was to compare women-headed household food security status before and during Covid-19 era in Goromonzi district, Zimbabwe. The results reveals that there was a significant difference dietary diversity (food security) before and during Covid-19 ($\chi^2=96.8$; $P<0.0001$). Before COVID-19, (77%) of respondents were on Low Dietary Diversity (LDD) while (23%) were on Medium Dietary Diversity (MDD) representing a (54%) difference and none (0%) of the respondents was on High Dietary Diversity (HDD) (food secured). During COVID 19 those on (LDD) increased significantly to (97%) while those on (MDD) decreased to (3%), corresponding to a (94%) difference and (0%) of the respondents was on HDD (food secure).

On objective six (6), The challenges faced by women-headed households in improving livelihoods during Covid-19 era in Goromonzi district, Zimbabwe revealed that the travel ban was a very big challenge amongst other with (100%) of respondents, the stay home policy with (97%), Gender Based Violence (GBV) 96%, curfew with (91%), Inflation with (73%), shortage of food with (58%) and school closure with (51%). Then, the operation of business from 0800 to 1500Hrs was cited as a big challenge by 99% of respondents. Only the banning of public gatherings was considered by (87%) of respondents as not a challenge.

The Chapter seven (7) study revealed that the socio-economic and institutional factors significantly affected ($P<0.05$) food security status of women headed household in Goromonzi district, Zimbabwe. The Socio-economic factors (marital status, age, household size and total incomes) significantly affected ($P<0.001$) food security status, the type of business ($P=0.006$), Farm size($P=0.048$) and institutional representation ($P=0.005$). The respondents on Low Dietary Diversity (LDD) were mainly those widowed with (28%), separated with (27%), those

in the 31 to 40-year age group (27%). Those with big household numbers of more than 6 individuals (44%).

8.3 Conclusions

A new set of challenges for households to maintain a healthy and diverse diet have risen due to the outbreak of the novel Covid-19. The lockdown has had gross impacts and has disrupted community activities that usually contribute to enhanced food security and nutrition at both household and community levels. It affected livelihoods options due to very big challenges which comprise of travelling ban, inflation, school closure, curfew and GBV. However, the livelihoods options should be supported through strict recognition of Covid -19 regulations. The lockdown restrictions and policies did not only negatively affect the livelihood activities of women but it also increased the GBV cases. A purposive sampling method was used to select 6 wards and then a simple random sampling method was employed to identify 90 women-headed households from wards lists. The pre-tested personal structured and (FAO) HDDS questionnaires were administered to the women-headed household. The data was analysed using descriptive statistics, Pearson X^2 (Chi-Square) statistic, 5-point Likert scale and the multinomial logistic regression model. The study revealed there is a significant difference in HDD (food security) before and during COVID 19 ($\chi^2=96.8$; $P<0.0001$). The challenges being faced by women-headed households in improving livelihoods revealed that the travelling ban was a very big challenge amongst other with (100%) of respondents. The multinomial logistic regression model revealed that the socio economic and institutional factors significantly affected ($P<0.05$) food security status of women headed households.

8.4 Policy implication and recommendations

- On marital status, the Government and NGOs should promote awareness gender issues
- On education, women should receive adult education, even the dissemination of new technology in vernacular (Shona) using virtual platforms so they understand sustainable Agriculture (Climate Smart Agriculture) and post-harvest management to mitigate the impacts of climate change which leads to poor yields and losses.
- On type of business, the Government and Council should create space for informal traders mainly (women) to continue engaging in their socio-economic and livelihood activities in a safe and secure environment to improve their household food security during the Covid-19 era.

- On household size, the Government and NGOs should provide affordable health services and awareness to rural women especially on contraceptives methods sexually reproduction health and rights (SRHR).
- Due to travelling ban restriction women headed households should intensify indigenous food system for instance as a substitute of bread for breakfast they can cook sweet potatoes.
- On land size, The Government should consider equal allocation of agricultural land, inputs and extension services between men and women.
- On total income per month, NGOs and Government should assist on community resilience building aftershocks and pandemics with supporting resilience project like home gardens, apiculture and keeping of small livestock.
- On institutional representation, the female legislatures in parliament should be involved in making decisions and ensure that the public policies are gender sensitive from grass root level. Moreover, Government and NGOs should develop gender-responsive social protection programs such as cash transfers and trainings on community identified home income generating activities like poultry to help vulnerable women-headed. There should be equal participation of men and women on Government agricultural programs like Command Agriculture. The Government should promote the development of banks which offer favorable financial services to women like the Zimbabwe Women's Microfinance Bank. On religion and tradition, the Government should support gender just by laws through the traditional and religion leaders.
- Virtual trainings and sharing of new technologies via social platforms.
- Promotion of e-marketing platforms for women to reduce movements during Covid-19 era and penetrate to rural market. Moreover, promotion of virtual group savings like Eco-Cash Savings club due to gathering restrictions.

8.5 Areas of further research

- A study to assess the women's characteristics socio-economic, demographic and institutional representation in other districts especially (urban areas) so to incorporate the challenges being faced by women during Covid-era.

8.6 References

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APPENDIX 1

QUESTIONNAIRE

Assessing the implications of Covid-19 pandemic to household food security status among women headed families. A case of Goromonzi District, Zimbabwe.

All information provided by you (interviewee) will be treated as STRICTLY CONFIDENTIAL for mutual benefit of both the researcher and the respondents.

Questionnaire Number..... Ward.....
Number.....

Enumerator..... Goromonzi District, Mash-East Province

Name of respondent (WOMAN-HEADED HOUSEHOLD ONLY)

.....

Date Farm/Village.....

Background Information: Kindly tick [√]

- i. Gender Female only [√]

SECTION A: To examine the characteristics of women-headed households relating to Socio-economic status, demographics and Institutional representation during Covid-19 era in Goromonzi district.

Demographics:

A1) Marital status:

Widowed []

Separated []

Divorcee []

Never been Married []

Husband migrated to town/mine/out of the country (other reasons) []

A2) Age

18-30 years []

31-40 years []

41-50 years []

51 years and above []

A3) Highest level of your education

None []

Primary []

Secondary []

Tertiary []

A4) Household size: []

Socio-economic status of women-headed households

A5) Type of business:

On-Farm []

Off-Farm []

None []

A6) Farm size (Hectare):

≤1 [] 2-5 [] 5 ≥ [] NONE []

A7) Membership to cooperatives or savings group

YES []

NO []

A8) Remittances (Usd):

≤USD 50 []

50-100 []

100-150 []

150-200 []

≥250 []

NONE []

A9) Total Income Per Month (Usd):

≤USD 50 []

50-100 []

100-150 []

150-200 []

≥250 []

Institutional representation of women-headed households

A10) Institutional representation

None []

Few []

Moderate/average []

High []

SECTION B: To compare the household food security status before and during Covid-19 era in Goromonzi district, Zimbabwe.

Now I would like to ask you about the types of foods that you or anyone else in your household ate in January 2020 before Covid-19 in Zimbabwe and past 24-hours during this Covid-19 era.

INSTRUCTION: Place a **One (1)** if anyone in the household ate the food in Question, place a **Zero (0)** if no-one in the household ate the food.

	Food groups	Before Covid-19	During Covid-19
1	Any bread, rice noodles, biscuits, cookies, or any other foods made from millet, sorghum, maize, rice, wheat		
2	Any pumpkin, carrots, squash, or sweet potatoes that are yellow or orange inside?		
3	Any white potatoes, white yams, manioc, cassava or any other foods made from roots or tubers?		
4	Any dark, green, leafy vegetables such as cassava leaves, bean leaves, kale, spinach, pepper leaves, taro leaves, and amaranth leaves?		
5	Any other vegetables?		
6	Any ripe mangoes, ripe papayas or any other locally available vitamin a-rich fruit?		
7	Any other fruits?		
8	Any beef, pork, lamb, goat, rabbit wild game, chicken, duck, or other birds, liver, kidney, heart, or other organ meats?		
9	Any eggs?		

10	Any fresh or dried fish or shellfish?		
11	Any foods made from beans, peas, or lentils?		
12	Any cheese, yogurt, milk or other milk products?		

SECTION C: To examine the challenges being faced by women-headed households in improving livelihoods during Covid-19 era in Goromonzi district, Zimbabwe.

C1) Curfew from 6pm -6am ?

Is not a challenge

Is a challenge

Is a minor challenge

Is a big challenge

Is a very big challenge

C2) travelling ban?

Is not a challenge

Is a challenge

Is a minor challenge

Is a big challenge

Is a very big challenge

C3) Business operation hours from 8am-1500Hrs

Is not a challenge

Is a challenge

Is a minor challenge

Is a big challenge

Is a very big challenge []

C4) ban of public gatherings

Is not a challenge []

Is a challenge []

Is a minor challenge []

Is a big challenge []

Is a very big challenge []

C5) Stay home policy

Is not a challenge []

Is a challenge []

Is a minor challenge []

Is a big challenge []

Is a very big challenge []

C6) Inflation

Is not a challenge []

Is a challenge []

Is a minor challenge []

Is a big challenge []

Is a very big challenge []

C7) Shortage of food

Is not a challenge []

Is a challenge []

Is a minor challenge []

Is a big challenge []

Is a very big challenge []

C8) School Closure

Is not a challenge []

Is a challenge []

Is a minor challenge []

Is a big challenge []

Is a very big challenge []

C9) Gender Based Violence

Is not a challenge []

Is a challenge []

Is a minor challenge []

Is a big challenge []

Is a very big challenge []

Section D:

To determine socio-economic and institutional factors which affect food security status of women-headed households Goromonzi district, Zimbabwe.

- **SOCIO-ECONOMIC FACTORS**

C1) Women access to credit from Formal Finance Institutions(FFI)	YES	NO
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C2) Women access to farm-land	YES	NO
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C3) Women access to market	YES	NO
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C4) Women access to education	YES	NO
--------------------------------------	------------	-----------

C5)Women access to capital	YES	NO
C6)Cultural norms	YES	NO
C7)Religious beliefs	YES	NO
• INSTITUTIONAL FACTORS		
C8)Women access to extension services	YES	NO
C9)Women access to new technologies	YES	NO
C10) Women access to information	YES	NO
C11) Women in leadership positions	YES	NO
C12) Women participation in decision making / community development programs	YES	NO

Thank you very much!!