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FACULTY OF SOCIAL SCIENCES AND HUMANATIES



**The Impact of Climate-Induced Food Insecurity on Child Marriage in
Chiredzi District, Zimbabwe.**

By

Lynette Ziwewe

B210690B

**A Dissertation Submitted to the Department of Peace and Governance in
Partial Fulfilment for The requirements for the bachelor of sciences Honors
Degree in Peace and Governance Degree**

Supervisor: K. Mhuri

Bindura Zimbabwe

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ABSTRACT

This study examined the impact of climate-induced food insecurity on child marriage in Chiredzi District, Zimbabwe, with the primary objectives of assessing how food insecurity influenced child marriage rates, exploring coping mechanisms employed by families, and identifying the socio-economic and cultural factors mediating this relationship. A total of 50 respondents participated in the research, consisting of 30 community members who completed structured questionnaires and 20 local government officials who engaged in semi-structured interviews. Employing a mixed-methods approach that integrated both quantitative and qualitative data allowed for a comprehensive analysis of the issues. The findings revealed a significant correlation between food insecurity and increased rates of child marriage, with many community members recognizing the detrimental impact of food scarcity on early marriage decisions. Key challenges identified included pervasive economic instability, entrenched cultural norms, and limited access to education. Despite these obstacles, the research highlighted opportunities for improvement through community awareness programs, government interventions, and support services aimed at alleviating economic pressures. Recommendations included enhancing community education programs to raise awareness about the implications of food insecurity on child marriage, improving access to education for girls, fostering partnerships with NGOs and government entities, strengthening community support systems, and implementing robust monitoring and evaluation frameworks for ongoing interventions.

DECLARATION FORM

I Lynette Ziwele hereby confirm that the research presented in this dissertation, unless stated otherwise, is the result of my original investigation submitted in partial fulfilment of the requirements for the Honors Degree in Peace and Governance. This dissertation has not been previously submitted for any other degree or examination at any other university.

The data and information contained in this dissertation are solely my own, unless explicitly stated otherwise.

Where references have been made to other sources, I have paraphrased the information and provided appropriate credit to the original authors. In cases where the exact wording has been used, quotation marks have been used to indicate the source, and proper citation has been provided.

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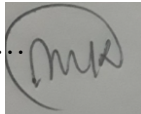
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Supervisor's Name Sir K Mhuri

Supervisor's signature 

Date16/09/25.....

Chairperson's Name.....DR J KUREBWATIRA.....

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DEDICATION

This research project is dedicated to my mother, my father and my handsome brother, who has been always my source of inspiration.

ACKNOWLEDGEMENT

I would like to the Almighty God, who has helped me through my project and without him I would not be where I am today. Gratitude to my family who is kind when it comes to instructing me where I need help and my mother for her enweaving support and the opportunity to help me. Not forgetting my lovely brother who gives me advices in addressing various issues. Special thanks to my beloved family for all the support I got from them, my relatives, grandparents and others.

I extended my profound gratitude and thank all the lectures at Bindura University for equipping me with important theoretical framework and background on Peace and Governance especially the department of Social Sciences and Humanities where I belong.

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LIST OF ABBREVIATIONS AND ACRONYMS

CSOs – Civil Society Organizations

FAO – Food and Agriculture Organization

IPCC – Intergovernmental Panel on Climate Change

IRB – Institutional Review Board

SDG – Sustainable Development Goal

SPSS – Statistical Package for the Social Sciences

STATA – A statistical software package

UN Women – United Nations Entity for Gender Equality and the Empowerment of Women

UNICEF – United Nations International Children's Emergency Fund

World Vision – World Vision International

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CHAPTER ONE

INTRODUCTION

1. Background of the study

Global climate change is manifesting in diverse ways across the globe with far-reaching consequences for human beings and societies. One of its most critical impacts is food insecurity, which arises from the destabilization of agricultural systems by extreme weather events, low crop yields, and water scarcity (IPCC, 2021). Several studies globally have analyzed the link between climate-induced food insecurity and child marriage, exploring how the crises interact to intensify vulnerabilities, most especially for adolescent girls. The evidence supports a complex relationship between the two phenomena. Food insecurity can increase child marriage risks since families might take up the practice as a survival strategy, considering it as a choice for reducing household pressures or gaining economic benefits (Castañeda Camey et al., 2020). Conversely, child marriage can perpetuate cycles of food insecurity and poverty since it inhibits girls' educational opportunities and involvement in agricultural production and household livelihoods (Plan International, 2021a).

At the international level the trend of climate-induced food insecurity and child marriage is not restricted to the developing world alone. In Europe, countries such as the United Kingdom have experienced rising rates of food insecurity among vulnerable populations, including migrant groups and low-income families (Joseph Rowntree Foundation, 2023). While child marriage is less prevalent in Europe than in other regions of the globe, there are concerns about forced marriages and early marriages in some ethnic minority groups that are likely to be exacerbated by economic hardship and food insecurity (Equality Now, 2022). In Asia, countries like India have experienced severe impacts of climate change on agriculture, leading to widespread food insecurity and malnutrition (Government of India, 2022). Child marriage continues to be a pressing issue in India, as millions of girls are wed before they turn 18 (UNICEF, 2023). There

has been a proven strong link between poverty, hunger, and child marriage in India (World Vision India, 2021). The United Nations has recognized the interlinkage between climate change, food insecurity, and gender inequality. The Sustainable Development Goal (SDG) 2 aims to end hunger, achieve food security, and improve nutrition, while SDG 5 aims to achieve gender equality and empower all women and girls. SDG 13 is committed to climate action. The goals call for addressing the root causes of food insecurity and child marriage to achieve sustainable development.

The climate change in the African continent is accentuating deep-seated vulnerabilities, leading to acute food insecurity and disruption of livelihood. Women and girls are differently affected by these issues and are typically shut out from decision-making regarding food security and resource management (FAO, 2022). Climate change, food insecurity, and child marriage have a combined interlinkage with long-lasting effects on affected populations. In countries like Nigeria, climate change and severe weather patterns have exacerbated food insecurity, particularly in the northern regions. This, coupled with poverty and sociocultural norms, has led to high rates of child marriage (UNICEF, 2023).

Research by Usman and Aliyu (2021) sheds light on the linkage between household-level food insecurity and the marriage of young girls in northern Nigeria. Similarly, in Ethiopia, consecutive droughts and floods have affected agricultural production, initiating food insecurity and economic hardship. These issues have been linked to increasing rates of child marriage because families may resort to the practice as a coping mechanism (World Vision Ethiopia, 2022). In Zimbabwe, like in most other African countries, the impacts of climate change in terms of erratic rainfall patterns, prolonged droughts, and heatwaves. These climatic shocks have disrupted agricultural livelihoods, a significant source of income for the majority of rural households. Consequently, food insecurity has been a perennial problem, particularly

in vulnerable districts like Chiredzi. Literature has proven that food insecurity is associated with high vulnerability to child marriage (UNICEF, 2020).

The climate change has intensified food insecurity in most African regions, like the Chiredzi District in Zimbabwe, where rain-fed agriculture is highly relied upon (Moyo et al., 2022). The study examines the intricate relationship between climate-induced food insecurity and child marriage, which is a prevalent practice within the district. There is a two-way link between these crises, and food insecurity is both a driver and consequence of child marriage (Castañeda Camey et al., 2020; Plan International, 2021b). Families that experience economic loss due to crop failure, for example, might marry off their daughters to cut financial costs or to receive dowries, and child marriage can, in turn, perpetuate poverty and hunger further by limiting the educational and economic opportunities of girls (World Vision, 2021a). This study aims to contribute to the growing body of knowledge on this complex issue and inform interventions for young adolescent girls' protection of their rights and well-being in Chiredzi.

1.2 Purpose of the study

To assess the Impact of Climate-Induced Food Insecurity on Child Marriages in Chiredzi District, Zimbabwe

1.3 Objectives

1. To examine the extent to which climate-induced food insecurity contributes to child marriages in Chiredzi District, Zimbabwe.
2. To explore the coping mechanisms employed to address food insecurity and their impact on child marriage decisions.
3. To investigate factors that mediate the relationship between climate-induced food insecurity and child marriages in the study area.

4. To identify effective strategies to mitigate the impact of climate-induced food insecurity on child marriages in Chiredzi District.

1.4 Research Questions

1. How does climate-induced food insecurity influence the prevalence of child marriages in Chiredzi District?
2. What are the specific coping strategies adopted to mitigate the effects of food insecurity?
3. What are the factors that contribute to the vulnerability of girls to child marriage in Chiredzi District?
4. What are the strategies that can mitigate the impact of climate-induced food insecurity on child marriages in Chiredzi District, Zimbabwe?

1.5 Assumptions of the study

1. There is a direct causal relationship between climate-induced food insecurity and child marriages in Chiredzi District.
2. The social, economic, and cultural context of Chiredzi District is representative of other regions facing similar challenges.
3. The interventions implemented to address food insecurity have not significantly impacted child marriage rates in the district.

1.6 Significance of the study

1.6.1 Policy makers

The significance of this study extends far beyond Chiredzi District. By investigating the intricate interface between climate food insecurity and child marriage, the study offers essential lessons for policymakers, development actors, and community leaders. The findings will enable them with the information to develop informed interventions that address the causes of both food insecurity and child marriage.

1.6.2 Chiredzi community

Kids in Chiredzi District will be directly impacted by this study because it will inform programs designed to enhance their resilience to climate change, expand their education and employment opportunities, and protect them from the negative impacts of early marriage. Parents will also be impacted by the research findings because it will provide them with information regarding other coping mechanisms for dealing with climate shocks other than child marriage. Besides, the research will allow communities to advocate for policies supportive of food security, gender equality, and child rights protection.

1.6.3 Academic body

This study contributes to existing literature on the complex interlinkages between climate change, food insecurity, and child marriage, a key area of research that has critical development and human rights concerns. The study is helpful in outlining the specific context of the Chiredzi District in Zimbabwe through a case study that is helpful in guiding future research and policy intervention in similar regions.

1.7 Study delimitations

1.7.1 Geographical Scope

The study is geographically limited to Chiredzi District in Zimbabwe. This constraint limits the scope for the generalizability of the findings to other locations with different climatic, socio economic, and cultural backgrounds. While Chiredzi District provides a good case study, it is important to note that the relationship between climate food insecurity and child marriage can vary in different geographic contexts.

1.7.2 Study Scope

The scope of the research was limited to the direct association between climate-induced food insecurity and child marriage. Even though the research focus is useful, it is to be known that other factors of child marriage, such as gender-based violence, education, and healthcare, can also affect child marriage decisions. Future research can borrow from studying the interplays among these factors and the relationship between climate induced food insecurity and child marriage.

1.8 Limitations of the study

Despite the fact that this study gives crucial information about the relationship between food insecurity due to climate and child marriages in Chiredzi District, Zimbabwe, there is a need to note its limitations.

1.8.1 Time Constraints

The study was conducted over a short duration, which potentially restricted the depth and breadth of data collection and analysis. This potentially resulted in a narrower investigation of some aspects of the research topic, and potentially other key factors were omitted. In order to offset this the researcher focused on a small sample.

1.8.3 Self-Reported Data

The study relied on self-report information from the participants, which may be distorted by biases and inaccuracies. The participants might have been reluctant to report sensitive realities, such as involvement in child marriage, or might have provided incorrect or incomplete information. To reduce this, the researcher issued consent forms to the participants and assured them of privacy and confidentiality.

1.9 Definitions of key words

Climate- Climate refers to the long-term weather situation in a region, i.e., temperature, precipitation, wind, and humidity. It is typically averaged over 30 years, (Usman and Aliyu 2021).

Climate-Induced Food Insecurity- Climate-induced food insecurity is a situation where people lack stable access to sufficient, safe, and nutritious food due to the impacts of climate change.

Child Marriages- A child marriage is any marriage or marital union between spouses where one or both spouses are below the age of 18 years.

Climate change- climate change by Usman and Aliyu (2021) climate change defines long-term changes in global temperatures and precipitation. They may be caused by natural forces, but the current warming trend is largely human-induced, e.g., by burning fossil fuels, cutting down forests, and industrial processes.

1.10 Dissertation outline

The chapter 1 has introduced the introduction to the study with the study's background and problem statement. The chapter has laid a foundation of this research and has provided a map of how the research is to be conducted

Chapter 2 provides literature review and study's theoretical framework. The literature review summarizes scholarly articles, books, as well as other materials that pertain to a particular area of research.

Chapter 3 is founded on the approach that the research will take to undertake a research. This chapter outlines a number of methodologies which were used in data collection and analysis which are suitable for the research. It includes explanations of the research worldview assumed

for this research, including the research approaches, data sources, data collection methods, and instruments.

Chapter 4 addresses data collection and reporting of the results. Data will be gathered from the interviews of the participants

The last chapter, chapter 5 addresses conclusions, summary, and recommendations of the study.

1.11 Budget

Table 1.1 Budget

Activities	Costs
Transport	\$10
Food	\$10
Stationery	\$5

CHAPTER TWO

LITERATURE REVIEW AND THEORITICAL FRAMEWORK

2.0 Introduction

The theoretical frameworks and empirical research pertaining to climate-induced food insecurity and its effects on child marriage, specifically in Zimbabwe's Chiredzi District, are examined in this chapter's overview of the literature. It looks at two important theories that are crucial to comprehending how social problems for vulnerable communities are made worse by climate-related challenges: vulnerability theory and social exchange theory. This chapter seeks to identify research gaps and support the necessity of this study by using these theoretical lenses to an analysis of the body of existing literature.

2.1 Theoretical Framework

2.1.1 Vulnerability Theory

A vital framework for comprehending how social, economic, and environmental elements interact to influence how people and groups react to dangers and difficulties is provided by vulnerability theory. Blaikie et al. (1994) assert that socioeconomic circumstances, political systems, and cultural elements all have an impact on susceptibility in addition to exposure to environmental risks. According to this notion, people and households with fewer resources and support networks are disproportionately impacted by climate-related issues like food insecurity. The idea of exposure and sensitivity, which highlights that different communities are exposed to climate threats to differing degrees, is a fundamental component of this theory. People who are more sensitive are more prone to suffer negative consequences, frequently as a result of poverty, illiteracy, or restricted access to resources.

Adaptive capacity the ability of people or communities to adapt to changes brought on by climate change is another crucial component of vulnerability theory. While low adaptation capacity increases susceptibility, higher adaptive capacity can lessen the effects of food insecurity (Mastrorillo et al., 2016). The idea also emphasises how vulnerability is shaped by social institutions, such as gender roles and cultural norms. In many situations, food insecurity disproportionately affects women and girls, which frequently results in choices that put immediate survival first, such child marriage (Wodon et al., 2017). Vulnerability theory's strength is its comprehensive approach, which acknowledges the interactions between many elements that affect vulnerability and skilfully draws attention to systemic problems like gender inequality and poverty.

One critique, though, is that it occasionally ignores the agency of people and communities, depicting them only as victims rather than proactive contributors to problem adaptation (O'Brien & Leichenko, 2000). Vulnerability Theory, which contextualises how food shortages brought on by climate change can force families to make tough choices, such as child marriage, is especially pertinent to Chiredzi District. This study aims to investigate how food insecurity vulnerability affects child marriage rates in the area by comprehending the socioeconomic and cultural factors at work.

2.1.2 Social Exchange Theory

According to social exchange theory, people try to maximise advantages and minimise costs in their interactions with one another, and this leads to the formation of human connections through the exchange of resources (Homans, 1958). When examining decision-making processes in relation to child marriage and food insecurity, this theory is especially helpful. The cost-benefit analysis, in which people weigh the advantages and disadvantages of their decisions, is one of the main principles of social exchange theory. Marrying off daughters may

be seen as a possible economic advantage for families experiencing food shortages, such as getting a dowry or easing financial responsibilities (Blau, 1964).

Reciprocity, which implies that relationships are based on the anticipation of future advantages based on current exchanges, is another important component. Families in food-insecure areas may marry daughters under order to ensure future support from extended family or in-laws (Cook & Emerson, 1978). Furthermore, Social Exchange Theory takes into account how power relations impact interactions; in patriarchal cultures, the choice to marry off girls frequently reflects ingrained gender inequality, leading to families putting the needs of male family members ahead of the rights and futures of young girls (Thibaut & Kelley, 1959).

The study intends to uncover the motivations behind these decisions and the social dynamics that influence them. Social Exchange Theory's strength is its applicability to a wide range of social interactions, providing a nuanced understanding of decision-making processes. However, critics contend that it may oversimplify complex social dynamics by reducing human behaviour to mere calculations of costs and benefits, neglecting emotional and cultural factors that influence decisions (Lawler & Thye, 1999). In Chiredzi District, Social Exchange Theory helps to explain the reason behind child marriages in the face of food insecurity, as families may view early marriage as a survival strategy, weighing the long-term implications for their daughters against the immediate economic benefits.

2.2 The Influence of Climate-Induced Food Insecurity on the Prevalence of Child Marriages

2.2.1 Economic Pressures

Food shortages brought on by climate change greatly increases financial strains on families, which leads them to turn to child marriage as a coping strategy. Families around the world are frequently forced to make tough decisions due to economic difficulties. For example, a study

conducted in Bangladesh by Efevbera et al. (2019) revealed a startling 39% rise in child marriages after climate-related disasters, underscoring the link between early marriage practices and food insecurity. This pattern emphasises the necessity of all-encompassing approaches that take into account social protection for disadvantaged groups as well as climate resilience.

In the African setting, child marriage has been cited as a survival strategy by numerous families in nations like Ethiopia and Nigeria that are experiencing economic difficulties as a result of climate shocks (Chirau, 2020). Due to the economic strains exacerbated by climate change, marrying off daughters is perceived as a workable way to lessen household responsibilities. These financial strains are particularly noticeable in rural Zimbabwe, where households frequently do not have access to enough food and resources (Mastrorillo et al., 2016).

The long-term effects of these economic pressures on girls' prospects are still not well understood, though. Child marriage may provide short-term financial respite, but more research is necessary to fully understand the possible long-term effects on health and educational performance.

2.2.2 Access to Education

Food instability brought on by climate change has a substantial impact on access to education, which in turn affects the prevalence of child marriage. During economic downturns, girls' education is frequently the first to be jeopardised worldwide. Families in nations with acute food shortages may pull their daughters from school in order to reduce expenses or help out around the house (UNICEF, 2021). Since girls who drop out of school are more likely to marry young, this disruption in their education raises the risk of an early marriage.

It is clear that education and child marriage are related in Africa. According to research, food insecurity has been linked to lower school attendance among girls in nations like Malawi and Mozambique, which raises the risk of an early marriage (Olowu, 2016). In Zimbabwe, persistent food shortages made worse by climate change has caused more girls to drop out of school, which has raised the number of child marriages (Chirau, 2020).

Despite these results, there is a significant research gap about the precise mechanisms through which food insecurity impacts girls' educational outcomes, and more research is required to determine whether interventions that improve food security can also increase access to education and lower the rate of child marriage.

2.2.3 Gender Inequality

The relationship between child marriage and food insecurity brought on by climate change is significantly influenced by gender inequality. Due to ingrained gender stereotypes that give preference to male education and opportunity over female ones, girls experience food insecurity at a disproportionate rate worldwide (UN Women, 2020). Daughters are often married off early in times of crises because they are seen as financial liabilities in many cultures.

This gendered viewpoint is common in the African context. According to studies, food insecurity frequently makes gender inequality worse in nations like Kenya and Tanzania, forcing families to prioritise their daughters' marriages as a way to ensure their financial survival (Wodon et al., 2017). Traditional gender norms have a big impact on marriage decisions in Zimbabwe. Gender inequality may be further entrenched when families feel pressured to marry off daughters in order to alleviate financial strains during times of food scarcity (Chirau, 2020).

However, little is known about how measures to lessen gender inequality can lessen the impact of food insecurity on child marriage. To evaluate how well gender-focused programs address these interconnected problems, more study is required.

2.3 Coping Strategies to Mitigate the Effects of Food Insecurity

2.3.1 Diversification of Livelihoods

According to a study by Smith et al. (2020) in Bangladesh, households that used a variety of farming methods had more food security than those that only used one crop. The study came to the conclusion that diversification acts as a buffer against economic shocks and increases resilience to climate unpredictability. In a similar vein, a 2019 study conducted in India by Thorne and Lema found that rural families' access to food and nutritional results were much enhanced by having a variety of income sources.

Research conducted in Zimbabwe by Moyo, Chikwanda, and Magombe (2022) demonstrated that smallholder farmers who used mixed farming practices, which combined crop cultivation and livestock husbandry, reported greater food security in an African setting. The significance of diversity in reducing the effects of climate change on agricultural productivity was underlined by this study. A different study conducted in Malawi, however, discovered that although diversity increased food security, many households continued to be at risk because of their restricted access to resources and markets.

Each of these research has demonstrated how diversification can improve food security. They haven't, however, addressed the precise contextual elements that affect how successful diversification tactics are in various geographical areas. The results of diversification initiatives in Zimbabwe will be examined in this study in relation to local cultural practices and resource accessibility.

2.3.2 Community-Based Support Programs

According to a study conducted in Brazil by Oliveira et al. (2021), low-income households' food security was considerably increased by community-based initiatives like food cooperatives. The study demonstrated how group efforts promoted social bonding in addition to expanding access to food. Similarly, a research conducted in Mexico by Ramirez and Soto (2020) discovered that community gardens improved access to food and gave members a place to share skills.

According to a World Vision Ethiopia (2022) study, community assistance programs were essential in tackling food insecurity in Africa, especially in regions devastated by drought. According to the study, local networks improved resilience by facilitating the efficient distribution of resources and food. Although community initiatives were helpful, a research conducted in Zimbabwe found that they frequently lacked long-term planning and consistent finance, which eventually reduced their efficacy.

All things considered, these studies show that community-based assistance programs improve food security. They have, nevertheless, created a hole in terms of the programs' scalability and durability. The purpose of this research is to examine how community-driven solutions might be developed to guarantee Zimbabwe's long-term food security.

2.3.3 Legal and Policy Advocacy

The Food and Agriculture Organisation (FAO, 2022) conducted a thorough investigation that demonstrated the importance of food security-promoting legal frameworks in combating hunger. The report cited examples from a number of nations where better agricultural productivity and food access were the result of policy reforms. In a similar vein, Lee and

Chang's (2021) study in South Korea highlighted how successful agricultural policy can improve food security for vulnerable groups.

India's National Food Security Act is a model for policy advocacy in Africa, showing how food insecurity may be addressed by government action (Government of India, 2022). However, a research carried out in Zimbabwe by Moyo et al. (2022) emphasised the difficulties in successfully putting such policies into practice, pointing out that bureaucratic inefficiencies frequently negate their potential advantages.

This study will examine the specific obstacles to policy effectiveness in Zimbabwe and suggest ways to improve it. Previous research has shown the value of legal and policy advocacy in promoting food security, but it has not fully understood how local contexts affect the implementation and efficacy of these policies.

2.3.4 Education and Awareness Campaigns

A study by Tan et al. (2020) in Indonesia also supported the notion that education campaigns could effectively reduce food insecurity by empowering communities to make informed decisions. A study by Johnson and Smith (2019) in the Philippines found that educational initiatives significantly improved community awareness about food security and nutrition, concluding that increased knowledge led to better food choices and agricultural practices.

A UNICEF (2020) study in Zimbabwe brought to light the critical role that education plays in preventing child marriage in Africa, which is closely related to food hardship. According to the study, educated girls were less likely to get married young, which increased their families' food security. A different study conducted in rural Kenya, however, found that cultural norms continued to have a major influence on females' access to education in spite of educational initiatives.

When taken as a whole, these studies demonstrate the revolutionary potential of education and awareness initiatives in combating food insecurity. They do not, however, address how education, cultural customs, and the results of food security interact. In order to optimise the impact of educational programs on food security in Zimbabwe, this study will investigate how they might be customised to local circumstances.

2.3.5 Implementation of Sustainable Agricultural Practices

A study conducted in India by Gupta et al. (2021) concluded that the adoption of sustainable agricultural practices, like organic farming and agroforestry, improved food security and environmental resilience, and that sustainable methods contributed to ecosystem health in addition to increasing crop yields. Similarly, a study conducted in Brazil by Pereira and Costa (2020) highlighted the significance of agro ecological practices in ensuring food security among smallholder farmers.

While a study conducted in South Africa found that although sustainable practices showed promise, they frequently required significant upfront investment that many farmers could not afford, Moyo, Chikwanda, and Magombe's (2022) research in Zimbabwe also strengthened the idea that sustainable practices can mitigate the impacts of climate change on food production by highlighting successful cases of farmers implementing conservation agriculture, which increased resilience to drought.

Although these studies have demonstrated the potential of sustainable agricultural practices to improve food security, they have not fully addressed the economic obstacles that hinder their widespread adoption. This study will investigate the financial and technical assistance required to promote sustainable practices among Zimbabwean farmers.

2.3.6 Access to Financial Services

A study conducted in Bangladesh by Choudhury et al. (2020) showed that rural households' food security was greatly enhanced by having access to microfinance. According to the study's findings, financial services allowed families to diversify their sources of income and invest in agricultural inputs. Kumar and Singh (2021) discovered that microcredit programs improved food access and decreased vulnerability among marginalised people in a related study conducted in India.

Although research in Zimbabwe showed that many rural households faced obstacles like high interest rates and lack of collateral, which limited their access to credit, a study by Usman and Aliyu (2021) in Nigeria corroborated these findings in the African context, showing that financial services were essential for empowering women farmers and improving household food security.

This study will examine the obstacles to financial inclusion in Zimbabwe and suggest ways to improve access for vulnerable groups. While previous research emphasises the significance of financial services access in tackling food insecurity, it does not address the unique difficulties rural households encounter in obtaining these services.

2.4 The factors that contribute to the vulnerability of girls to child marriage

2.4.1 Economic Instability

This study will examine the obstacles to financial inclusion in Zimbabwe and suggest ways to improve access for vulnerable groups. While previous research emphasises the significance of financial services access in tackling food insecurity, it does not address the unique difficulties rural households encounter in obtaining these services. Ushewokunze-Obatolu (2019) found that child marriage rates in Zimbabwe were significantly impacted by economic instability, especially in rural areas where families were struggling to meet basic needs. The study found

that girls were frequently married off as a way to relieve financial burdens, which is a similar pattern seen in other countries. However, the study also found that marrying off daughters often harms the community's economic prospects by perpetuating cycles of poverty. This study intends to explore how economic reforms can mitigate the pressures that lead families to marry off their daughters prematurely, even though previous research has not sufficiently explored the role of local economic policies in addressing these vulnerabilities.

2.4.2 Cultural Norms and Traditional Practices

Research by Jain and Kurz (2007) in South Asia found that marrying daughters at a young age is ingrained in cultural expectations and social norms in many communities, and the researchers concluded that these cultural practices not only perpetuate child marriage but also create a stigma around girls who remain unmarried after a certain age. Similarly, research by Chandra-Mouli et al. (2017) focused on how cultural beliefs regarding gender roles contribute to the persistence of child marriage, with girls often viewed as financial burdens rather than as human beings with rights to education and autonomy.

Chikoko et al. (2021) found that cultural beliefs about marriage and family honour had a significant impact on girls' vulnerability to early marriage in Zimbabwe. They noted that in many communities, marrying off a daughter is seen as a way to preserve family honour, especially in societies where virginity and modesty are highly valued. However, they also emphasised that these cultural practices often conflict with legal frameworks designed to protect girls. While these studies highlight the cultural aspects of child marriage, they leave a gap in understanding how educational interventions can shift these deeply in beliefs.

2.4.3 Lack of Education and Awareness

One of the main things that makes girls more susceptible to child marriage is a lack of knowledge and awareness. According to research conducted in India by Raj et al. (2019), females who had less access to schooling had a far higher chance of getting married before turning 18. The study came to the conclusion that girls who have had an education are less likely to marry young because they are more informed about their rights and have the skills needed to become economically independent. Similarly, a study conducted in Nigeria by Usman et al. (2020) discovered that child marriage was more common in communities with lower educational attainment because families were frequently unaware of the legal ramifications and potential consequences of marrying off their daughters at a young age.

A study by Maphosa and Moyo (2020) in Zimbabwe supported these findings, showing that girls from low-education backgrounds were more likely to marry young. The researchers stressed that when girls are denied the chance to receive an education, they are frequently left without the knowledge or resources to resist early marriage, which creates a cycle of poverty and dependency. Nevertheless, the study also noted that systemic barriers, such as societal attitudes and inadequate schooling infrastructure, continue to prevent girls from receiving an education.

When taken as a whole, these studies demonstrate the revolutionary potential of education and awareness initiatives in combating food insecurity. They do not, however, address how education, cultural customs, and the results of food security interact. In order to optimise the impact of educational programs on food security in Zimbabwe, this study will investigate how they might be customised to local circumstances.

2.4.4 Legal and Institutional Barriers

A study conducted in Lebanon by Karam et al. (2019) revealed that although there are laws against child marriage, enforcement is weak, allowing the practice to continue. The researchers came to the conclusion that inadequate legal frameworks and a lack of governmental support exacerbate the issue, leaving many girls unprotected. Rahman et al. (2020) conducted a study in Bangladesh that showed that, despite legal prohibitions on child marriage, loopholes in the law and ineffective implementation:

According to a study by Zindi and Chikoko (2021), efforts to prevent child marriage in Zimbabwe are made more difficult by the intersection of cultural customs and legislative restrictions. According to the study, females in areas with strong cultural customs that encourage child marriage have a difficult time getting legal protection. But the report also pointed out that girls and their families can fight against early marriage practices if they are aware of their legal rights. Although these studies highlight the value of legal frameworks in combating child marriage, they do not fully explain the efficacy of grassroots legal activism. This project will investigate how enhancing community involvement and legal protections can lessen girls' susceptibility to child marriage.

2.4.5 Gender Inequality

Research conducted in South Asia by Malhotra et al. (2011) revealed that patriarchal norms frequently dictate the roles and expectations of girls, leading families to prioritise marriage over education. The study concluded that early marriage is seen as a means of controlling their sexuality and ensuring family honour in societies where girls are valued less than boys. Similarly, a study conducted in Nigeria by Odugbemi and Oluyemi (2020) highlighted that gender discrimination in education and employment opportunities increases the likelihood of child marriage because girls are often considered less valuable investments.

In Zimbabwe, a research by Chinyoka and Kadzamira (2020) indicated that ingrained gender norms greatly limit girls' prospects and choices, often leading to early marriage. The researchers underlined that girls confront systemic constraints that limit their access to education and economic resources, compounding their vulnerability. But the study also pointed out that these dangers might be considerably reduced by empowering girls with education and social support. Although these studies show how gender inequality and child marriage are closely related, they haven't gone far enough in examining how male participation can challenge these conventions. This study will look into how reducing child marriage rates can be achieved by involving men and boys in gender equality activities.

2.4.6 Health Issues and Access to Services

Girls' susceptibility to child marriage is made worse by a number of important variables, including health problems and limited access to healthcare facilities. Girls who lack access to reproductive health care are more likely to be married young, frequently without realising the health consequences, according to a study done in Bangladesh by Naher et al. (2018). The study came to the conclusion that greater rates of maternal death and child marriage are caused by a lack of health education and services. Similar to this, a study conducted in India by Gupta et al. (2020) found that girls who had limited access to health care were more likely to marry young since marriage is frequently given priority over health education in households.

In Zimbabwe, a study by Nyamukondiwa et al. (2021) revealed that limited access to healthcare services significantly increased the risk of child marriage. The researchers discovered that in places with limited healthcare facilities, families often resorted to marrying off their daughters to alleviate perceived health risks associated with delayed marriage. However, the study also revealed that boosting access to health services could empower girls and delay marriage. Although these studies highlight the link between child marriage and health access, they do not

fully explain how community health initiatives might be modified to target these vulnerabilities. This study will investigate how combining community actions with health education can lower the rate of child marriage among populations that are already at risk.

2.5 Strategies to Mitigate the Impact of Climate-Induced Food Insecurity on Child Marriages

2.5.1 Enhancing Agricultural Resilience

The implementation of climate-resilient agricultural practices, such as drought-resistant crops and improved irrigation systems, significantly improved food security in rural households, according to a study by Verchot et al. (2018) in Indonesia, which concluded that when families can sustain their food production, they are less likely to use marrying off their daughters as a coping mechanism. Similarly, research in the Philippines by Laquihon et al. (2020) emphasised the importance of diversifying crops to withstand climate shocks, securing food availability and lowering the financial burdens that frequently result in child marriage.

Moyo et al. (2021) found that communities that adopted agro-ecological practices were better able to handle climate variability, which led to improved nutritional outcomes and delayed the onset of child marriage. However, these studies do not fully address the barriers to adopting such practices, especially for the most vulnerable populations. This study will investigate the socio-economic factors that hinder the implementation of resilient agricultural strategies in Zimbabwe.

2.5.2 Promoting Education and Awareness

In order to empower communities to break the cycle of child marriage, it is essential to promote education and awareness about the connections between climate change, food security, and

child marriage. For example, a study conducted in Bangladesh by O'Brien et al. (2012) found that educating communities about the effects of climate change on food security can result in better informed decisions about marriage and family planning. Similarly, a study conducted in Vietnam by Pham et al. (2019) found that educational programs addressing the socio-economic consequences of climate change effectively reduced early marriage rates by raising awareness of girls' rights and opportunities.

A study conducted in Zimbabwe by Chisango and Mataranyika (2022) showed that attitudes on child marriage were effectively changed by community-based educational programs that addressed climate change and its effects on agriculture. The researchers found that families were more inclined to place a higher priority on education when they were aware of the long-term effects of marrying off their daughters too young. Though these studies emphasise the value of education, they don't go far enough in examining how traditional leaders might be involved in these efforts. The purpose of this study is to find out how working with local leaders might improve the efficacy of educational initiatives aimed at reducing child marriage.

2.5.3 Strengthening Social Protection Systems

Addressing the economic vulnerabilities that result in child marriage in the face of climate-induced food shortages requires strengthening social safety mechanisms. According to a Brazilian study by Gentilini et al. (2020), social safety nets including food aid and cash transfers help protect families from financial shocks and lower the risk of child marriage. By giving families the financial security they need to support their daughters' education, well-designed social protection programs directly reduced the number of child marriages, according to a different study done in Mexico by Vargas et al. (2018).

According to a study by Chikoko et al. (2021), the implementation of focused social protection programs in Zimbabwe helped lessen the impact of climate shocks on families that were already at risk, which in turn decreased the number of child marriages. The researchers stressed that families were less inclined to marry off their daughters as a coping mechanism when they received support during difficult times. Even though these studies show how successful social protection is, they don't provide enough information about how these programs might be modified to better suit the unique requirements of communities dealing with food insecurity brought on by climate change. The purpose of this study is to investigate methods for improving Zimbabwe's social protection programs' applicability and accessibility.

2.5.4 Fostering Community Resilience

Child marriage rates can be decreased and the effects of climate-induced food insecurity can be lessened by promoting community resilience through group efforts. Communities who practiced collective resource management were more resilient to climate shocks and maintained food security, according to a 2016 study conducted in West Africa by Béné et al. The researchers came to the conclusion that encouraging cooperation among neighbours not only improves food security but also gives families the strength to fend against the pressures that result in child marriage. In a similar vein, a study conducted in Ethiopia by Dercon et al. (2014) highlighted how community-based adaption measures greatly decreased households' susceptibility to hazards associated with climate change.

According to research by Nyamadzawo et al. (2020), communities in Zimbabwe who established cooperative groups to pool resources and expertise reported better food security, which in turn helped to reduce the prevalence of child marriage. According to the study, families were more inclined to give their daughters' education first priority when they collaborated to solve food insecurity. These studies do not sufficiently address the difficulties

of organising communities for collective action, despite the fact that they emphasise the advantages of community resilience. This research will look into the best ways to involve communities in resilience-building programs that especially aim to lower the number of child marriages.

2.5.5 Improving Access to Healthcare Services

Addressing the health-related aspects of food insecurity and child marriage brought on by climate change requires expanding access to healthcare services. According to a 2011 study by Ivers and Cullen, females who had access to reproductive health care were less likely to be married young because they were better equipped to make decisions regarding their health and welfare. Similar findings were made by Singh et al. (2019) in India, who found that increasing girls' access to healthcare greatly decreased the number of child weddings as families become more conscious of the negative health effects of young marriages.

Although these studies highlight the importance of healthcare access, they leave a gap in understanding how to effectively integrate health services with community-based programs. This study will explore strategies for combining health education with initiatives aimed at reducing child marriage. In Zimbabwe, a study by Chigavazira et al. (2021) found that improving healthcare accessibility, especially in rural areas, played a pivotal role in reducing the vulnerability of girls to child marriage. The researchers found that families were more likely to delay marriage when girls had access to health education and services and understood the importance of health and education for their daughters.

2.5.6 Engaging Men and Boys

The effects of climate-induced food insecurity can be considerably lessened by involving men and boys in campaigns to prevent child marriage. According to a study by Barker et al. (2015),

the prevalence of child marriage significantly declines when boys participate in conversations on gender equality and children's rights. Given that boys have the ability to influence their classmates and families, the study made clear that male participation is crucial to combating cultural norms that support child marriage. Similar to this, a study conducted in South Africa by Jewkes et al. (2017) highlighted how giving boys the confidence to speak out against child marriage can result in more equal beliefs and behaviours in local communities.

Mavhunga and Nyoni's (2022) study in Zimbabwe found that programs that engaged boys in conversations about the effects of climate change and food insecurity reduced the number of child marriages, and that when boys realised the economic benefits of postponing marriage and the importance of education for girls, they became change agents in their families.

2.6 Chapter Summary

The theoretical frameworks and empirical research pertaining to climate-induced food insecurity and its effect on child marriage, specifically in Zimbabwe's Chiredzi District, were examined in this chapter's thorough literature analysis. In order to comprehend how social problems for vulnerable populations were made worse by climate-related obstacles, it looked at two crucial theories: vulnerability theory and social exchange theory. The study's goals were to determine how much food insecurity brought on by climate change contributed to child marriages, examine coping strategies used by families, look into mediating factors, and find practical ways to lessen the effect of food insecurity on child marriages. This chapter emphasised the need for this study and pointed out important gaps in the current research by examining the literature through various theoretical lenses. The methods will be described in the upcoming chapter.

CHAPTER THREE: RESEARCH METHODOLOGY AND DESIGN

3.0 Introduction

The present chapter provides a detailed introduction on the research methodology applied to investigate the intricate relationship between climate change-induced food insecurity and the prevalence of child marriage in Zimbabwe's Chiredzi District. Based on the literature reviewed in the previous chapter, this section outlines the mixed methods design that combines both qualitative and quantitative methods. The aim is to demystify the complexities of child marriage in the context of climate hardships. This chapter continues to elaborate on the target group, sampling techniques, data gathering methods, and ethical issues that were of utmost importance in the research activity.

3.1 Research Approach

The research approach is the foundation upon which the design, methodology, and procedures employed in the research rest (Creswell & Poth, 2018). A mixed-methods approach was used in order to offer an in-depth view of how climate-driven food insecurity affected child marriage in Chiredzi District. By bringing together qualitative and quantitative research methods, the research allowed for the collection of diverse data types, which enhanced the overall analysis. This intersection was essential to capture the richness and variety of the challenges themselves, in presenting both statistic findings and thick accounts that encapsulated the lived experiences of individuals whose lives were being affected by such challenges.

3.2 Research Design

A case study design was employed in the study to investigate the pervasive circumstances of food insecurity and its impact on child marriage in Chiredzi District. This method allowed for data collection across multiple points in time and at various geographical sites, leading to a more sophisticated understanding of the phenomena (Yin, 2018). Quantitatively, it utilized

structured questionnaires to collect data from a representative sample of community members in an attempt to capture a broad spectrum of perspectives. The qualitative aspect entailed semi-structured interviews with the most important informants like representatives of the local government and community leaders. This combination of approaches provided an integrated perspective, enabling the examination of statistical trends and individual narratives, which were instrumental to answering the research questions accurately.

3.3 Target Population

The study's target population was individuals of various ages residing in Chiredzi District. In attempting to further explore the complexities surrounding food insecurity and child marriage, both purposive and stratified sampling methods were employed. The groups targeted were the representatives of civil society organizations (CSOs) known to be aware of local needs and sustainable practices, traditional leaders, and local government policymakers responsible for the implementation of policies. The study also aimed to include owners of businesses because of their positions in supply chains and food production. Incorporating ordinary residents, especially parents and guardians, was identified as important in uncovering the dynamics of child marriage due to food insecurity (Chigunta, 2020). Besides, informal laborers and small-scale farmers were also sampled to reflect their concerns and contribution to the local economy in an attempt to capture the diversity of opinions.

3.4 Sample Size

While examining the inter-linkage between climate-induced food insecurity and child marriage in Chiredzi District, a survey was conducted on 50 respondents from an estimated population of 15,000. This provided a sample size proportion of approximately 0.33%. Stratified and purposive sampling techniques were used to offer representation from a variety of demographic groups regarding age, gender, and socioeconomic status (Creswell, 2014). The sample had two

strata: 30 residents to pick up what the residents believe and 20 local government officials to provide some insights on policy approaches. This approach was aimed at ensuring balanced understanding of the problem and prospects of food insecurity and child marriage, adhering to best practices in sampling of the population and study design.

3.6 Data Collection Methods

Data collection during the study involved a variety of methods, including questionnaires, interviews, focus group discussions, and others. The variety was selected to get a detailed understanding of challenges and opportunities in climate-induced food insecurity and child marriage in Chiredzi District. With the application of both qualitative and quantitative methods, the study aimed at getting strong and credible findings capturing the numerous dimensions of issues under research.

3.6.1 Questionnaires

Questionnaires are officially crafted data collection tools, typically a series of questions to be used to elicit data from respondents. They can be closed-ended (fixed alternatives) or open-ended (free-text) questions (Bryman, 2016). In this study, officially crafted questionnaires were used to gather quantitative information from individuals in communities, such as households, local leaders, and service users. Questionnaires measured variables such as food security status, the incidence of child marriage, and the attitudes toward intervention in the community. Anonymity guaranteed frank responses, while online and in-person methods were used to ensure high levels of participation. Pilot testing guaranteed question clarity and improved response rates and yielded baseline data for the detection of patterns in community attitudes regarding food insecurity and child marriage.

3.6.2 Interviews

Interviews are qualitative data collection methods whereby the researcher directly engages with respondents through questions to grasp their thoughts, feelings, and experiences (Creswell, 2015). Semi-structured interviews were conducted with key stakeholders like local government officials, community leaders, and NGO representatives. The method enabled having a thorough comprehension of systemic matters related to the distribution of resources, policy enforcement, and public engagement in preventing food insecurity and child marriage. An interview schedule allowed focus on major issues with space for probes. Face-to-face and phone interviews provided in-depth information on operational and structural concerns, and logistic concerns were dealt with through communication.

3.6.3 Focus Group Discussions

Focus group discussions were a moderated discussion of a limited number of participants that was aimed at getting a broad variety of opinions about a topic at hand (Flick, 2020). Focus group interviews were held with mixed groups, including community members, youth representatives, and women's associations. 5–10 individuals were employed in each group to generate lively debate around barriers and opportunities to food security and child marriage. Facilitators employed a discussion guide to ensure balanced participation and the identification of issues of concern. Despite problems such as overbearing voices overpowering other participants being noted, techniques such as facilitated moderation were employed to maintain openness, and this resulted in collective observations and focusing on solutions from the community.

3.6.4 Data Collection Instruments and Procedures

Data collection instruments are the equipment or methods used to gather data during research (Kahn, 2013). The three primary instruments used for data collection were recorders,

notebooks, and interview/discussion guides. Notebooks were used to take field notes and observations, particularly where technical problems were encountered or where participants refused to be taped. Voice recorders were used to take accurate data to allow for proper transcription and analysis. The structured guides allowed for in-depth insights as well as cross-checking of the participant responses. This systematic procedure carried out in real-life settings increased the credibility and validity of the data gathered as well as conforming to ethical research practice.

3.7 Pilot Testing

Pilot testing was the original test of research instruments on a population to identify and address any emergent issues (Bryman, 2016). The step was essential in determining the suitability of data-gathering instruments like questionnaires and interview guides in conducting research on climate-induced food insecurity and child marriage in Chiredzi District. Pilot test comments led to revisions for clarity and participant point of view compatibility, which ensured that the instruments effectively captured community perceptions. Moreover, estimating completion times maximized data gathering efficiency and encouraged increased participant participation.

The pilot test also indicated the necessity of triangulating the procedures of data collection in order to increase the research rigour. By pre-testing the mixture of questionnaires, interviews, and focus group discussions, the researcher ensured these procedures combined well with each other in a manner that provided an in-depth insight into the issue of research. The phase tested the protocol acceptability of the study and participation reluctance, thereby increasing the feasibility and reliability of the study.

3.8 Data Presentation and Analysis

Data analysis involved examining and interpreting data to uncover substantial patterns, themes, and insights (Creswell, 2014). Analysis was needed when interpreting the complexities of climate-induced food insecurity and child marriage in Chiredzi District.

3.8.1 Quantitative Data

Quantitative data collected through structured questionnaires were statistically analyzed using SPSS or STATA programmes in order to determine trends and patterns between variables. Descriptive statistics, namely frequencies, percentages, and means, offered an overview of overall results, for instance, food insecurity prevalence and child marriage rates. Inferential statistics, for instance, regression analysis, examined correlations between variables, for instance, the impact of economic conditions or education interventions on child marriage prevalence. An adequate sample size ensured the findings were more reliable and statistically significant, leading to robust conclusions that informed practical recommendations in countering such pertinent issues (Field, 2018).

3.8.2 Qualitative Data

Qualitative data obtained from semi-structured interviews and focus group discussions were analyzed thematically in an effort to provide detailed insights into the challenges and opportunities of food insecurity and child marriage. This process consisted of transcribing, coding, and theme categorization of data into themes such as "community perceptions" and "cultural influences," which helped identify common patterns and stakeholders' opinions. Analysis revealed how socio-economic determinants and cultural norms have contributed to such issues. Use of direct quotations from participants enriched data and offered varied voices. Thematic analysis complemented the quantitative data, offering detailed knowledge on systemic issues (Braun & Clarke, 2006).

3.8.3 Integration of Quantitative and Qualitative Data

Integration of quantitative and qualitative data provides an end-to-end view of opportunities and challenges for meeting climate-induced food insecurity and child marriage. A mixed-methods approach enhances validity through the integration of patterns of numbers and context data. For example, while quantitative data is able to demonstrate high levels of child marriage, qualitative data can ascertain the reasons for the same, including economic necessity. This triangulation offers the confidence that statistical correlations and social processes are being addressed. Creswell and Plano Clark (2018) posit that the integration gives a more inclusive perspective of complex issues, where it is possible to develop sound and actionable recommendations for alleviating these challenging issues.

3.9 Ethical Considerations

Ethical practice was central in human participant research, especially with sensitive issues like food insecurity and child marriage in Chiredzi District. Confidentiality, informed consent, and ethical clearance were key ethical aspects of this study, in upholding participants' rights and well-being.

3.9.1 Informed Consent

Informed consent was also provided to all respondents prior to data collection, so participants were aware of the purposes of the study, their rights, and the ability to withdraw without penalty. This is in accordance with ethical standards, and it guaranteed voluntary participation without coercion (Bryman, 2012).

3.9.2 Confidentiality

Confidentiality was ensured by anonymizing responses and secure storage of data. Information about participants was not disclosed, and data were used solely for research. Data protection

using secure digital techniques, e.g., password encryption, was employed to prevent unauthorized access to the data, protecting the privacy of the participants (Alkassim, 2016).

3.9.3 Ethical Approval and Sensitivity

The researcher obtained pre-emptive ethical clearance from the relevant institutional review board before collecting data, signifying adherence to ethical principles (Creswell, 2014). The research instruments were carefully designed to avoid inflicting distress and ensuring participants' rights and dignity remained paramount.

3.10 Validity and Reliability

Validity referred to research accuracy measurement, with the goal that measurements really reflected the phenomena being studied. Validity types included face, content, and construct validity, which were achieved through pilot testing and data triangulation from various sources (Bryman, 2016; Cohen et al., 2018).

3.10.1 Validity

To acquire reliable measurement of food insecurity and child marriage, the study focused on strengthening research instruments and applying the principle of triangulation to cross-check information gathered from questionnaires, interviews, and focus group discussions. This assisted in reducing biases and enhancing the validity of the results.

3.10.2 Reliability

Reliability meant consistency of measuring tools. Techniques such as Cronbach's alpha were used in the research to test internal consistency in quantitative data (Dennick, 2011), and long field notes and audio records were kept for qualitative data. Triangulation also enhanced reliability by cross-verifying information from a variety of sources (Denzin, 2017). Such

techniques guaranteed production of reliable results that could be applied in similar circumstances, promoting improved policies to combat food insecurity and child marriage.

3.11 Summary of Chapter

The chapter presents an overview of the research approach employed to explore the opportunities and challenges of climate-driven food insecurity and child marriage in Chiredzi District. The adopted research design, population, and sampling methods are justified in terms of their ability to produce credible and representative data. Moreover, the data collection methods, measures of validity and reliability, and ethical issues all play their part in ensuring that the research was carried out ethically. This methodological framework provides a solid basis for examining the impacts of food insecurity and child marriage. The findings of the research will be discussed and analyzed in the next chapter.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSION OF FINDINGS

4.0 Introduction

This chapter presents findings from data collection procedures regarding the impact of climate-induced food insecurity on child marriage in Chiredzi District, Zimbabwe. Findings are organized according to the study objectives, which include assessing the influence of food insecurity on child marriages, exploring coping mechanisms, identifying mediating social factors, and evaluating existing policies aimed at reducing child marriages.

4.1 Response Rate

According to Leedy (2015), the response rate is the proportion of subjects in a statistical study who responded to the research questions. The researcher aimed to administer 50 questionnaires, receiving 40 completed responses, yielding a response rate of 80%. Additionally, 25 out of 30 questionnaires and 15 out of 20 interviews were successfully conducted. This response rate is deemed adequate for generalizing findings, as shown in Table 4.1.

Table 4.1 Response Rate

Method	Expected Response	Actual Response	Non-Response	Response Rate (%)
Questionnaires	30	25	5	83.3%
Interviews	20	15	5	75%

Total	50	40	10	80%
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Source: field data, 2025

The overall expected response for the study was 50 participants, with a total of 40 completed responses, achieving a response rate of 80%. This rate is considered satisfactory for generalizing findings in research (Mugenda, 2003). These engagement levels reflect a strong willingness among participants to share their insights, which enhances the reliability of the findings.

4.2 Demographic Variables

The demographic features of the respondents are categorized by gender, age, education level, and household size.

4.2.1 Gender

Among the respondents, 15 out of 25 (60%) of questionnaire participants were female, while 10 (40%) were male. This representation reflects a significant involvement of women in discussions regarding food insecurity and child marriage.

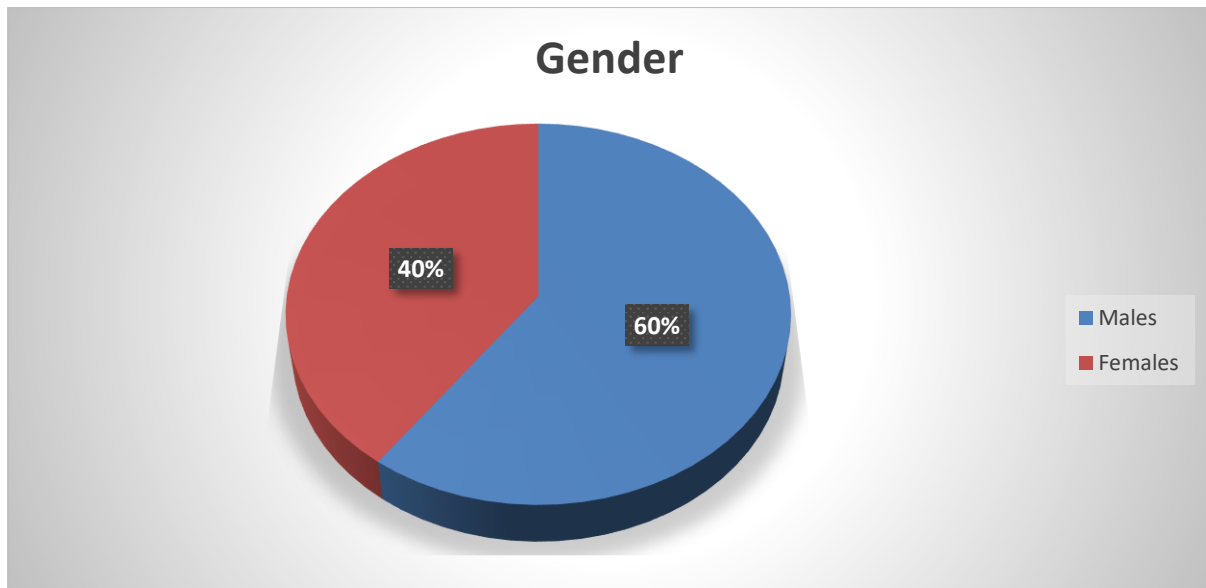


Figure 4.1 Gender Representation

Source: field data, 2025

4.2.2 Age

The age distribution of respondents from the 25 completed questionnaires is presented in the table below:

Table 4:2 Age Distribution of Respondents

Age Group	Frequency
18-25	3
26-35	5
36-45	12
46-55	3

56+	2
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Source: field data, 2025

The table illustrates the age distribution of respondents who completed the questionnaires regarding the impact of climate-induced food insecurity on child marriage in Chiredzi District, Zimbabwe. A total of 25 questionnaires were analysed, revealing important insights into the demographics of the participants. Among the respondents, the largest age group is 36-45 years, comprising 12 individuals, which accounts for 48% of the total responses. This significant representation indicates that middle-aged adults are actively engaged in discussions concerning food insecurity and child marriage, which are critical issues in the community (Chigunta, 2002).

The second-largest group is the 26-35 age category, with 5 respondents (20%). This demographic also plays a crucial role in understanding the dynamics of food insecurity and child marriage, as they are often in transitional stages of life and may have families that are impacted by these issues (Mason, 2016).

In contrast, the age groups 18-25 and 46-55 both have 3 respondents (12% each), while the 56+ age group includes 2 participants (8%). The lower representation of younger individuals (18-25 years) could suggest a lack of involvement or awareness among youth regarding these critical social issues, which may hinder the effectiveness of interventions aimed at addressing climate-induced food insecurity and its correlation with child marriage (UNICEF, 2019).

4.2.3 Education Level

The education levels among the respondents from the 25 completed questionnaires are summarized in the table below:

Table 4:3 Education Level

Education Level	Frequency	Percent
Primary	10	25%
Secondary	7	17.5%
Tertiary	5	12.5%
Other	3	7.5%

Source: field data, 2025

The education level of the respondents reveals a diverse educational background, which is essential for understanding the complexities surrounding food insecurity and child marriage in Chiredzi District. A significant portion of the respondents, 25%, have attained only primary education, indicating that a considerable number of individuals may lack access to advanced educational opportunities. This limitation can affect their ability to engage critically with issues related to food security and child marriage, potentially perpetuating cycles of poverty and vulnerability (UNICEF, 2019).

Moreover, 17.5% of respondents completed secondary education, while 12.5% hold tertiary qualifications. This suggests that while some individuals possess higher education levels, a substantial number still fall short of educational attainment that can empower them to make informed decisions regarding family and social matters. The 7.5% of respondents with other forms of education may include vocational training or specialized qualifications, which could also contribute to their understanding of economic opportunities and social issues.

The diversity in education levels among respondents highlights the varying capacities to address the challenges posed by climate-induced food insecurity and its relationship with child marriage. Individuals with higher education may be better equipped to advocate for effective solutions and participate in discussions on policy interventions. Therefore, understanding this educational landscape is crucial for developing targeted strategies to engage all community members in addressing these pressing social issues.

4.2.4 Household Size

The household sizes reported by the respondents from the 25 completed questionnaires (not interviews) are summarized in the table below:

Table 4:4 Household Size

Household Size	Frequency
1-3 people	5
4-6 people	10
7-10 people	7
10+ people	3

Source: field data, 2025

The distribution of household sizes among respondents indicates a significant number of individuals come from larger households, which can profoundly influence the dynamics of food insecurity and child marriage in Chiredzi District. The largest group, consisting of 10 respondents, falls within the 4-6 people category, representing 40% of the sample. This

prevalence suggests that many families may face increased competition for resources, including food, which can exacerbate food insecurity (Masanjala, 2006).

Additionally, the presence of 7 respondents from households with 7-10 individuals (28%) highlights the challenges these families may encounter in managing resources effectively. Larger households may struggle to provide adequate nutrition and support for all members, particularly children, which can lead to increased vulnerability to child marriage as families might resort to such measures as a coping mechanism during times of food scarcity (Kumar et al., 2018).

In contrast, the smaller household sizes (1-3 people) account for only 20% of the responses, which suggests that a minority of respondents come from homes that might experience less pressure regarding resource allocation. However, the presence of households with 10 or more individuals (12%) indicates that some families are significantly larger, potentially leading to even greater challenges in ensuring food security and preventing child marriage.

4.3 Presentation of Findings

The findings will be presented according to the objective outlined in chapter 1, along with data analysis using both descriptive statistics and thematic content analysis.

4.3.1 Impact of climate-Induced food insecurity on child marriage

To address the research questions regarding the extent to which climate-induced food insecurity contributes to child marriages in Chiredzi District, Zimbabwe, a series of closed-ended questions were administered through a questionnaire. The responses from the participants were analysed and summarized in the following table.

Table 4.4: impact of climate-induced food insecurity on child marriage

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Climate change has significantly affected food availability in my community.	0	0	5	7	13
Food insecurity is a major factor influencing families' decisions to marry off their children.	0	0	6	0	19
Increased food prices due to climate change have pressured families to consider child marriage.	0	0	0	0	25

Source: field data, 2025

The quantitative data reveals several insights into the perceptions of climate-induced food insecurity and its contribution to child marriage among respondents.

The findings indicates that climate change has significantly affected food availability in the community. In total, 20 respondents acknowledged this, with 7 agreeing (28%) and 13 strongly

agreeing (52%), highlighting a strong awareness of the impact of climate change on local food resources.

In relation to food insecurity as a major factor influencing families' decisions to marry off their children, shows that 19 respondents strongly agreed (76%) with this assertion, while 6 were neutral (24%). This underscores the perception that food insecurity plays a crucial role in family decisions regarding child marriage.

Lastly, the study reveals unanimous agreement among respondents, with all 25 participants strongly agreeing (100%) that increased food prices due to climate change have pressured families to consider child marriage. This consensus emphasizes the critical link between economic pressures stemming from climate change and the prevalence of child marriage in the community.

In addition to the quantitative findings, qualitative data gathered from interviews with community members in Chiredzi District provided deeper insights into the impact of climate-induced food insecurity on child marriage. The following paragraphs summarize key themes that emerged from these interviews.

Many respondents expressed a heightened awareness of the relationship between climate change and food insecurity. One participant articulated,

"We have seen the rains become less predictable, and this has made it difficult for us to grow enough food. When there is not enough to eat, families feel pressured to marry off their daughters early."

This sentiment reflects a common understanding that climate change directly affects agricultural productivity, leading to food shortages that compel families to make difficult

decisions regarding their children's futures. The acknowledgment of this connection underscores the urgent need for community education on sustainable agricultural practices and climate resilience strategies to mitigate these challenges.

Several interviewees highlighted the economic pressures that drive families to consider child marriage as a coping mechanism during times of food scarcity. One mother shared,

"When food is scarce, I worry about how I will feed my children. Marrying my daughter off seems like a way to ensure she will be taken care of, even if it means sacrificing her childhood."

This perspective illustrates the desperation that families face when confronted with food insecurity, revealing how economic hardship can lead to the normalization of child marriage as a survival strategy. The emotional weight of such decisions emphasizes the need for targeted interventions that provide financial support and resources to families, enabling them to prioritize education and well-being over early marriage.

Education emerged as a critical theme in the discussions, with many respondents advocating for increased access to educational opportunities for girls. One participant noted,

"If our girls can stay in school, they will have better chances in life. Education can help break the cycle of poverty and reduce the need for child marriage."

This statement highlights the potential of education to empower young women and provide them with alternatives to early marriage. The community's recognition of education as a key factor in addressing child marriage suggests that initiatives aimed at improving educational access and retention could significantly impact the prevalence of this practice in the face of climate-induced food insecurity.

Respondents also emphasized the importance of community engagement and support systems in addressing the challenges posed by climate change and food insecurity. One community leader remarked,

"We need to come together as a community to support each other. Organizing workshops and clean-up days can help raise awareness and foster a sense of responsibility."

This call for collective action reflects a desire for community-driven solutions that not only address immediate food security concerns but also promote long-term resilience against climate change. By fostering a sense of community ownership and collaboration, residents believe they can create a supportive environment that reduces the incidence of child marriage.

4.3.2 The coping mechanisms employed to address food insecurity and their impact on child marriage decisions

To explore the coping mechanisms employed by families in Chiredzi District to address food insecurity and understand their impact on child marriage decisions, a series of closed-ended questions were administered through a questionnaire. The responses from the participants were analysed and summarized in the following table.

Table. 4.6: The Coping mechanisms employed to address food insecurity and their impact on child marriage decisions

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Families in my community have developed coping strategies to deal with food insecurity.	0	0	2	13	10
These coping mechanisms often lead to decisions regarding child marriages.	0	0	0	0	25
I believe that access to alternative food sources can reduce the incidence of child marriage.	0	0	10	15	0

Source: field data, 2025

The quantitative data reveals several insights into the coping mechanisms employed by families to address food insecurity and their implications for child marriage. The first statement indicates that families in the community have developed coping strategies to deal with food insecurity. A total of 23 respondents acknowledged this, with 13 agreeing (56.5%) and 10 strongly agreeing (43.5%). This highlights a recognition of the adaptive strategies families employ in response to the challenges posed by food scarcity. The acknowledgment of these coping strategies suggests that while families are actively seeking solutions, the effectiveness of these strategies may vary, and further support is needed to enhance their efficacy.

On whether the coping mechanisms lead to decisions regarding child marriage, the study shows unanimous agreement among all 25 respondents (100%). This indicates a strong perception that the strategies families adopt in response to food insecurity often have direct implications for child marriage. The overwhelming consensus underscores the urgent need for interventions that not only address food insecurity but also consider the social consequences of these coping mechanisms.

Lastly, on the belief that access to alternative food sources can reduce the incidence of child marriage. Here, 10 respondents agreed (40%) and 15 strongly agreed (60%). This indicates a strong belief among participants that improving access to diverse food sources could mitigate the pressures that lead families to consider child marriage as a solution to food scarcity. This recognition emphasizes the importance of food security initiatives that provide sustainable alternatives to families, potentially reducing reliance on early marriage as a coping mechanism.

In addition to the quantitative findings, qualitative data from interviews provided further insights into the coping mechanisms and their implications for child marriage. Many respondents discussed how families have adopted various strategies, such as bartering goods and seeking assistance from local organizations. One participant noted,

"When food is scarce, we often trade what we have for other essentials. These strategies help us survive but can also lead to difficult decisions about our children's futures."

This sentiment reflects the complexity of coping strategies that, while necessary for survival, can also create pressures that influence family decisions regarding marriage.

Respondents also highlighted the critical role of community support systems in enhancing coping mechanisms. One community member remarked,

"We need more programs that teach families how to grow alternative crops and manage their resources better. This knowledge can empower us to make better choices for our children."

This perspective underscores the importance of education and community engagement in fostering resilience against food insecurity, which in turn could reduce the incidence of child marriage.

The findings suggest that while families in Chiredzi District are developing coping strategies to address food insecurity, these strategies often have significant implications for child marriage decisions. Addressing food insecurity through sustainable practices and community support systems is crucial in mitigating the impact of these pressures on families and children.

4.3.3 The factors that mediate the relationship between climate-Induced food insecurity and child marriages in the study area

To examine the factors that mediate the relationship between climate-induced food insecurity and child marriages in Chiredzi District, a series of closed-ended questions were administered through a questionnaire. The responses from the participants were analysed and summarized in the following table.

Table 4.7 The factors that mediate the relationship between climate-Induced food insecurity and child marriages in the study area

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Cultural beliefs in my community influence decisions about child marriage in the context of food insecurity.	0	4	1	10	10
The level of education in my community affects how families respond to food insecurity and child marriage.	4	3	0	6	12
Economic status plays a significant role in determining whether families resort to child marriage during times of food scarcity.	0	0	0	0	25

Source: field data, 2025

The quantitative data reveals several insights into the factors that mediate the relationship between climate-induced food insecurity and child marriages.

In relation to the influence of cultural beliefs on child marriage in the context of food insecurity. A total of 20 respondents acknowledged this, with 10 agreeing (50%) and 10 strongly agreeing (50%). This highlights the significant role that cultural norms and values play in shaping family decisions, particularly during times of food scarcity. The acknowledgment of these cultural influences suggests that interventions aimed at addressing child marriage must take into account the socio-cultural context of the community to be effective.

Moving on to the impact of education on how families respond to food insecurity and child marriage. Here, 4 respondents strongly disagreed (16%), 3 disagreed (12%), 6 agreed (24%), and 12 strongly agreed (48%). This indicates that education is perceived as a crucial factor in shaping family responses to these challenges, with a strong majority recognizing that higher levels of education can lead to better decision-making regarding both food security and child marriage. The recognition of education as a mediating factor underscores the importance of promoting educational opportunities for both boys and girls to empower families to make informed choices.

Lastly, the study also examined the role of economic status in determining whether families resort to child marriage during times of food scarcity. All 25 respondents (100%) strongly agreed that economic status plays a significant role. This overwhelming consensus emphasizes the critical link between economic pressures and the prevalence of child marriage, indicating that families facing severe economic challenges are more likely to consider early marriage as a viable coping strategy. The clarity of this relationship highlights the need for economic interventions that can alleviate financial burdens on families, thereby reducing the incidence of child marriage.

In addition to the quantitative findings, qualitative data from interviews provided further insights into these mediating factors. Respondents shared their views on how cultural beliefs shape decisions about child marriage. One participant noted,

"In our culture, marrying off daughters early is often seen as a way to secure their future, especially when food is scarce. It's a tradition that is hard to break."

This sentiment reflects the deep-rooted cultural norms that can perpetuate child marriage, even in challenging economic circumstances.

Additionally, respondents discussed the importance of education in fostering resilience against food insecurity. One community member stated,

"When families are educated, they are more likely to find alternative ways to cope with food shortages. Education opens doors to better job opportunities and reduces the urgency to marry off children."

This perspective reinforces the idea that educational initiatives can play a vital role in mitigating the impact of food insecurity on child marriage.

4.3.4 Effective strategies to mitigate the impact of climate-induced food insecurity on child marriages in Chiredzi District

To explore effective strategies that can mitigate the impact of climate-induced food insecurity on child marriages in Chiredzi District, a series of closed-ended questions were administered through a questionnaire. The responses from the participants were analysed and summarized in the following table.

Table 4.8: Effective strategies to mitigate the impact of climate-induced food insecurity on child marriages in Chiredzi District

Statement	Strongly Disagree (1)	Disagree (2)	Neutral (3)	Agree (4)	Strongly Agree (5)
Community awareness programs on food security can help reduce child marriage rates.	0	0	5	14	11
Government interventions to improve food security are necessary to address child marriage issues.	0	0	0	0	25
Support services for families facing food insecurity can mitigate the impact on child marriage.	0	0	5	7	13

Source: field data, 2025

The quantitative data reveals several insights into effective strategies for mitigating the impact of climate-induced food insecurity on child marriages.

The study shows that community awareness programs on food security can help reduce child marriage rates. A total of 25 respondents acknowledged this, with 14 agreeing (56%) and 11 strongly agreeing (44%). This highlights the strong belief that increasing awareness within the community about food security issues can play a crucial role in addressing the underlying factors contributing to child marriage. The acknowledgment of the importance of awareness programs suggests that community engagement initiatives can empower families to make informed choices and encourage collective action against early marriage.

In addition, the study demonstrated the necessity of government interventions to improve food security as a means to address child marriage issues. All 25 respondents (100%) strongly agreed with this assertion. This overwhelming consensus underscores the critical role that government action plays in creating sustainable solutions to food insecurity. Participants recognize that without significant governmental support, efforts to combat child marriage will be insufficient, as economic stability is fundamental to reducing early marriages.

Lastly, the study revealed the necessity of support services for families facing food insecurity. Here, 5 respondents were neutral (20%), 7 agreed (28%), and 13 strongly agreed (52%). This indicates a strong belief among participants that providing support services can significantly mitigate the impact of food insecurity on child marriage. The recognition of support services emphasizes the need for targeted programs that offer resources, education, and assistance to families struggling with food scarcity, thereby reducing the pressures that lead to early marriage.

In addition to the quantitative findings, qualitative data from interviews provided further insights into these effective strategies. Many respondents discussed the importance of community awareness programs. One participant stated,

"When people understand how food insecurity affects our children, they are more likely to take action to protect them from early marriage."

This sentiment reflects the community's desire for education and outreach initiatives that can foster a culture of awareness and proactive measures against child marriages.

Respondents also emphasized the need for government intervention. One community leader noted,

"We need our government to step in and provide resources for food production. Only then can we hope to alleviate the pressures that lead families to marry off their daughters."

This perspective underscores the community's expectation for governmental support to create an environment conducive to addressing both food security and child marriage.

The findings suggest that community awareness programs, government interventions, and support services are effective strategies for mitigating the impact of climate-induced food insecurity on child marriages in Chiredzi District. Implementing these strategies can help create a supportive environment that empowers families and reduces the incidence of early marriage, ultimately enhancing the well-being of children in the community.

4.4 Discussion of Findings

4.4.1 Impact of climate-induced food insecurity on child marriage

The findings from this study reveal a clear and concerning connection between climate-induced food insecurity and the prevalence of child marriage in Chiredzi District, Zimbabwe. The quantitative data indicates a strong awareness among respondents regarding the impact of

climate change on food availability, with a significant majority acknowledging that food insecurity influences their decisions about child marriage. Specifically, 76% of participants identified food insecurity as a major factor affecting family decisions, while 100% agreed that rising food prices due to climate change compel families to consider marrying off their daughters. This aligns with global trends observed by Efevbera et al. (2019), who noted a 39% increase in child marriages in Bangladesh following climate-related disasters, demonstrating the direct correlation between economic pressures and early marriage practices.

Qualitative data further enrich this understanding, as many respondents expressed the emotional and practical dilemmas faced by families in times of food scarcity. As one participant noted, the unpredictability of rainfall has significantly hindered agricultural productivity, forcing families into desperate situations where marrying off daughters is seen as a viable solution. This reflects broader trends noted by Chirau (2020), who documented similar coping mechanisms in Ethiopia and Nigeria, where families resort to child marriage to alleviate economic burdens during crises.

Moreover, the findings highlight the critical role of education in mitigating these pressures. Many respondents emphasized the importance of keeping girls in school as a means to break the cycle of poverty and reduce child marriage rates. This resonates with research by UNICEF (2021), which indicates that educational access is often compromised during economic crises, leading to higher rates of early marriage. In Zimbabwe, the ongoing food insecurity exacerbated by climate change has indeed resulted in increased school dropouts among girls, which further contributes to the prevalence of child marriages (Chirau, 2020).

Additionally, the study underscores the intersection of gender inequality with climate-induced food insecurity. Global patterns show that entrenched gender norms often prioritize male education over that of females, which exacerbates the vulnerabilities of girls in times of

economic hardship (UN Women, 2020). In Chiredzi District, traditional gender roles compel families to view daughters as economic burdens, leading to early marriages during food scarcity. This gendered perspective is echoed in the findings, which suggest that addressing gender inequality is crucial for mitigating the impact of food insecurity on child marriages.

The qualitative insights from community interviews emphasize the urgent need for targeted interventions that provide financial support and resources, allowing families to prioritize education and well-being over early marriage. By fostering community engagement and awareness, stakeholders can work towards creating a supportive environment that reduces the incidence of child marriage while addressing the root causes of food insecurity.

4.4.2 The coping mechanisms employed to address food insecurity and their impact on child marriage decisions

The findings from this study reveal critical insights into the coping mechanisms employed by families in Chiredzi District to address food insecurity and their implications for child marriage. The quantitative data indicates that 23 respondents recognized the development of coping strategies, with 56.5% agreeing and 43.5% strongly agreeing that these strategies are essential for navigating food scarcity. This acknowledgment highlights the adaptive measures families undertake in response to economic pressures, aligning with findings from Smith et al. (2020), who emphasized that diversified farming practices enhance resilience against climate variability and economic shocks.

Moreover, the unanimous agreement among respondents that these coping mechanisms often lead to decisions regarding child marriage underscores the urgent need for interventions that address both food insecurity and its social consequences. The findings resonate with Chirau (2020), who observed that economic pressures intensified by climate change compel families

to consider early marriage as a survival strategy. As one participant articulated, the necessity of trading goods for essentials illustrates the complex dynamics at play, where coping mechanisms intended to ensure survival can inadvertently reinforce the cycle of child marriage.

Access to alternative food sources emerged as a significant factor in the discussions, with 40% of participants agreeing and 60% strongly agreeing that such access could reduce the incidence of child marriage. This belief aligns with the research of Moyo, Chikwanda, and Magombe (2022), which highlighted the importance of diversified livelihoods in improving food security in Zimbabwe. The recognition that enhancing food access can alleviate pressures leading to early marriage emphasizes the need for sustainable food security initiatives that provide families with viable alternatives.

Qualitative data further enriches this understanding, as respondents identified the critical role of community support systems in bolstering coping strategies. One community member emphasized the necessity of programs that educate families on sustainable agricultural practices. This perspective reinforces findings from Oliveira et al. (2021), which demonstrated that community-based programs significantly improve food security among low-income families through collective action. Such programs not only enhance food availability but also foster social cohesion, which is vital for building community resilience against food insecurity.

However, despite the positive impacts of community support initiatives, challenges remain. As articulated by some respondents, a lack of sustainable funding and long-term planning can hinder the effectiveness of these programs, echoing observations made by Moyo et al. (2022) about the limitations of community programs in Zimbabwe. This gap underscores the need for comprehensive approaches that not only implement community-driven solutions but also ensure their sustainability and scalability.

The findings from this study indicate that while families in Chiredzi District are actively developing coping strategies to address food insecurity, these strategies often have significant implications for child marriage decisions. Addressing food insecurity through sustainable practices, community support systems, and educational initiatives is crucial in mitigating the impact of these pressures on families and children. By fostering a supportive environment that prioritizes education and community engagement, stakeholders can work towards alleviating the cycle of food insecurity and child marriage, ultimately improving the well-being of vulnerable populations.

4.4.3 The factors that mediate the relationship between climate-induced food insecurity and child marriages

The findings from this study reveal several critical factors that mediate the relationship between climate-induced food insecurity and child marriages in Chiredzi District. The quantitative data indicates a significant acknowledgment of cultural beliefs influencing child marriage decisions, with 50% of respondents agreeing and 50% strongly agreeing that these beliefs play a crucial role, particularly in the context of food insecurity. This reflects the entrenched cultural norms that often dictate family decisions, aligning with research by Chikoko et al. (2021), which found that cultural perceptions of marriage and family honour significantly impact girls' vulnerability to early marriage in Zimbabwe. The acknowledgment of these cultural influences suggests that effective interventions must consider the socio-cultural context to challenge harmful practices.

Education emerged as another critical mediating factor, with 48% of respondents strongly agreeing that the level of education in the community affects how families respond to food insecurity and child marriage. This finding underscores the importance of educational opportunities in shaping family decision-making processes. Research by Maphosa and Moyo

(2020) supports this notion, indicating that girls with limited access to education are more susceptible to early marriage due to a lack of awareness regarding their rights and opportunities. The recognition of education as a mediating factor emphasizes the need for initiatives that promote educational access and retention for both boys and girls, empowering families to make informed choices.

Economic status also plays a significant role, with all respondents (100%) strongly agreeing that economic pressures influence families' decisions to resort to child marriage during times of food scarcity. This overwhelming consensus highlights the link between economic instability and the prevalence of child marriage, which is echoed in the findings of Ushewokunze-Obatolu (2019). The study revealed that families in rural Zimbabwe often view marrying off daughters as a strategy to alleviate financial burdens, reflecting a broader pattern observed in other contexts where economic hardship compels families to make difficult choices regarding their children's futures.

Qualitative insights from interviews further elucidate these mediating factors. Respondents emphasized the ingrained cultural norms that dictate marriage practices, with one participant noting that marrying off daughters early is often viewed as a means of securing their future. This sentiment resonates with Jain and Kurz (2007), who found that cultural expectations significantly perpetuate child marriage, creating stigma around unmarried girls. The persistence of these beliefs complicates efforts to combat early marriage, underscoring the need for culturally sensitive approaches that challenge harmful norms while promoting gender equality.

Additionally, the importance of education in fostering resilience against food insecurity was reiterated by respondents, who indicated that educated families are more likely to find alternative ways to cope with food shortages. This aligns with the conclusions of Raj et al.

(2019), which highlighted that education equips girls with knowledge about their rights and opportunities, ultimately reducing their likelihood of early marriage.

The findings suggest that cultural beliefs, educational access, and economic status are significant mediating factors in the relationship between climate-induced food insecurity and child marriages in Chiredzi District. Addressing these factors through targeted interventions can help create a supportive environment that empowers families to resist early marriage practices, ultimately enhancing the well-being of girls in the community.

4.4.4 Effective Strategies to Mitigate the Impact of Climate-Induced Food Insecurity on Child Marriages

The findings from this study highlight several effective strategies that can mitigate the impact of climate-induced food insecurity on child marriages in Chiredzi District. The quantitative data reveals a strong consensus among respondents regarding the importance of community awareness programs, with 56% agreeing and 44% strongly agreeing that such initiatives can help reduce child marriage rates. This underscores the belief that increasing awareness about food security issues is essential for addressing the underlying factors contributing to child marriage. Research by O'Brien et al. (2012) supports this notion, showing that educating communities about the impacts of climate change on food security can lead to more informed decision-making regarding family planning and marriage.

The necessity of government interventions to improve food security received unanimous support, with all respondents (100%) strongly agreeing that such actions are essential to address child marriage issues. This overwhelming consensus emphasizes the critical role of governmental action in creating sustainable solutions to food insecurity. Moyo et al. (2021) similarly found that training farmers in sustainable agricultural techniques significantly

enhanced food security, thereby reducing reliance on child marriage as a survival strategy. This highlights the need for comprehensive government support to create an environment conducive to addressing both food security and child marriage.

Support services for families facing food insecurity were also identified as crucial, with 52% of respondents strongly agreeing that these services could mitigate the impact on child marriage. This recognition aligns with findings from Gentilini et al. (2020), which demonstrated that social safety nets help buffer families against economic shocks and reduce the likelihood of early marriage. The acknowledgment of support services emphasizes the need for targeted programs that offer resources, education, and assistance to families struggling with food scarcity.

Qualitative insights from interviews further emphasize these strategies. Respondents highlighted the importance of community awareness programs, with one participant stating that understanding how food insecurity affects children encourages proactive measures against early marriage. This reflects the community's desire for educational initiatives that foster a culture of awareness. Additionally, the need for government intervention was reiterated by a community leader who noted that government support is vital for providing resources for food production. This perspective underscores the community's expectation for governmental action to alleviate the pressures that lead families to consider marrying off their daughters.

Moreover, enhancing agricultural resilience emerged as a critical strategy. Research by Verchot et al. (2018) illustrates that implementing climate-resilient agricultural practices can significantly improve food security, thereby reducing the economic pressures that often lead to early marriage. In Zimbabwe, Moyo et al. (2021) found that communities adopting agroecological practices were better equipped to handle climate variability, leading to improved nutritional outcomes and delaying the onset of child marriage.

The findings suggest that community awareness programs, government interventions, and support services are effective strategies for mitigating the impact of climate-induced food insecurity on child marriages in Chiredzi District. Implementing these strategies can help create a supportive environment that empowers families and reduces the incidence of early marriage, ultimately enhancing the well-being of children in the community. By fostering collaboration among community members and engaging local leaders, stakeholders can effectively address the intertwined challenges of food insecurity and child marriage.

4.5 Chapter Summary

This chapter has presented findings derived from the data collection procedures, focusing on the impact of climate-induced food insecurity on child marriages in Chiredzi District. The study revealed a strong awareness among community members regarding the relationship between food insecurity and early marriage. However, significant challenges persisted, including economic instability, entrenched cultural norms, and limited access to education. Despite these obstacles, there were notable opportunities for improvement, particularly through community awareness programs, government interventions, and support services for families. Participants emphasized that these strategies could significantly mitigate the pressures leading to child marriage and enhance the overall well-being of children in the community.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS AND AREAS FOR FURTHER RESEACH

5.0 Introduction

This chapter serves as a comprehensive summary of the research findings related to the impact of climate-induced food insecurity on child marriage in Chiredzi District, Zimbabwe. It encapsulates the study's primary objectives, methodologies, and significant insights gathered throughout the research process. The chapter also highlights the intricate relationships between food insecurity and child marriage, emphasizing the socio-economic and cultural dynamics that influence these issues in the local context. By synthesizing the data collected from various sources, this chapter aims to provide a holistic view of the challenges faced by families in Chiredzi District and outlines actionable recommendations for stakeholders involved in addressing these pressing issues.

5.1 Summary of the Whole Project

The study began with a clear articulation of the pressing problem of child marriage exacerbated by climate-induced food insecurity in Chiredzi District. The research aimed to assess the influence of food insecurity on child marriage rates, explore the coping mechanisms employed by households in response to economic pressures, and identify the social, economic, and cultural factors that mediate the relationship between these two critical issues.

In Chapter 2, a literature review was presented that thoroughly examined theoretical frameworks, particularly Vulnerability Theory and Social Exchange Theory. These theories

are essential for understanding the socio-economic dynamics at play in Chiredzi District, especially how climate-related challenges disproportionately affect vulnerable populations. The literature highlighted the significant role of education, cultural beliefs, and economic pressures in shaping family decisions regarding child marriage. This comprehensive overview set the stage for the subsequent chapters, where empirical data was collected and analysed.

Chapter 3 detailed the research methodology, explaining the selection of a diverse participant pool through stratified sampling techniques. This approach ensured that a wide range of perspectives was captured, reflecting the varied experiences of families in Chiredzi District. Data collection involved structured questionnaires to gather quantitative insights and semi-structured interviews to delve deeper into individual experiences and perceptions. This combination of methods was crucial for capturing the nuances of the relationship between food insecurity and child marriage, allowing for a more profound understanding of the local context.

Chapter 4 presented the findings, revealing a concerning correlation between climate-induced food insecurity and the prevalence of child marriage. The data indicated that a significant number of community members were aware of the relationship between food scarcity and early marriage decisions. However, numerous challenges persisted, including economic instability, entrenched cultural norms, and limited access to education. Despite these obstacles, there were notable opportunities for improvement, particularly through community awareness programs, government interventions, and support services for families facing economic hardships. Participants emphasized that these strategies could significantly mitigate the pressures leading to child marriage and enhance the overall well-being of children in the community.

5.2 Conclusion

The conclusions of this study are in line with the objectives which were assessing the influence of food insecurity on child marriages, exploring coping mechanisms, identifying mediating social factors, and evaluating existing policies aimed at reducing child marriages.

5.2.1 To examine the extent to which climate-induced food insecurity contributes to child marriages in Chiredzi District, Zimbabwe.

To obtain answers to this objective, questionnaires were distributed and also interviews were successful conducted. The research highlights a significant awareness of the relationship between climate-induced food insecurity and child marriage within the Chiredzi community. While many community members acknowledged the impact of food scarcity on early marriage decisions, persistent economic and cultural challenges continue to impede progress toward mitigating these issues. The findings underscore the need for enhanced educational initiatives to promote understanding and proactive measures among community members. By facilitating open discussions and providing resources, stakeholders can empower families to recognize the long-term benefits of keeping girls in school and delaying marriage. This proactive approach is essential for fostering a community mindset that values education and gender equality, ultimately leading to a reduction in child marriage rates.

5.2.2 To explore the coping mechanisms employed to address food insecurity and their impact on child marriage decisions.

The reliance on child marriage as a coping mechanism during times of food scarcity reveals a critical area that requires intervention. The findings illustrate how economic pressures can lead families to make difficult decisions regarding their daughters' futures, often prioritizing short-term survival over long-term well-being. This underscores the importance of strategies that

promote educational retention and economic stability, as keeping girls in school is vital for breaking the cycle of poverty and reducing child marriage rates. Furthermore, understanding the emotional and psychological impacts of these decisions on families is crucial for developing support programs that not only address economic needs but also provide mental health resources. By creating a supportive environment that prioritizes education and well-being, communities can reduce the prevalence of child marriage and improve overall quality of life.

5.2.3 To investigate factors that mediate the relationship between climate-induced food insecurity and child marriages in the study area.

The entrenched cultural norms and economic conditions in Chiredzi District play pivotal roles in mediating the relationship between food insecurity and child marriage. Addressing these factors through community engagement and education is essential for fostering an environment that supports girls' rights and opportunities. The research indicates that culturally sensitive approaches are necessary to challenge harmful norms while promoting gender equality. This involves working with community leaders and influencers to reshape perceptions around child marriage and emphasize the value of education for girls. Additionally, initiatives that provide economic alternatives to early marriage, such as vocational training and entrepreneurship programs, can empower families to make informed decisions that prioritize their children's futures.

5.2.4 To identify effective strategies to mitigate the impact of climate-induced food insecurity on child marriages in Chiredzi District.

The consensus on the need for community awareness programs and government support reflects a pathway forward for mitigating the impacts of food insecurity on child marriage. The community's desire for educational initiatives and support services highlights the importance

of collaboration among stakeholders to create sustainable solutions. By fostering partnerships between local government, NGOs, and community organizations, a more comprehensive approach can be developed that addresses the root causes of food insecurity and child marriage. This collaborative effort should focus on integrating educational programs with economic development initiatives, ensuring that families have access to resources and support that enable them to prioritize their children's education and well-being.

5.3 Recommendations

5.3.1 Enhance Community Education Programs

To address the identified gaps in awareness and understanding, it is crucial to develop targeted educational initiatives aimed at increasing awareness of food insecurity and its implications for child marriage. Workshops and outreach programs should be implemented to engage residents actively in discussions about the importance of education for girls and sustainable farming practices. These educational initiatives should be tailored to the community's cultural context, utilizing local leaders and influencers to promote key messages. By fostering a sense of ownership and responsibility among community members, these programs can significantly enhance participation and improve overall outcomes in the fight against child marriage.

5.3.2 Improve Access to Education

Efforts must be made to ensure that girls have continued access to education, particularly during economic crises. This can be achieved through the implementation of scholarships, school feeding programs, and community support networks that alleviate the financial burdens families face. Additionally, creating safe and supportive environments within schools can encourage girls to remain enrolled and engaged in their education. By addressing barriers to

education, communities can empower girls to make informed choices about their futures and reduce the incidence of early marriage.

5.3.3 Foster Partnerships with NGOs and Government

Encouraging collaboration between local government, NGOs, and community organizations is vital for developing community-driven initiatives that effectively address food insecurity and child marriage. By leveraging resources and expertise from NGOs, the community can benefit from enhanced public awareness campaigns and more effective strategies for improving food security. Establishing these partnerships can also facilitate greater resource mobilization, ensuring sustainable solutions that are tailored to the specific needs of families in Chiredzi District. Collaborative efforts should focus on integrating educational initiatives with economic development strategies to create comprehensive support systems for families.

5.3.4 Strengthen Community Support Systems

Establishing support services for families facing food insecurity is essential for mitigating the factors that contribute to child marriage. Programs that provide financial assistance, resources for sustainable agriculture, and mental health support can help families navigate economic challenges without resorting to early marriage. Additionally, creating community support networks that connect families with available resources can foster resilience and empower parents to prioritize their children's education and well-being. By building strong support systems, communities can create an environment where families feel equipped to make informed decisions that enhance the future prospects of their children.

5.3.5 Monitor and Evaluate Interventions

Regular monitoring and evaluation of implemented strategies are crucial for assessing their effectiveness and making necessary adjustments. Utilizing community feedback will ensure that interventions remain relevant and responsive to the needs of families. Establishing clear metrics for success and conducting periodic assessments can provide valuable insights into the impact of various initiatives, enabling stakeholders to adapt their approaches as needed. Continuous monitoring will help promote accountability among all parties involved and ensure that resources are allocated effectively to address both food insecurity and child marriage.

5.4 Areas for Further Studies

Future research should focus on:

1. Investigating the long-term impacts of education on girls' decisions regarding marriage and family planning.
2. Exploring the effectiveness of specific community programs aimed at improving food security and reducing child marriage.
3. Examining the role of local governance and policy implementation in addressing the challenges of food insecurity and child marriage in similar contexts.

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APPENDIX 1: Questionnaire

Introduction

Dear Participant,

Thank you for taking the time to participate in this research study conducted by Lynette Ziwewe, a student at Bindura University of Sciences Education. The purpose of this questionnaire is to explore the impact of climate-induced food insecurity on child marriages in Chiredzi District, Zimbabwe. Your insights will be invaluable in understanding this critical issue and developing effective strategies to address it. Your responses will remain confidential and will only be used for academic purposes.

Background Information

Please provide the following information:

1. Age: _____
2. Gender:
 - ☐ Male
 - ☐ Female
 - ☐ Other
3. Level of Education:
 - ☐ Primary
 - ☐ Secondary
 - ☐ Tertiary
 - ☐ Other: _____
4. Occupation: _____
5. Household Size: _____

Questions

Please indicate your level of agreement with the following statements regarding climate-induced food insecurity and child marriage in Chiredzi District. Use the following scale:

1. Strongly agree, 2. Agree, 3. Neutral, 4. Disagree, 5. Strongly disagree

The extent to which climate-induced food insecurity contributes to child marriages in Chiredzi District, Zimbabwe.

Statement	1	2	3	4	5
Climate change has significantly affected food availability in my community.					
Food insecurity is a major factor influencing families' decisions to marry off their children.					
Increased food prices due to climate change have pressured families to consider child marriage.					

5. The coping mechanisms employed to address food insecurity and their impact on child marriage decisions.

Statement	1	2	3	4	5
Families in my community have developed coping strategies to deal with food insecurity.					
These coping mechanisms often lead to decisions regarding child marriages.					
I believe that access to alternative food sources can reduce the incidence of child marriage.					

6. The factors that mediate the relationship between climate-induced food insecurity and child marriages in the study area.

Statement	1	2	3	4	5

Cultural beliefs in my community influence decisions about child marriage in the context of food insecurity.					
The level of education in my community affects how families respond to food insecurity and child marriage.					
Economic status plays a significant role in determining whether families resort to child marriage during times of food scarcity.					

7. The effective strategies to mitigate the impact of climate-induced food insecurity on child marriages in Chiredzi District.

Statement	1	2	3	4	5
Community awareness programs on food security can help reduce child marriage rates.					
Government interventions to improve food security are necessary to address child marriage issues.					
Support services for families facing food insecurity can mitigate the impact on child marriage.					

Thank you for your participation in this important research. Your insights will contribute significantly to understanding and addressing the challenges of climate-induced food insecurity and child marriage in Chiredzi District. If you have any questions or would like to discuss further, please feel free to reach out.

APPENDIX 2: Interview Guide

Thank you for agreeing to participate in this interview. My name is Lynette Ziwewe, and I am a student at Bindura University of Sciences Education conducting research on the impact of

climate-induced food insecurity on child marriage in Chiredzi District, Zimbabwe. Your insights will be invaluable in understanding this critical issue. Please feel free to share your thoughts openly, as your responses will remain confidential.

1. In your opinion, how has climate change affected food availability in your community?
2. Have you observed any increase in child marriages related to food insecurity? Can you share specific examples?
3. How do families in your community perceive the relationship between food scarcity and child marriage?
4. What coping strategies do families in your community use to deal with food insecurity?
5. How do these coping mechanisms influence decisions regarding child marriage?
6. Are there any community programs aimed at helping families cope with food insecurity? How effective are they?
7. What cultural beliefs or practices influence child marriage decisions in your community?
8. How does education play a role in addressing food insecurity and child marriage?
9. Can you describe the economic factors that contribute to child marriage in the context of food insecurity?
10. What strategies do you believe could effectively address the impact of climate-induced food insecurity on child marriage?
11. How important are community awareness and education programs in reducing child marriage rates?
12. What role do you think the government should play in addressing food insecurity and its effects on child marriage?

Thank you for sharing your insights and experiences. Your contributions will greatly enhance the understanding of these challenges. Is there anything else you would like to add or discuss?

APPENDIX 3



