FOOD INTERVENTION PROGRAMS ON FOOD SECURITY IN NASSIR COUNTY, SOUTH SUDAN

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An Applied Research Project Proposal Submitted In Partial Fulfilment Of The Requirements For The Award Of Master Of Business Administration Degree In The School Of Business Of Africa Nazarene University

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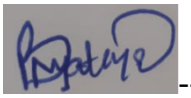
DECLARATION

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

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SUPERVISOR'S DECLARTION

I/We confirm that the candidate under my supervision carried out the work reported in this applied research project proposal



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DEDICATION

This work is dedicated to my family, my wife and, children for the support and encouragement they gave me in the process of this study. Their love and care kept me going. Also, to the humanitarian colleagues fighting hunger in South Sudan.

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I first recognize the help from the Almighty God for his blessings throughout my life. I would not be here today without his Hand.

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TABLE OF CONTENTS

DECLARATION **2**

DEDICATION **3**

ACKNOWLEDGEMENT **4**

LIST OF TABLES **9**

LIST OF FIGURES **10**

ABSTRACT **11**

DEFINITION OF TERMS **12**

LIST OF ABBREVATIONS **13**

CHAPTER ONE **1**

INTRODUCTION AND BACKGROUND OF THE STUDY **1**

1.1 Introduction 1

1.2 Background of the Study 1

1.2.1 Response Programs 6

1.2.2 Food Security 8

1.3 Problem Statement 8

1.4 Purpose of the Study 10

1.5 Objectives of the Study 10

1.5.1 General Objective 10

1.5.2 Specific Objectives 10

1.6 Research Hypothesis 10

1.7 Significance of the Study 11

1.8 Scope of the Study 11

1.9 Delimitation of the Study 12

1.10 Limitations of the Study 12

1.11 Assumptions of the Study....13
1.12 Theoretical Framework....13
1.12.1 Theory of Change....13
1.12.2 Stakeholders Theory....15
1.13 Conceptual Framework....16
CHAPTER TWO....18
LITERATURE REVIEW....18
2.1 Introduction....18
2.2 Discussion of the Empirical Literature....18
2.2.1 Emergency Response Programs and Food Security....18
2.2.2 Mid-Term Intervention and Food Security....21
2.2.3 Long Term Intervention and Food Security....24
2.2.4 Coping Strategies and Food Security....28
2.3 Summary of the Reviewed Literature....33
2.4 Knowledge Gap....34
CHAPTER THREE....35
RESEARCH DESIGN AND METHODOLOGY....35
3.1 Introduction....35
3.2 Research Design....35
3.3 Research Site and Rationale....36
3.4 Target Population....36
3.5 Sample Size....37
3.5.1 Study Sample Size....37
3.5.2 Sampling Procedures....39
3.6 Data Collection....39
3.6.1 Data Collection Instruments....39
3.6.2 Piloting of the Research Instruments....40

3.6.3 Instruments of Reliability 40
3.6.4 Instruments of validity 41
3.6.5 Data Collection Procedures 41
3.7 Data Processing and Analysis 42
3.8 Legal and Ethical Consideration 43
CHAPTER FOUR 44
DATA ANALYSIS AND PRESENTATION OF FINDINGS 44
4.1 Introduction 44
4.2 Response Rate 44
4.3 General Information 45
4.3.2 Age of Respondents 46
4.3.3 Education of the Respondents 47
4.3.4 Designation 47
4.3.5 Beneficiary Category 48
4.4 Effect of Food Intervention Program 49
4.4.1 Emergency Response Program 49
4.4.2 Mid Term Intervention 52
4.4.3 Long Term Intervention 55
4.4.4 Coping Strategies on Food Security 57
4.4.5 Food Security 59
4.5 Hypothesis Testing 61
4.5.1 Emergency Response Program 61
4.5.2 Mid-term Food Intervention 63
4.5.3 Long-Term Food Intervention 64
4.5.4 Coping Strategies 66
4.6 Joint Impact on Food Security 67
4.6.1 Correlation Analysis 67
4.6.2 Regression Analysis 69

CHAPTER FIVE: SUMMARY, DISCUSSION, CONCLUSION, AND RECOMMENDATION 71

5.1 Introduction 71

5.2 Summary 71

5.3 Discussion 72

5.3.1 To ascertain how disaster response strategies affect food security 72

5.3.2 Mid-Term Food Security Intervention on Food Security 73

5.2.3 Long Term Food Security Interventions on Food Security 74

5.2.4 Coping Strategies on Food Security 75

5.4 Conclusions 76

5.5 Recommendations 77

5.5.1 Emergency Response Program 77

5.5.2 Mid-term Intervention 79

5.5.3 Long-term Food Interventions 86

5.5.4 Coping Strategies 91

5.6 Areas for Further Discussions 94

REFERENCES 95

APPENDICES 100

Appendix 1: Transmittal Letter 100

Appendix 2: Questionnaire 101

Appendix 3: University Authorization Letter 106

Appendix 4: NACOSTI Permit 107

Appendix 5: Nassir County 108

LIST OF TABLES

Table 3.1: Population Size 37

Table 3.2: Sample of the Study 38

Table 4.1: Response Rate. 45

Table 4.2 Emergency Response Program Descriptive Results 52

Table 4.3 Mid Term Food Security Descriptive Results 55

Table 4.4: Long Term Interventions on Food Security 57

Table 4.5: Coping Strategies 59

Table 4.6 Food Security Descriptive Results 61

Table 4.7 Correlation results on emergency response program on food security 62

Table 4.8 Regression Results on the impact Emergency Response Program on Food Security 62

Table 4.9 Correlation Results on the Impact of Mid-Term Food Intervention on food security. 63

Table 4.10 Regression Results on the Impact of Mid-term Food Intervention on Food Security 64

4.5.3 Long-Term Food Intervention 64

Table 4.11 Correlation Results on the impact of Long-Term Food Intervention on Food Security 64

Table 4.12 Regression Results of Long-Term Food Intervention on Food Security 65

Table 4.13 Correlation Results on impact of coping strategies on food security.....66

Table 4.14 Regression Results on the impact of coping strategies on food security 66

Table 4.15 Food Intervention Programs on Food Security Joint Correlation Analysis Results.....68

Table 4.16 Food Intervention Programs on Food Security.....70

LIST OF FIGURES

Figure 1.1: Conceptual Framework 17

Figure 4.1 Gender Analysis Results 46

Figure 4.2 Age Distribution Analysis Results 47

Table 4.3 Mid Term Food Security Descriptive Results 55

Figure 4.4 Designation Analysis of Results 48

Figure 4.5 Beneficiary Category Analysis 49

ABSTRACT

Widespread hunger and malnutrition persist today despite considerable growth in per capita food availability. This has prompted an evolving conceptualization of food security and of mechanisms to attain and maintain food security. The study aimed at establishing food security and food intervention programs designed to respond to the threat of hunger. The primary objective of the study focused on the effects of food intervention programs on food security in Nassir County, South Sudan. The specific objectives of the study were guided by four variables; emergency response programs, mid-term food intervention, long term food intervention and coping strategies. The Theory of Change and Stakeholders Theory anchored the study variables. The descriptive research design was adopted, and in the process proved significant in establishing the existing relationship between the variables. The study target population was 9,996 individuals obtained from different institutions as outlined. A sample of 370 individuals was considered by the researcher. The reliability tool was determined by the use of SPSS Software version 25. Quantitative data was analyzed using descriptive statistics and presented in percentages, mean and standard deviation. The data collected was analyzed using descriptive statistics and presented in percentages, mean, and standard deviation. The study used inferential statistics to test the hypotheses. The study revealed that an emergency response program with $p=0.489$ has a weak insignificant positive effect on food security in Nassir County. Secondly, mid-term food intervention with an $r(215),=0.048,p=0.001>0.05$ showed that there was significant and positive moderate effect on food security. Thirdly, long-term food security intervention with a $r(215)=.208,p=.003$ showed that there was a significant and positive moderate effect on food security. Finally, coping strategies with a ($r(215)=-.17.p=.807>0.05$) demonstrated that there is an adverse (negative) effect on food security. The study recommended that a multi-sector response with a lens for relief, development and peace initiatives would be effective in addressing food security.

DEFINITION OF TERMS

Food Security: The significance of food security in the study will be considered to be a state in which people at all times have both physical and economic access to sufficient food to meet their dietary needs for a productive and healthy life.

Food Intervention: It is attributed by the actual improvement of food production and availability, processing and conservation, supply and commercialization, as well as access and food consumption.

Emergency Response Program: It was useful in establishing the various mechanisms put in place that will cut across the frameworks through the lens of sustainable livelihood. In this study, emergency response program was considered to be the duration between 1 to 2 years.

Mid Term Intervention: It was significant to the study since it was perceived as the set goals that have a time frame that span for a duration of 3-4 years.

Long Term Intervention: It was significant to the study since it was perceived as the set goals that have a time frame that span for a duration of 5 years and beyond.

LIST OF ABBREVATIONS

ADRA: Adventists Development Relief Agency

CHADO: Community Health and Development Organization

CSI: Coping Strategy Index

DDS: Dietary Diversity Score

FAOs: Food and Agricultural Organization

FCS: Food Consumption Score

HEA: Household Economic Analysis

HFIAs: Household Food Insecurity Access Scale

HFSSM: Households Food Security Survey Modules

ICRC: International Committee for the Red Cross

IDPs: Internally Displaced Persons

IFAD: International Fund for Agriculture

IGAD: Intergovernmental Authority on Development

LULC: Land Use and Land Cover

MCO: Movement Control Order

NGOs: Non-Governmental Organizations

OCHA: Office for the Coordination of Humanitarian Affairs

SDGs: Sustainable Development Goals

SPI: System Rice Identification

SPSS: Statistical Package for Social Sciences

TOC: Theory of Change

UN: United Nations

UNHCR: United Nations High Commissioner for Refugees

UNICEF: United Nations Children's Fund

US: United States

WHOs: World Health Organization

WFP: World Food Programme

WVI: World Vision International

CHAPTER ONE
INTRODUCTION AND BACKGROUND OF THE STUDY

1.1 Introduction

This section provides, at a glance, the setting of the study, and discusses the concepts and the context of the study. The chapter also identifies the statement of the problem, and expresses the research question as well as the objectives of the study. The chapter further states the research hypothesis, significance of the study, scope, limitations, delimitations and conceptual of the study. The dependent variable is food security while independent variables are; emergency response programs, coping mechanisms, long-term food security interventions and mid-term food security interventions

1.2 Background of the Study

Achieving food security in its totality continues to be a challenge not only for the developing nations, but also for the developed world. Moreover, existence of differences that lies in the magnitude of the problem in terms of its severity and proportion of the population affected. In developed nations the problem is alleviated by provision of target food security interventions which includes food aid in the form of direct food relief, food stamps, or indirectly through subsidized production (Abdisalam, 2022). Moreover, these approaches have employed in South Sudan but with less success. It should however be established that discrepancy in the results may be due to insufficient resource base, shorter durations of intervention, or different systems most of which are inherently heterogenous among other factors. Oryem and Noah, (2022) clearly pointed out on the fact that food intervention programs is a situation in which all people, at all times, have physical and economic access to sufficient, safe and nutritious affected by a complexity of factors. These include unstable social and political enviroments that preclude sustainable economic growth, war and civil strive, base, gender inequality, inadequate education, poor health,

natural disasters, such as floods and locust infestations, and the absence of goof governance. All these factors contribute to either insufficent national food availability or insufficient access to food by households and individuals. .

WHO (2021) pointed out on the negative implications of food intervention programmes which clearly estimated that nearly 60% of all childhood deaths in developing countries are related to chronic malnutrition and hunger. Jiang, Chen and Wang (2021), in research on global food security under COVID-19, conducted a comparison and enlightenment of policy responses in diverse countries and revealed that progress has been achieved in Northern Africa, Southern and Eastern Asia, and Latin America. However, in South Asia and Sub-Saharan Africa, high levels of hunger are noted. Specifically, Sub-Sahara has the highest rates of child stunting, child mortality and undernourishment, compared to any region in the world and hosts 28 countries considered with the highest rates of food insecurity. FSIN (2022) indicated that hunger is at shocking levels in eight African countries including Somalia, Central African Republic, Comoros, Chad, Burundi, Democratic Republic of the Congo, Madagascar, and South Sudan.

Shimada (2022) in a study of the effect of climate-change-associated disasters on Africa's agriculture, conflicts, and economic growth, established that the Eastern African region remains to undergo an increasing tendency in the number of displaced populations with conflict and/or insecurity and climatic shocks as the leading push factors for food insecurity. Consequently, South Sudan, Ethiopia, and Sudan were among the 10 worst global food crises in 2021. According to UNHCR (2020), there are roughly 8.2 million Internally Displaced Persons (IDPs), 4.4 million asylum seekers, and refugees, in the IGAD Region, who require food and non-food assistance. The deepening effects of conflict and

insecurity, climatic shocks, desert locust invasion, adversative macro-economic shocks, and the COVID-19 epidemic, coupled with prolonged food insecurity from the past shocks have led to food security disasters of an extraordinary magnitude in some of the developing countries including South Sudan (Halkos & Gkampoura, 2021).

Xu, Elomri, El Omri, Kerbache, and Liu (2021) investigated the heightened effects of desert locust invasion and the coronavirus pandemic on the food supply chain and food security and reported that approximately 80% of South Sudan's population exist in rural settings, with many of the households involved in livestock, agriculture, fisheries, and forestry as their main source of livelihood. According to The World Bank (2021), estimations on the value addition by these sectors reported 36% of non-oil Gross Domestic Product (GDP). Inadequate areas of arable land are utilized: out of the projected 64 million hectares of land, only 50 percent of it is cultivatable prime agricultural land, of which only 4 percent (approximately 2.8 million hectares) is cultivated periodically or continuously. The real area cultivated in any one year in South Sudan has fluctuated between a minimum of 1% and a maximum of 2% of the whole land area – i.e., from about 800, 000-1.3 million hectares. Extensive areas of unused agricultural land, vast water resources, and high levels of natural resources offer massive livelihood prospects for those staying in peri-urban and urban areas (WHO, 2021).

According to FAO (2021), food security conditions continue to worsen in South Sudan aggravated by local conflicts, a weakened economy, poorly functioning markets, inadequate or lack of infrastructure, decades of conflict-associated asset diminution, and cumulative effects of frequent flooding including disruption of livelihoods and population displacement. Further, the report notes that in 2017, a famine was controlled because of

the humanitarian community's sustained and urgent multi-sector response. Notwithstanding several efforts to implement peace with some extent of political advancement in the past two years, the Revitalized Agreement on the Resolution of the Conflict in South Sudan which was signed on 12th September 2018, new hotspot of civil unrest, and violent conflicts continued to arise through 2020 and continued through 2021 (Erinle, Ogwu, Evivie, Zaheer, Ogunyemi & Adeniran, 2021).

According to Shimada (2022), the majority of the nation is inaccessible during the rainy seasons due to a lack of resources, inadequate institutional capacity for the government, a lack of resources or restricted ability for the private sector, and inadequate infrastructure. In addition, the nation lacks the expertise and resources to operationalize agricultural development projects, leaving it unable to do so. Due to the decreased desire of merchants to participate in local market economies and the resulting deterioration of market functionality, prepositioning, acquiring, and distributing humanitarian aid has become not only expensive but also difficult, (World Bank, 2021). Shimada (2022) noted that since 2019, flooding incidents have occurred three years in a row, aggravating the nation's multifaceted crisis with rising water levels that are high enough to rush through banks, submerging crops and pasture, disrupt dykes, damage household assets and public infrastructure, and in the worst cases, result in the loss of human and animal lives.

As per FAO (2021), while over 1,700 000 individuals did not recover fully from the 2019/2020 floods, a projected 650 000 more individuals across the country were harmed by the floods of October 2021. The most affected state, Jonglei, recorded damage to more than 45 percent of its entire cereal cultivation area in nine affected counties, equivalent to 26 892 ha of land destroyed and 11, 916 tons of cereal lost. The United

Nations, through the Office of the High Commissioner for Refugees, raised an alarm that, there is a really high risk that the measures executed to avert the spread of Coronavirus pandemic (COVID-19), significantly disrupted the already fragile state in South Sudan (Malish, 2020). This is a result of issues such as limited access to services, weak and under-resourced health infrastructure, severe food insecurity, and a large number of internally displaced persons (IDPs) residing in cramped shelters or clogged camps (UNHCR, 2020). Because of these measures, market connections are reduced for both consumers and traders, thereby leaving producers deprived of access to vending their products and purchasers short of access to agricultural inputs, food, or other household requirements.

Vallet, Frankenberger, Presnail, Otieno, Fu, and Lee (2021) reiterated that this has amplified the cost of doing business since supply chain disruptions and access restrictions have led to damaged livelihoods and loss of household incomes. Furthermore, the introduction of lockdown measures has also resulted in significant disruptions to agriculture consulting services, significantly restricting access for farmers, particularly during crucial growth seasons. Upper Nile State in South Sudan's Nasir County, an administrative region, is extremely poor and lacks infrastructure. The County’s economy depends on small-scale agriculture, with erratic yields. In 2021, Nasir County was among the 34 counties classified under acute food insecurity. In Nasir, the main shocks causing food insecurity included floods that damaged shelters and crops, high food prices, low yields due to floods and inaccessibility of markets due to flooding. There is a limit to the amount of food circulation due to budgetary and access constraints, and logistics, hence prioritizing local food production in the current environment, which is well-defined by both natural and man-made shocks. This necessitates prompt attention and humanitarian help. As these response interventions can have adversative impacts on agricultural production in

the subsequent season, a follow-up response requires to be set in place to lessen those effects. This study, therefore, seeks to examine the effect of food intervention programs on food security in Nassir County, South Sudan.

1.2.1 Response Programs

James (2022) defines Response Programs as the interventions deployed to help improve the communities' effectiveness during disasters and emergencies through education, research, and simulation activities. Mena and Hilhorst (2022) view response programs as an act of providing assistance designed to alleviate suffering, save lives, promote and restore human dignity in the wake of sweeping emergencies and disasters. According to Clarke and Parris (2019), a response program refers to the financial resources channeled for humanitarian actions such as war, food insecurity, drought, and catastrophes.

Weizmann (2021) indicated that the purposes of response programs are to safeguard human dignity, alleviate suffering, save lives in the aftermath of natural and artificial disasters, and also prevent and reinforce preparedness for such scenarios. Typically, humanitarian response initiatives occur when the world is irritated by acts of brutality committed by armed actors and political leaders take international military action in a bid to stop them (James, 2022).

According to Weizmann (2021), response programs are created to alleviate suffering and save lives during and in immediate outcome of emergencies. Further, humanitarian assistance is useful during instances of man-made and natural disasters, because it alleviates suffering, maintains human dignity and it saves lives. Therefore, humanitarian response programs address the profound consequences of the conflict on physical and mental the welfare and living circumstances of those who have been

displaced, those who have returned, and host communities by promoting their protection, safety and dignity.

1.2.1.1 Emergency Response Programs

Emergency Response Programs stress the scenarios when the scale of the potential emergency needs the concentrated efforts of different organizations or agencies. Lessening the influence on the environment and people is the primary goal of an emergency response procedure. Ollove and Hamdi (2021) pointed out that emergency responses attempt to contain, control, or end the emergency. It offers hands-on direction to help inter-agency country teams (including international organizations, the ICRC, NGOs, and the UN agencies,) when they jointly prepare to respond to prospective crises with suitable humanitarian protection and assistance.

1.2.1.2 Mid-Term Interventions

Interventions for a moderate level of food security are executed through an all-inclusive system approach, tied with a medium-term plan to advance the proficiency of the entire marketing and production chain for inputs, as part of the expansion of a more efficient agricultural system. More emphasis is on subsistence food, fisheries, and livestock sectors, which play very significant functions in nutrition and income generation.

1.2.1.3 Long Term Interventions

The interventions needed for long-term food security are a “continuum” or “nexus” approach, where emergency, recovery, and development interventions are simultaneously employed at distinct points in time (even if funded by separate instruments), to address different yet overlapping needs, including the need to anticipate and mitigate disasters and food security crisis while building the resilience of communities and households to shocks and stressors.

1.2.1.4 Coping Strategies

Coping tactics are 'ex-post' initiatives that seek to minimize the effect of an undesirable event after it has occurred. According to FSIN (2022), mid-term coping strategies include; the adoption of food policy nets (food for work, cash transfers, school feeding programs, and food subsidies), development of agricultural production, provision of emergency food assistance by donors and governments, and administer prices for farmers or producers. Coping strategies are social rejoinders utilized to counterbalance hazards to a household's economic and food resources during hardship.

1.2.2 Food Security

When everyone has financial and physical access to enough, safe, and nutritious food to accomodate their dietary needs and requirement for a healthy, active lifestyle, then there is food security (Bongaarts, 2021). Contrarily, food insecurity happens when people lack sufficient social, physical, or financial access to food. Otilia, Eduardo, and Garrido (2018) contend that program administrators, policymakers and health care providers face serious challenges because of the consequences of food insecurity.

1.3 Problem Statement

The World Food Program (WFP) of the United Nations (UN) estimates that 957 million people in 93 different countries are hungry (Petrikova, 2022). Goal 2 of the Sustainable Development Goals (SDGs), which is focused on eradicating hunger and ensuring that everyone has access to healthy food, has received a lot of attention from the UN (Halkos & Gkampoura, 2021). A humanitarian reaction aiming at saving lives has been sparked by the ongoing famine crisis in South Sudan. According to WFP estimates, 7.24 million people experienced severe food insecurity between April and September 2021 of which 108,000 faced famine; 2.4 million were in the emergency phase as a further 4.6

million faced stressed food security levels and needed urgent targeting under the various modalities (Vallet, Frankenberger, Presnail, Otieno, Fu, & Lee, 2021).

Notable midterm effects of hunger include; seasonal migration, insecurity, disease, loss of productivity, and death while some long-term consequences are; disability, high mortality rates, ailing economies, permanent displacement of population and malnutrition. The potential zero sustainable impact has been undermined by challenging conditions in Nassir County due to extreme levels of acute food insecurity, political instability, violence and poor infrastructure, high dependence of food imports and climate related crisis. The United Nations (UN) and World Food Program (WFP) based much emphasis on the Sustainable Development Goals (SDGs) Goal 2 which anchored on achieving zero hunger and universal access to nutritious and safe food. To achieve zero hunger, a combination of emergency programs, short, long-term food security interventions and coping strategies need to be re-analyzed.

The government has over the years strive on ways of addressing food security. Moreover, the need for the adoption of a clear and precise strategic plan was of significance to Nassir County. It was mainly attributed by the need for having adaptive and flexible approach to tackling shocks, engaging the government to facilitate resources that enhances sustainability, need for good collaboration among involved players and finally opting for innovative approaches. Despite the findings on the hunger outlook in South Sudan, there is limited research that focuses on the appropriate food security interventions in South Sudan. The study seeks to incorporate food security response strategies which include emergency response programs, mid-term and long-term food security interventions, as well as coping strategies in addressing food security in Nassir County.

1.4 Purpose of the Study

The study's objective is to evaluate how South Sudan's Nassir County's food intervention programs affect food security in order to recommend the most effective approaches for these programs to address the challenges associated with hunger.

1.5 Objectives of the Study

1.5.1 General Objective

The primary objective of the study focused on the effects of food intervention programs on food security in Nassir County, South Sudan.

1.5.2 Specific Objectives

The study was guided by the following:

i. To ascertain how emergency response strategies, have an effect on-food security in Nassir County
ii. To find out the effects of mid-term interventions on food security in Nassir County.
iii. To establish the effects of long-term interventions on food security in Nassir County.
iv. To provide information on coping strategies on food security in Nassir County.

1.6 Research Hypothesis

This study sought to test the following hypothesis

i. **H01**: In Nassir County, there is no statistically significant relationship between emergency response programs and food security.
ii. **H02**: In Nassir County, midterm interventions have no statistically significant impact on food security.
iii. **H03**: In Nassir County, there is no statistically significant link between long-term interventions and food security.

iv. **H04**: The impact of coping mechanisms on the availability of food in Nassir County is not statistically significant.

1.7 Significance of the Study

In light of the response programs and food security interventions in South Sudan, with a specific focus on Nassir County, the research study benefited many stakeholders, including development partners, humanitarian organizations, and aid recipients. The findings of the study were crucial for informing an integrated food security response plan, according to the Nassir County Government and the Republic of South Sudan's government, as well as global humanitarian standards. The finding provides a solid basis to program design to various food security humanitarian partners as well as a benchmark for monitoring, evaluation, and learning. Prior to this study, no study existed on the subject area in Nassir County.

The study would help in revealing and exploring critical areas left out in designing, planning and implementing food security programs. The findings produced from the study provided insight into food security programs currently implemented as well as community resilience levels. Gaps identified would lead to suggestions for program improvement as well as further studies, by other scholars.

1.8 Scope of the Study

The scope of the study, as stated by Easterby-Smith et al. (2014), describes all the topics that the research study addressed with respect to the subject, geographical area, methodology, and population. Nassir County in South Sudan was the study's geographic focus. The various people dispersed around Nassir County were of the main emphasis. The study's subject area was centered on coping mechanisms and their potential impact on food security in Nassir County, as well as emergency response programs, medium and long-

term food security measures. Constraints in terms of resources, accessibility, and logistics could prevent data collection from all of the nation's counties. The study was retrospective and concentrated on the time frame between February 2022 and April 2023.

1.9 Delimitation of the Study

Delimitations, according to Easterby-Smith et al. (2014), are the parameters the researcher sets for the study and specify what the research was not addressed. The subjects of the current study were people from Nassir County. There are no other responders who could provide the study with the pertinent data especially those from the neighboring counties. The study examined four areas of food security Interventions: coping mechanisms, mid-term food security interventions, long-term food security interventions, and emergency response programs.

1.10 Limitations of the Study

According to Robson (2017), a limitation is a factor over which the researcher has no control but which imposes restrictions on and influences a research study. As envisioned, the research assistants encountered some difficulty in data collection for the research as some respondents were not willing to avail information due to fear of victimization. To address the issue, the researcher guaranteed the respondents that the study finding was purely for academic purposes. Additionally, the researcher also deployed a research assistant who had an introduction and a research permit which was used to ask the management for help to collect data.

Second, it is impossible to generalize the results by focusing solely on the Nassir County situation. Only counties like Nassir are included in the findings. However, to allow for the generalization of the results, the data collection tool was validated for reliability through a pilot test to guarantee what was gathered was accurate and trustworthy data.

Thirdly, the study was reflective and relied on the respondents' ability to recollect information and provide objective answers to the questionnaire. As a result, the study was impacted by inaccurate reporting and weak respondent memory. However, the significance of their accurate and objective responses in the survey was made clear to the respondents. Finally, despite the government's relaxation of Covid-19 control efforts, the researcher experienced challenges during the process of distribution of the questionnaires and therefore face-to-face meet up with some respondents was not possible. To address this issue, the researcher developed a link for the questionnaire which was in turn distributed to the respondents through various media platforms such as WhatsApp, email, and Facebook Messenger.

1.11 Assumptions of the Study

Study participants who responded constituted beneficiaries, County government officials, and humanitarian agencies. The researcher assumed that adequate amounts and valid information collected for the study were significant to detect differences. The information obtained was reliable from authorized government officials, field-level humanitarian agency leads and community leaders. In addition, the respondents were majorly collaborative and by extension responded to questions when asked. The results were relevant and meaningful to the various stakeholders and by extension be generalizable to other areas that share the same characteristics.

1.12 Theoretical Framework

1.12.1 Theory of Change

The proponents of the Theory of Change (ToC) are not clearly defined but it can be traced to the field of development where it is seen to have grown out of the tradition of logical planning (Piras, Tobiasz-Lis, Currie, Dmochowska-Dudek, Duckett, & Copus,

2021). Moreover, the theory is an outcomes-based approach. As a concept, ToC has a strong base in the fields of sociology, environment, political science, and psychology (Brook & Akin, 2019). The major principles informing the ToC are that it dwells on the process, which aids the practitioner think systemically with clear purpose and indicators. Also, the theory prioritizes learning. It therefore means that when it is applied, the practitioners have to keep reflecting and finding adaptive approaches to circumnavigate any challenge. The theory of change advocates for stakeholders' participation upon evaluation of policies and programs that articulates how the intervention is purposed to operate and the mechanisms by which it is designed to produce results (King, 2021). Furthermore, it was asserted that it is important to take note of the processes for value creation that describe how interventions tend to use resources effectively, efficiently, and in a way that generates enough value to justify resources.

In their work, Gilissens, et al (2018) emphasized the need for understanding the ultimate effect and long-term outcomes to be achieved. Naturally, organizations can articulate their strategies, activities and mission. However, organizations often find it difficult to handle clarity or internal consensus as to how they will realize their mission. The scope of the theory of change is reliant on different aspects such as the complexity of the context and the interests, resources and timing, of the organization and/ or the initiatives putting in mind the imaginable, sharing information whenever possible and recognizing the limitations and values. Different researchers in various fields have applied the ToC in their work. O'Connor, et al.(2021) on the other hand, emphasized that the theory seeks to allow agents to draw on present knowledge and better contribute to the collective knowledge regarding how to achieve meaningful change.

1.12.2 Stakeholders Theory

Freeman (1984) advanced the concept of Stakeholders theory, where he emphasized the need to steer businesses objectively and by extension maximize stakeholder's value for sustainability. On the other hand, seconded by Kim, Chun, and Wang (2021) anchored the fact that the stakeholder's theory upon the incorporation of corporate social responsibility base much emphasis on discovering social matters in management, constituting limited and often which enhances operational efficiency. Further, it is of great significance to note that the stakeholders are important for the existence and success of an entity or organization. Moreover, the possession of a devolved unit is considered a congregation of several stakeholders created politically and in a political environment to act on behalf of the citizens with a focus on development. To attain this there must be a close association between all the actors and parameters necessary for effective access to and utilization of public resources.

The public can invoke the principle of stakeholder resource through which stakeholders can institute an action against the executive for failure to accomplish the required duty (Freeman, Dmytriyev, & Philips, 2021). This act as a guideline mainly focused on high levels of improved leadership qualities and integrity. The need for stakeholder values necessitates that a series of devolved units delivers aimed at addressing the current food situation by extension gauging the performance. This theory is relevant to the study since organizations emphasize on service delivery returns to stakeholders as they go about their daily operational and decision-making processes. The study focuses on operations by the organizations to guarantee adequate provision of services and provisions to the stakeholders, including but not limited to food security. On the other hand, Dmytriyev, Freeman, and Horisch (2021) infer that the stakeholders' theory is more a

normative approach that may be argued to be morally and ethically acceptable than the shareholders' value approach. Moreover, stakeholders tend to be viewed as important by the instrumental stakeholder theory aimed at addressing the stakeholders needs and is a good practice in business. By taking good care of the stakeholders, they positively influence management, which leads to success, thereby contributing to profitable strategic value.

Ramoglou, Zyglidopoulos, and Papadopoulou, (2021) who are among the proponents of this theory suggest that the primary perspective of the instrument's theory is organizational performance which is part and parcel of financial growth. Much emphasis was on the fact that for increased organizational performance there must be a focus on staff and stakeholders. Consequently, since the main objective of the perspective is to gain benefits, stakeholders and staff have to be managed well. The theory addresses the significance of the humanitarian response programs installed in South Sudan.

1.13 Conceptual Framework

The variables investigated in this study are depicted diagrammatically in Figure 1.1. Food security is the dependent variable in the study, while the independent variables are emergency response programs, mid-term-term, and long-term food security interventions, as well as coping strategies.

Independent Variables **Dependent Variable**

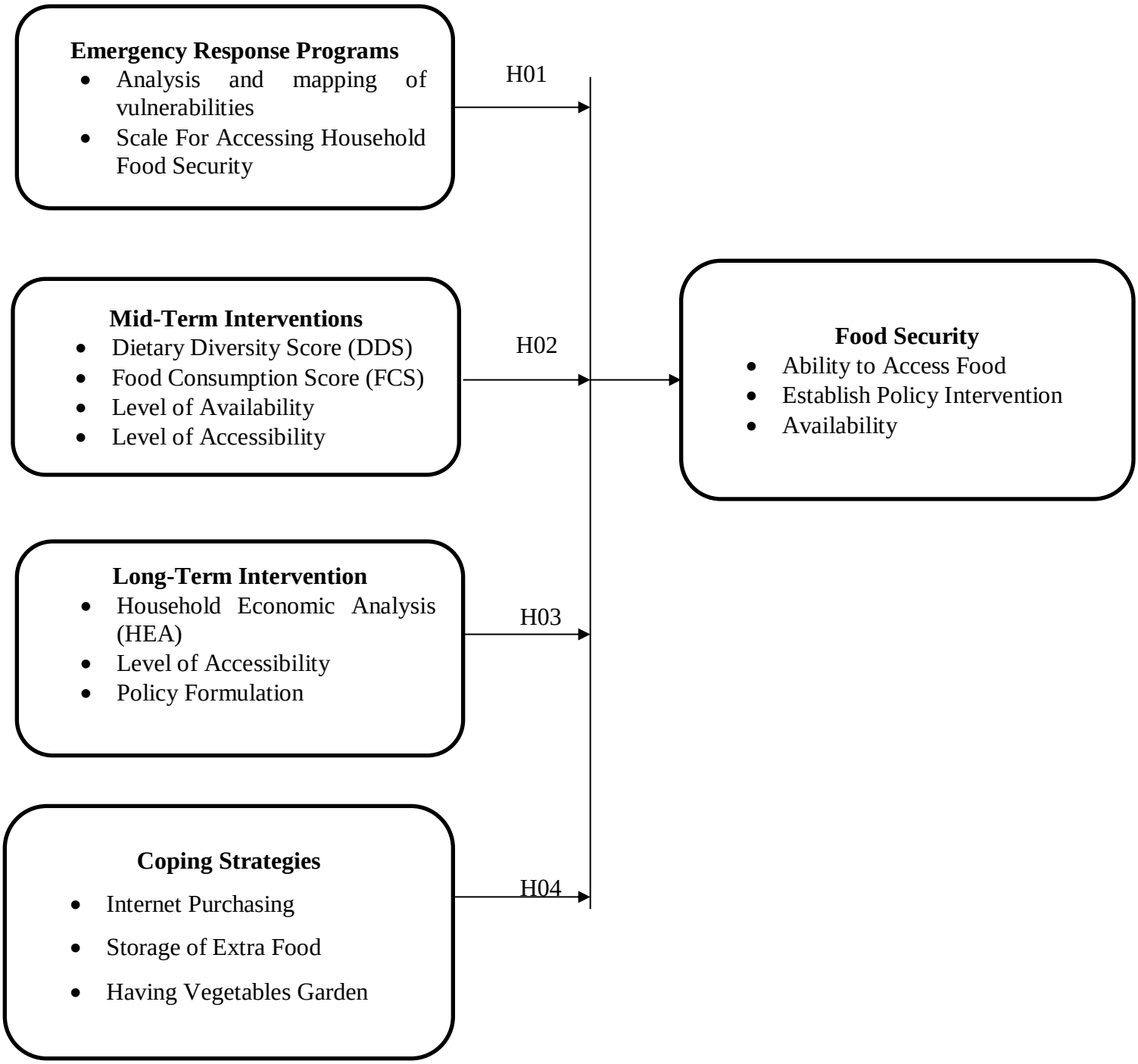


Figure 1.1: Conceptual Framework

Source: Author (2023)

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

An empirical evaluation of the literature from prior research is presented in this chapter and is done in accordance with the goals of the study. Moreover, the aim of the study was to establish the effects of food intervention programs on food security in Nassir County, sections were analyzed from various authors' and academics' points of view. Moreover, the subsequent sections covered a summary and knowledge gap(s) that the researcher intends to fill.

2.2 Discussion of the Empirical Literature

2.2.1 Emergency Response Programs and Food Security

The impact of localized flooding and poverty on food security in rural Pakistan is amply demonstrated by research by Ali and Rahut (2019). Furthermore, it is clear that the national scale of floods impacts significant portions of the people, necessitating the government's close attention. Local natural catastrophes, like floods, clearly did not receive much attention from policymakers and the government, since their effects are only felt in a small geographic region, despite the fact that these tragedies severely impact the livelihoods of rural populations. Using cross-sectional data from 812 families, the study focused a lot on how localized floods in Pakistan affect farmers' ability to make a living.

The primary data gathering technique was the study's main data source. According to the study's findings, localized floods had a significant negative impact on rural livelihoods, which was ascribed to lower cereal crop yields, lower income, and worse food security levels. In order to mitigate the effects of localized floods, the farmers implemented a significant response program that included land-leveling, tree planting, crop and livestock insurance, and Gabon's. Tree planting was rated as the best mitigation strategy out of all of

them, followed by crop and livestock insurance, land leveling, and bund construction, in that order.

Similarly, Shi et al. (2020) conducted a research on current initiatives like the green grains program, which has put China's Loess Plateau's food security in jeopardy. Furthermore, there was a question that put a lot of emphasis on discussing whether the large-scale Grain for Green program in China actually threatened regional food security. The study made heavy use of secondary data-gathering methods. Following the implementation of the re-vegetation program, the Loess Plateau's food security was evaluated extensively using the self-sufficiency index and the cropland pressure index. According to the study's findings, In fact, the first effects of the Grain for Green program had a significant influence on the food security of the region, where there was a net decline in grain yields of 10.49 million tons between 1999 and 2001, increasing agricultural stress and reducing grain self-sufficiency. According to the study, greater construction of check dams, terraces, and agricultural input led to higher grain yields in the region.

Muhire (2020) undertook a study on the effectiveness of land redistribution on food security in Rwanda; the case study of Nyagatare District. The study’s main emphasis was to assess the effectiveness of land size, family size, and intensification of farming on food security. The researcher adopted a descriptive research design which was aimed at accurately and systematically describing the target population. The target population included 30 respondents comprising 27 farmers, 1 in charge of development and 2 land officers who participated. Data was collected using interviews, observations and focus group discussions. The major findings were, land initially allocated based on family size and number of cows is no longer enough to sustain the families. Most farmers lack enough knowledge of modern farming methods which has led to reduced food production,

information dissemination on the meteorological state is insufficient to enhance preparedness and the district is still lagging in terms of infrastructure development which is negatively affecting food security. As a matter of fact, farmers are contributing to soil infertility through poor farming methods.

Ngure, Wandiga, Olago, and Oriaso (2021) performed a study on the different emergency measures used by the Kimandi-Wanyaga smallholder farmers in Murang'a County, Kenya, to address the environmental stresses affecting their households' food security. The authors also pointed out that Kenyan smallholder farmers' crop output and sense of security were negatively impacted by climate change threats including droughts and floods. The study's goal was to examine how changes in rainfall and temperature in Kenya's Murang'a County's Kimandi-Wanyaga affected households' access to food. Monthly rainfall, temperature data and community observations information gained through household survey, focus group talks, and key informant interviews were analyzed using content analysis and the Statistical Package for Social Sciences (SPSS). Chi-Square tests were used to examine the study's hypotheses. The community noted that reduced rainfall intensity (77%), a shortage of rain during agricultural production (79%), and unpredictable seasonal rainfall (73%) had a negative impact on their agricultural yield. This study found a significant correlation between home food security and the perceived local temperature and rainfall variations in the community. For strategic and robustly planned climate programs and policies for food security, regimes or governments are intended to convey to decision-makers the perspectives of smallholder farmers engaged in independent climate adaptation. In conclusion, the government needs to revisit the various land policies, adoption of modern farming methods, setting up irrigations in low rainfall areas, enforce virilization, and support more training and infrastructure development to improve

production and guarantee food security in each of the three areas of food availability, accessibility, and use.

2.2.2 Mid-Term Intervention and Food Security

Charvadeh, Savari, Khan, Gholamrezai, and Flora (2021) conducted research on the actual determinants of households' vulnerability to food insecurity during the Covid-19 lockdown in Iran's mid-term period. The study's primary goal was to determine how vulnerable households are to food insecurity. The study's primary data collection method was the standard online questionnaire. The researcher used household food insecurity access scales to assess food insecurity levels, and first-order structural equation modeling was used to understand the factors that influence food insecurity.

The study used thirty-seven variables derived from an associated literature analysis to assess seven levels of vulnerability: economic, social, cultural, human, physical, psychological, and information. The study focused on 392 households from Tehran province who were chosen at random. According to the study's findings, nearly 61% of the whole sample experienced food insecurity in the marginal, moderate, and severe categories. During the original Covid-19 shutdown, the psychological, economic, and human components of vulnerability had the most influence on food insecurity. Furthermore, it was indeed, a significant boost for policymakers and authorities to provide financial and economic assistance to vulnerable households. Notably, the lifting of US financial and economic sanctions on Iran is required to solve Covid-19 in the country.

Pandey and Fusaro (2020) performed research on food insecurity among women of reproductive age in Nepal. According to the report, food insecurity is pervasive in distinct social groups in low- and middle-income nations As a result; the United Nations has challenged all member countries to end world hunger by 2030. The purpose of this research

is to determine the incidence of mid-term food interventions and the extent to which they correspond with family food insecurity among Nepalese women, particularly Dalit women of reproductive age. The major data source was the 2016 Nepal Demographic Health Survey, a cross-sectional, nationally representative survey of 12,862 women aged 15 to 49 years old, 12% of whom were pregnant. After controlling for economic, demographic, geo-ecological, and cultural factors, descriptive analysis was used to determine the prevalence of household insecurity, and logistic regression was used to investigate the existing association between the risk of food insecurity and women's ethnicity. Long-term food security interventions in Nepal should focus on enhancing women's wealth and education, particularly among Dalits and those riding in the distant and mid-western districts.

Mbagwu, (2021) investigated the significance of the government of Nigeria's mid-term food intervention in increasing food security in Enugu State. While the government has been a driving force in encouraging small-scale farmers, it has paid little attention to their problems. For the government to reduce food imports to meet the nutritional needs of its people, save foreign cash that might be used in other economic sectors, and achieve food security, reassure small-scale farmers in Enugu State, Nigeria. Data was collected via an online Google document link from 53 respondents, with 44 surveys distributed physically to farmers who did not have email and three phone calls conducted equally. The Food and Agriculture Organization (FAO) time series data from 2014 to 2019 were examined. The study discovered that various difficulties confront small-scale farmers in Because of inadequate government responsibilities in small-scale farmers' operations, such as the usage of substandard and basic storage facilities, among other things, the research region was chosen. All of these concerns have made the country a large importer of food

to meet its citizens' nutritional demands, with the value of food import-export ratios standing at 13% and 11% in 2016-2018 and 2017-2019, respectively.

Weather spoon, Miller, Ngabitsinze, Weather spoon, and Oehmke (2019) steered a study on the significance of mid-term intervention in relation to markets, food security, stunting, and food policy in Rwanda. They argued that Rwanda for the past decades, has witnessed remarkable economic growth, ensuing from considerable developments in poverty reduction and living standards. Despite these developments, achievements in minimizing the prevalence of stunting among smallholder farmers' rural children, particularly boys, remain a major problem. The study's data gathering was primary. Furthermore, the socioeconomic determinants, dietary diversity, and policies that may impact stunting in rural Rwandan children were analyzed using a logit model with clustered variance-covariance estimators based on household village membership.

Ali and Mwaura, (2022) conducted a study on the cash transfer effect being a mid-term intervention on women empowerment; the case of the Islamic Relief Kenya Program in Garissa County, Kenya. Poverty incidence in Garissa County is high at 46.6% in 2017/18, down from 52.2% in 2016, (National Bureau of Statistics, 2019). Poverty rates are significantly greater in rural areas (49.7%) than in urban areas (34.4%), even though people in informal urban settlements frequently face severe hardship. Children (53.5%), especially orphans and vulnerable children (54.1%), older persons (53.2%), and those with disabilities (57.4%) are also more likely to be poor. Despite the fact that cash transfer programs provide cash to households, which they can use to purchase for food, clothing, and services such as education and health, there is no empirical literature on the social economic effects of Islamic relief cash transfers on women's empowerment. The study sought to investigate the socio-economic effects of cash transfers by Islamic Relief Kenya

on women empowerment in Garissa County, Kenya. The specific objectives were; to investigate the effect of food security from the cash transfer program, shelter provision from the cash transfer program, and livelihood diversification of the recipients of the cash transfer program on women empowerment in Garissa County, Kenya. This study was guided by the empowerment theory. A cross-sectional research design was used. The study targeted 1127 households in Garissa County which were sampled into 295 households using Slovin Formula. The result of the cash transfer program on food security indicated that cash transfer program beneficiaries were able to afford meals with a variety of food nutrients and quantities. The Islamic cash transfer programs were effectively utilized by women to improve the quality of housing and clothing. The livelihood of the beneficiaries changed as a result of acquiring livestock, and land, participating in social activities, owning marketable securities, and ability to meet daily domestic expenses through the use of Islamic cash transfer programs.

2.2.3 Long Term Intervention and Food Security

Zhong, Si, Crush, Scott, and Huang (2019) investigated urban food security research in Nanjing, China, using a hybrid public-private food supply system. Furthermore, as compared to other capitals in the Global South, Chinese cities have been able to retain far greater levels of family food security. The study relied on secondary data gathering methods, and food security is underpinned by the regulation of food delivery systems. The study similarly used a descriptive survey approach. The mixed ownership structure of retail markets and food wholesale, the companies that manage them, and the participation of both private and public capital in these markets all reflected the hybridity. The study identified the various food security regulations and policies implemented by the Nanjing municipal government, such as having vegetable baskets policy, crawling peg policy in urban

planning, financial aids for advancing wet market facilities and minimizing rental fees, and rules on vending of fresh produce in food stores or supermarkets. These rules ensure that Nanjing inhabitants have relatively equitable and accessible access to healthful food and that the establishment of new wet markets maintains pace with urban population growth. These long-term actions in Nanjing provide critical lessons for other cities throughout the world looking to increase urban food security.

Long-term policy initiatives include investments in agricultural research and extension, rural infrastructure (marketing infrastructure, irrigation, etc.), agro-processing, and financial services. Rizvi, Wasfi, Enns, and colleagues (2021) investigated the influence of new and classic food bank tactics on food insecurity: longitudinal research in Ottawa, Canada. The study examined changes in food security, physical and mental health at four-time intervals over 18 months at eleven food banks in Ottawa, Ontario, Canada. The Household Food Security Survey Module (HFSSM) and the Short-Form Health Survey Version 2 were used to evaluate the participants (SF-12). To understand how food security changed over time, statistical analyses included pair wise paired t-tests between the mean perceived mental and physical health scores across the four waves of data collection, as well as longitudinal mixed effects regression models. According to the study, food banks provide some relief from food insecurity but do not address the issue.

Adventist Development & Relief Agency (ADRA) (2020) South Sudan carried out a project titled ‘Education in Emergency Upper Nile.’ This project has led to increased equitable access to safe learning spaces for conflict-affected children, out-of-school children, firming up child protection and contributing towards peace and stability in government and opposition-controlled areas. The project incorporated gender disparity and sex aggregated data was gathered for all activities and analysis. During training, male and

female groups were formed to better understand the challenges facing each gender. They reported that between September and December 2019 heavy rainfall and flooding across the country made access to project sites difficult and affected implementation of some activities in Nasir and to some extent in Maiwut. Staff had to walk for long distances to reach supported schools and some of the learning was disrupted as some education activities moved to sites on higher ground and children and women the most vulnerable people remain the most vulnerable. The triple shock of sub-national violence and intensified conflict, a second consecutive year of major flooding, and the effects of COVID-19 all had a significant impact on communities in 2020, exacerbating an already serious humanitarian crisis.

Tora, Degaga, and Utallo (2021) investigated a study on the long-term food intervention and food security status of rural lowland people in Southwest Ethiopia. Furthermore, they stated that food security is a global issue. Drought impacted Gamo rural lowland residents' perceptions of drought risk and food security status. The study relies on primary data collected from 285 survey respondents, focus group discussions, key informants, agricultural professionals, and field observations. The study also relied on secondary data collection techniques gathered from printed and unprinted relevant materials and supplemented with original data. The study used a descriptive research approach, with narrations, notes, and conversations used to interpret the qualitative data. Multiple activities were taken to assess the food security of households. The study found that 53.68% of households were food insecure during the adoption of the family food balance model. Long-term food interventions include, among other things, reducing daily intake frequency, selling small animals, reducing dietary quantity, and purchasing food on credit.

Obwocha, Ramisch, Duguma, and Orero (2022) examined a study on the significance of long-term food intervention in addressing the issues associated with regard to climate change, variability, and food security in Kenya's West Pokot County. The study's major focus is on examining the implications of climate change and variability on food security in West Pokot County, Kenya, from 1980 to 2012. It analyzed land use and land cover (LULC) changes, and surveyed local knowledge and views of the links between variability and climate change, land use decisions and food (in) security from 1980 to 2011. The 124 interviewees were aware of long-term environmental changes, with 68% firmly believing that the climate has gotten more changeable. The majority of respondents (88%) reported declining rainfall and rising temperatures, with respondents in lowland areas citing shortened growing seasons as a factor influencing food production. Enhancing continuous climate change monitoring, intensifying early warning systems, and disseminating relevant information to farmers could help farmers adopt appropriate long-term food security intervention strategies.

In a study by Ikutwa, Siringi, and Magani (2019) examined that the enhancement of food security through result-oriented policies was considered to be an effective long-term food intervention strategy. Moreover, it was established that Kenya's Drylands have food security and economic prosperity that was weakened due to the lack of adequate execution of policy interventions. The main focus of the study was to provide sufficient understanding on the impact of food policy interventions on food security in Makueni County's Kikumbulyu North Ward. The study clearly characterized the extent to which policy intervention influences food security and assessed the extent to which they employed antiquated food security interventions in Kikumbulyu North Ward, Makueni County. A cross-sectional descriptive research design was used for this investigation. A

standardized questionnaire was used to collect data, and an interview guide was developed to target key informants. The survey included 128 households. The stratified sampling strategy was also utilized in the study to distribute the 138 questionnaires to the sample. Inferential analysis and descriptive approaches were used to summarize the acquired data, and the results were available in the form of charts and tables.

2.2.4 Coping Strategies and Food Security

In a study by Ibrahim and Othman (2020) it established that during the Covid-19 pandemic, a series to attain Food Security during Movement Control Order, Malaysian B40 households used coping methods (MCO). Furthermore, they assessed the present effects of the Covid-19 epidemic on household food security among B40 households in Malaysia using online survey questions administered to 803 respondents. The researcher used a descriptive survey design for data collecting. The study's findings indicated that more than 37.73% of respondents faced income shocks as a result of the Covid-19 issue. The survey discovered that 83.31% of these B40 households buy items in places that provide low costs, 3.74% borrow money from relatives or neighbors to maintain surviving, collecting vegetables around the house area with 32.28% and 26.9% to conduct business online. The findings indicated that ongoing and future government interventions should focus on structural changes in social protection by developing long-term responsiveness and more focused on building human capital among B40 households through training and skill to ensure the resilience of sustainability and food security among groups.

During the Covid-19 epidemic, Abdullahi, Kiong, and Mersat (2021) performed research on family food security and coping mechanisms in Malaysia. They observed that food security is a crucial aspect of global issues, particularly in the context of the Covid-19 outbreak. The limited mobility of products, people, and transportation is a crucial

component of this aspect. As a result, food security and supply become entangled in the mix. The key issues were whether we would be able to obtain food supplies during the pandemic, if there would be enough food for everyone, and how we would deal with maintaining family food security. The study's goal is to ensure family food security and short-term coping measures during the Covid-19 outbreak, with a focus on respondents from Sarawak, Malaysia. The study depended on original data collecting. The study used an online questionnaire that was distributed to 235 people from all throughout Sarawak, Malaysia. The major focus was data collecting. Evidently, it was discovered that food supply is not really a concern, but rather the problems of food security during the Covid-19 epidemic are more centered on access to their chosen food and the options of food that are accessible. It was clear that the coping mechanisms found, such as collecting food from alternate sources such as home vegetable gardens, internet purchasing, and preserving and storing extra food to make it last longer, were effective. These measures are not regarded as harsh.

Drysdale, Moshabela, and Bob (2019) investigated food security in Ilembe, KwaZulu-Natal families in South Africa. Clearly, food insecurity varies across rural and urban populations, as do household habits and characteristics. The study's purpose was to determine the importance of coping methods during times of food scarcity in the district of Ilembe, South Africa. The study used a cross-sectional research approach, with homes surveyed to acquire information on diet, household factors, and coping mechanisms. The target population consisted of 376 homes selected at random from low-income wards, 229 of which were rural and 147 of which were urban. The coping mechanisms implemented revealed that rural households had more access to and dependence on natural resources

than their urban counterparts. Long-term initiatives, in reality, are targeted at enhancing the natural resources accessible to them as well as the community's needs.

Mukhtar (2019) investigated food insecurity and coping methods among rural families in Niger State, Nigeria. The study used a sample size of 104 rural household heads from three local government areas taken from three agricultural zones in the state of Nigeria. The study used a sample size of 104 rural household heads from three local government districts taken from three agricultural zones in the state. The use of a food index was significant in evaluating the food insecurity state of rural families, whereas a universal coping strategy index was utilized to assess the various solutions taken by rural households faced with food insecurity. The food insecurity index result showed that 48% of rural household heads in Niger State, Nigeria were food insecure, while 52% were food secure based on per capita family consumption. The researcher established seven coping strategies to deal with food scarcity, which included children eating first, minimizing food consumption portions, eating less favored food, acquiring food on credit or borrowing food, consumption portion, leasing of assets, relying on assistance from friends and relatives, and skipping mealtimes. The report proposed that the government implement agricultural and employment programs aimed at decreasing or eliminating poverty, which would increase the number of food secure families in Niger, Nigeria.

Ndungu, Mutunga, Mwangi, and Kariuki (2021) performed research in Kitui County, Kenya, on food-insecure coping methods and the drivers of families' adoption of certain coping strategies. The study looked at farmers' coping methods and the factors that influenced their choice of certain coping strategies in Kitui County's agro-ecological zones. The target population consisted of 341 homes drawn from four distinct agro-ecological zones: semi-humid, transitional semi-humid, and semi-arid. According to the findings, the

most prevalent coping mechanisms used by farmers in the research region were selling animals to buy food, using off-farm income, limiting the number of meals per day, selling family assets, and pursuing off-farm jobs in metropolitan areas. The examination of the multivariate probate regression model revealed the farmers' choice of specific coping strategies was influenced by a variety of socioeconomic factors. As a result, the study concludes that interventions by both state and non-state actors aimed at improving households' capacity to cope with climate variability and extreme events-related food shortages must be informed by the socioeconomic characteristics of the households in question, which influence the coping strategy in question in specific agro-ecological zones.

Ouma, Ombati, and Onyango (2021) investigated research on the obstacles and coping methods in the adoption of a rice intensification system at the Oluch Irrigation Scheme in Homa-Bay County, Kenya. The study's goal is to determine whether the new rice intensification system (SRI) is a revolutionary technical method targeted at enhancing rice yield via the use of environmentally friendly and cost-effective agronomic approaches. This study investigated the problems experienced and coping methods employed by Kenyan smallholder farmers who contribute significantly to domestic rice production in the adoption of SRI techniques in rural settings in the country's western region, where it had previously been introduced. A survey of 101 smallholder rice farmers in the Oluch Irrigation Scheme in Homabay County was conducted as part of the study to comprehend the issues and coping methods associated with the adoption of the rice intensification system Using the SPSS software, descriptive and inferential statistical analysis was performed to assist in summarizing the results. The findings revealed that a slew of challenges impede the adoption of SRI in the Oluch irrigation scheme, including insufficient knowledge, labor shortages and high labor costs, weak stakeholder networks

in the rice value chain, pests and diseases, and high agricultural input costs to facilitate SRI. Notably, none of these obstacles were extremely frequent among the majority of farmers, but they were confronted with many complicated and conflicting challenges, restricting their potential to use alternative SRI methods. It was discovered that the nature and appearance of these difficulties demanded engagement of numerous participants in the rice value chain to address them. This served as the foundation for a multi-stakeholder approach to addressing the difficulties that hampered the application of new agricultural technology, particularly the use of creative ways such as an innovation platform to encourage SRI adoption.

According to the most recent IPC results for South Sudan, food insecurity is anticipated to continue high due to the impact of severe drought and flooding on war, livelihoods, and continuing macroeconomic issues. 6.83 million People, or 55% of the population, are food insecure. The IPC research emphasizes five (five) phases of South Sudan's food insecurity issue. In the first phase, 2,146,000 individuals are food secure, 3,371,000 are stressed, 4,401,000 are in a food crisis, 2,375,000 are in a food insecurity emergency, and 55,000 are in a disaster.

Food insecurity in South Sudan is primarily caused by climatic shocks (dry spells, floods, and droughts), insecurity (caused by sub-national and localized violence), population displacements, cereal deficits, pests and diseases, economic crisis, limited access to basic services, COVID-19 effects, and the cumulative effects of years of asset depletion that continue to erode households' coping strategies and loss of livelihoods. Because of the country's high levels of acute food insecurity, a rapid scale-up of multi-sectorial humanitarian aid is necessary to save lives and avert the entire collapse of livelihoods in impacted counties, particularly those with a large proportion of residents in

phases 5 and 4. Urgent action is also required for populations in phase 3 to protect their livelihoods and alleviate household-level poverty

2.3 Summary of the Reviewed Literature

This review identifies the theory of change and stakeholders' theory to guide the study objectives. Notably, the theory of change facilitates an in-depth exploration of values, and beliefs that signify change as it happens. Stakeholder theory, on the other hand, expands the institution's relationship with its consumers, suppliers, workers, investors, and communities. As a result, institutions are required to provide effective humanitarian response initiatives that address food security. The number of undernourished people has decreased by about half in the last two decades as a result of strong economic expansion and higher agricultural output. Unfortunately, severe malnutrition and hunger continue to be a major impediment to growth in many nations. According to UNDP figures (2017), there were around 821 million people who were chronically undernourished. Undernourishment and severe food insecurity appear to be on the rise across Africa. The SDG Goal 2: Zero Hunger seeks to eliminate all kinds of hunger and malnutrition by 2030, ensuring that all people, particularly children, are fed. On the other hand, the stakeholders' theory expands the connectivity between the institutions. This entails encouraging sustainable agriculture, as well as aiding small-scale farmers and providing equal access to land, markets, and technology. This SDG objective 2 also necessitates international collaboration to ensure investment in technology and infrastructure to boost agricultural output.

The empirical reviews are four variables; emergency response programs, mid-term food security intervention, long-term food security intervention and coping strategies. First, an emergency response program is essential in the rather than ad hoc emergency

needs assessments. It constitutes a possession of clear feedback mechanisms. It aims at obtaining a foundation response option, operational requirement and monitoring and evaluation. Besides, mid-term food security intervention is considered to be a minimal duration of time taken so as to address food security, while long term is purely the opposite. Finally, coping strategies are mechanisms adopted to mitigate food insecurity. Many scholars agree that the incorporation of emergency response programs, Food security was addressed through short-term food security interventions, long-term food security interventions, and coping strategies.

2.4 Knowledge Gap

From the studies conducted, there has been scattered evidence that tends to show the existing relationship between food intervention programs and food security, especially in Nassir County. As such, it results in a knowledge gap in the concept of food intervention programs, in Nassir County. As a result, there was a need to perform this research due to limited information on the subject matter. Emphasis by the researcher was on the effect of food intervention programs on food security. This study specifically determined the effects of emergency response programs, mid-term food security interventions, long-term food security interventions, and coping methods on food security in Nassir County, South Sudan.

CHAPTER THREE
RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter goes through the numerous research methodologies that were used in this study. Specific topics covered include research design, target population, sampling technique and sample size, data collection processes, data processing approaches, diagnostic tests, conceptual and analytical models, significance tests, and degrees of dependability by the study instruments.

3.2 Research Design

Cooper and Schindler (2018) defined study design as the framework for acquiring, measuring, and analyzing data. This study employed a descriptive survey research methodology, which allowed for the collection of information from participants in order to provide an explanation of its applicability and general comprehension. As a matter of fact, a research design is a basic arrangement for conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedures. The descriptive survey research design assisted the researcher in obtaining a picture of opinions, perceptions, and attitudes concerning food intervention programs targeted at food security with the goal of solving hunger conditions for purposes of this study.

The descriptive research design enabled the researcher to gain deeper insights as regards to the issues linked with food intervention programs. As a matter of fact, through exploration, the researcher was in a position of understanding the issues that led to the introduction of the food intervention programs. This was done through literature review as well as primary data. The researcher learned about the food intervention programs on food

security for Nassir County and its stakeholders, during the administration of research questionnaires. The researcher used descriptive research design, to answer the questions of to what extent food intervention programs influenced food security in Nassir County and its residents.

3.3 Research Site and Rationale

This study was undertaken in Nasir County located in the Upper Nile State region of South Sudan. Being the most hit by the South Sudan Crisis of 2013, a major proportion of the population living in Nasir comprises of IDPs in the settlements along Sobat and Gilo Rivers. This, among other areas, is frequently affected by flooding. These included more than 180,000 nationals and close to 30,000 refugees and asylum seekers (Relief web, 2016).

3.4 Target Population

According to Casteel and Bridier (2021), a target population is a group of people, events, components, objects, or instances having unique observable characteristics that the researcher is interested in and wants to learn more about in order to make better decisions. In the framework of this study, the target population was local and international organizations participating in food security programs in Nassir County. These international organization representatives included program managers from World Vision International (WVI), Relief International (RI), Adventist Development and Relief Agency (ADRA), and GOAL. Beneficiaries (IDPs/Host Communities, returnees), community leaders, local authorities, the Universal Network for Knowledge and Empowerment Agency, Nile Hope, and Community Health & Development Organization (CHADO) among others. The target beneficiaries are spread across seven (7) administrative areas (Payams) of Dingkar, Jikmir, Kiech, Kuerenge-Ke, Mading, Maker, and Roam. From these organizations and stakeholders, the possible population under consideration amounts to approximately 9,104

household heads, beneficiaries, refugees, IDPs and returnees, 234 officers working for the international community/organizations, 482 officials working for the local non-governmental actors, and 176 officials working for the local authorities. Accordingly, the total target population was 9,996. The distribution of the target population across the various strata is as summarized in Table 3.1.

Table 3.1: Population Size

Category	Frequency	Percentage
Household heads/beneficiaries/refugees, IDPs	9,104	91.08
International community/organization	234	2.34
Local non-governmental organizations	482	4.82
Local/governmental authorities	176	1.76
Total	**9,996**	**100.0**

Source: OCHA, 2022

3.5 Sample Size

3.5.1 Study Sample Size

According to Obwatho (2014), a sample size is the number of items, components, or people chosen from the target population to collect data. The researcher used stratified sampling procedures, which included dividing the population into groups with distinct characteristics. The researcher adopted the Krejcie and Morgan method to pick 370 people from a total population of 9,996. In this study, the sample was obtained within the following parameters: 5% margin of error, 95% confidence level, and 50% response distribution of the target population. A good sample population is between 10% and 30% of the entire population (Mugenda & Mugenda, 2013). As a result, the sample population of 370 was distributed proportionally among the various stakeholders in Nassir County.

The Krejcie and Morgan algorithm was adopted to find the proper sample size. This was critical since certain sectors have tiny enterprises while others have a large number of firms that are already diverse.

Where s denotes the necessary sample size

X2 = the chi-square table value for one degree of freedom at the specified confidence level (3.841).

N represents the population size (n=9996).

P denotes the population percentage (assumed to be .50 since this would provide the maximum sample size).

d = the degree of precision represented as a percentage (.05).

S= 370

The distribution is as depicted in Table 3.2.

Table 3.2: Sample of the Study

Category	**Frequency**	**Sample Size**
Household heads/beneficiaries/refugees, IDPs	9,104	337
International community/organization	234	9
Local non-governmental organizations	482	18
Local/governmental authorities	176	6
Total	**9,996**	**370**

Source: Researcher, (2023)

3.5.2 Sampling Procedures

Sampling procedure constituted to the process or technique that involves choosing a sub-group from a population to participate in the study; it is the process of selecting a number of individuals for the study in such a way that individuals were selected to represent the large group from which they were selected (Ngala,2018). A stratified sampling procedure was used. The four strata enabled the researcher to find answers relating to the objective questions. It was significant in the proportional allocation strategy; the size of the sample size in each stratum was taken in proportion to the size of the stratum.

3.6 Data Collection

3.6.1 Data Collection Instruments

The questionnaire captured both qualitative and quantitative information. This engaged participants with both closed-ended and open-ended questions. For closed-ended interviews, the research instrument contained quantitative measurements such as Likert scales, which required the respondents to rate the extents and levels of agreement with various statements presented. The significance of the responses were considered to add value to the quantitative data gathered from the open-ended questions.

The research questionnaire was made up of two main sections. The initial section of the questionnaire contained background data regarding the respondents and their functions. This included their demographic data, their roles as well as their category. Additionally, the researcher reviewed the secondary sources including the published reports, County Government reports, National Government reports, international humanitarian communities' reports and Non-Governmental Reports among other relevant published information for connection of the study findings. These sources formed the basis for the primary data gathered.

3.6.2 Piloting of the Research Instruments

Pilot research was conducted to pre-test and validate the questionnaire. This is consistent with the descriptive research design methodology utilized in this study. The study chose a pilot group of 12 actors from the Nasir County sample population to test the validity and reliability of the research instrument. Three respondents were chosen randomly from each of the four groups. The survey put into account individuals' geographical backgrounds as well as gender equity. The pilot data was incorporated into the main study. To improve the instrument's reliability and validity, the clarity of the instrument items is established for the respondents. The trial study provided the researcher with knowledge of the tool and its application procedure, as well as identifying objects that needed to be modified. The results were that the study corrected inconsistencies caused by the equipment, ensuring that they measure what is expected.

3.6.3 Instruments of Reliability

Pre-testing the questionnaire with a specific sample from one of the Nasir County areas will also verify reliability. The form was pre-tested with a selected sample to assure dependability for this study. The pre-test initiative was place at the convenience of both the respondent and the researcher. To improve the clarity of the questionnaire, the lead researcher and the research assistants conducted a pretest. The internal consistency technique was tested using Cronbach's Alpha. This method assesses internal consistency, or how closely related a group of objects are. A "high" alpha value is frequently used to demonstrate that the items assess an underlying (or latent) component. Typically, reliability with a defined threshold of 0.7 is deemed acceptable.

3.6.4 Instruments of validity

The amount to which the sample of test items represents the content of the test is referred to as validity. The content validity that was used in this study is a measure of how well information acquired using a certain instrument represents a specific topic or domain of a specific idea. To assess the face validity of the research instrument, the researcher sought input from research specialists such as the supervisor and food security experts as well as beneficiaries. This allowed for the change of the study instrument, hence increasing validity. Furthermore, the study examined the responses and non-responses per topic to determine if there were any technical challenges with the questions given.

3.6.5 Data Collection Procedures

The study mostly relied on primary data acquired through the use of a research questionnaire with basic outline questions examining the effects of food intervention programs on food security in Nassir County, South Sudan. The research instrument was sent to respondents in person, by e-mail, and via an online survey as well as face to face. The surveys were distributed to respondents working in the international community/organizations, local non-governmental organizations, and local governmental authorities via Internet platforms, emails, and face to face meetings. The researcher designed an online survey that was accessible via a URL given by the responders. The online survey link was live for two weeks after it is opened to allow respondents to reply at their convenience. The completed questionnaires were returned to the researcher as a scanned copy via email or physical copy via established collecting sites at the humanitarian coordination liaison office at the county level.

The sampled population consisted primarily of literate persons who are unlikely to have difficulty responding to questionnaire items. However, the researcher hired research

assistants to aid in reading the questionnaires in rural places with low literacy levels. Permits and authorization for study were obtained from the National Commission for Science Technology and Innovation (NACOSTI). Throughout the exercise, the researcher located each respondent, introduce themselves to them by explaining the objective and nature of the study, and then administer the surveys accordingly. A cover letter describing the study's aims and guaranteeing the questionnaire included a statement protecting respondents' privacy and inviting them to participate in the study.

3.7 Data Processing and Analysis

The questionnaires and other sources were evaluated and assessed as part of the data analysis. Before processing the responses, the field data was examined and compared to select the most accurate and quality information from the feedback supplied by different respondents. The questionnaires that have been completed were reviewed for consistency and completeness. The acquired raw primary data was coded before being entered into the Statistical Package for Social Sciences (SPSS, Version 25) program. The data collected was solely quantitative, and it was examined using descriptive statistics. MS Excel and SPSS assisted the researcher to characterize the data and establish the amount to which it was used. In addition, the researcher adopted a multiple regression analysis to assess the strength of the association between the variables. This provided a qualitative and quantitative explanation of the study's goals. The regression equation was be: $Y = 0 + 1X1 + 2X2 + 3X3 + 4X4+$:

Y = food security, X1 = emergency response programs, X2 = mid-term interventions, X3 = long-term interventions, and X4 = coping techniques. Furthermore, 0 represents the regression intercept, while 1, 2, 3, and 4 represent the regression coefficients. Coefficients and = Error term normally distributed about a mean of 0 and considered to be 0 for

calculating purposes. Multiple regression allows the researcher to estimate a score for one variable based on their scores for several other factors. Multiple regression is used to understand the relationship between the independent and dependent variables. The study provided quantitative reports based on central measure, percentages, and tabulations. The findings provided in the form of figures and tables.

3.8 Legal and Ethical Consideration

The research explored a number of moral problems, notably those pertaining to the respondent's safety. The data collected from responders will be used for research purposes in the study. All information gathered throughout the inquiry was kept confidential. In the application of information accumulation procedures that lead to the outcomes, the researcher monitored the exploration criteria, trustworthiness, and objectivity. The researcher shall accept responsibility for ensuring that the respondents were informed about the estimate of the examination under consideration. Respondents were able to appreciate their participation in the test as a result of this. The researcher was not attempted to trade anything for information

CHAPTER FOUR
DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This section outlines a comprehensive analysis in relation to the information gathered from the respondents. For the descriptive analysis, the data is analyzed and presented according to the research objectives. The study adopted inferential analysis which tested the research questions of the study independently under each research objective. This aimed at determining the consistency and flow of presenting research findings for each variable of the study. Summarily, this section highlights response rate of the study, general information, findings and responding to research questions.

4.2 Response Rate

Among the 370 surveys sent to the respondents, a total of 215 questionnaires were filled and taken back for data analysis which translated to 58.12% response rate and 41.88% did not fill the questionnaire. Mugenda and Mugenda (2003) claimed that a 50% response rate is adequate, 60% is good, whereas above 70% is excellent. Moreover, following Mugenda and Mugenda's assertion, the response rate is satisfactory to make study inferences.

Table 4.1: Response Rate.

Response Category	Target Population	Response Rate (%)
Filled and Returned Questionnaires	215	58.12%
Un-returned Questionnaire	155	41.88%
Total	**370**	**100%**

Source: Author (2023)

4.3 General Information

The study surveyed the respondents' characteristics including age, gender, education level, designation, and beneficiary category. The descriptive information was specific to this study to illustrate the distribution of the study respondents.

4.3.1 General of the Respondents

The descriptive statistics presented in the study's Figure 4.1 depicts that from 215 respondents, 129 (60%) were male respondents while 86 (40%) were female. The results, therefore, indicated that two genders were fairly represented in the study considering the existing gender disparity in the context. Moreover, the descriptive statistics evidence suggested that male gender could be dominating in Nassir County in terms of freedom of expression. The results, therefore the study indicated that majority of the Male respondents agreed that emergency response program, short term intervention, long term intervention and coping strategies contribute to food security.

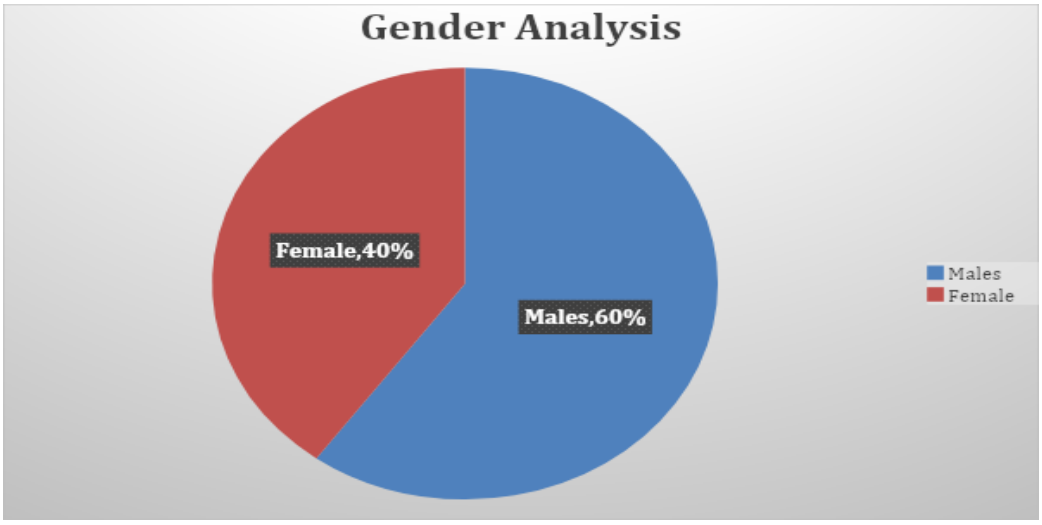


Figure 4.1 Gender Analysis Results

4.3.2 Age of Respondents

The descriptive study findings revealed that the majority of the respondents for this study 120 (56%), were aged between 18-35 years; 52 (24%) respondents were aged between 36-45 years, 27(13%) of the respondents were aged between 46-55 years, and 16 (8%) were aged above 50 years. It was clearly that the youth people were well informed about the food intervention strategies on food security.

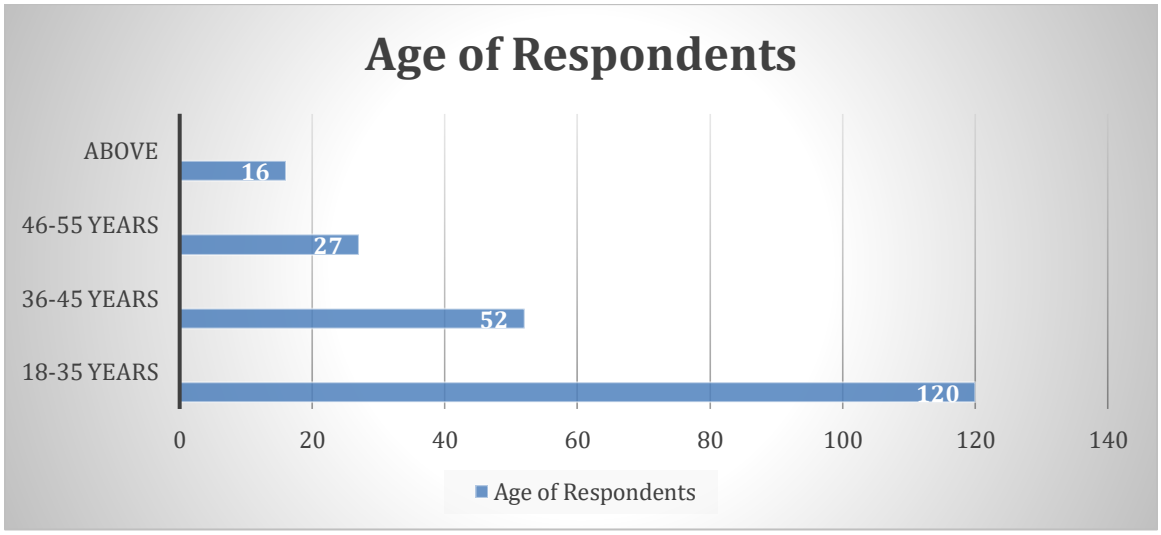


Figure 4.2 Age Distribution Analysis Results

The study findings indicated that respondents aged 56 years and above as presented in Figure 4.2 were less in number, compared to the younger generation aged between 18-35 years, who actively participated in providing study response

4.3.3 Education of the Respondents

As indicated in the study, majority of the respondents, 138 (64%), were degree holders while 77 (36%) of the remaining participants were diploma holders. No respondents had either secondary or primary as their final level of education. This descriptive analysis shows that both categories of the education level were represented in the study. However, evidence suggests that most respondents at Nassir County are degree holders. The findings are presented in Figure 4.3 of the study. It is clear that majority of the respondents clearly had sufficient knowledge on the food intervention program and could easily relate to food security.

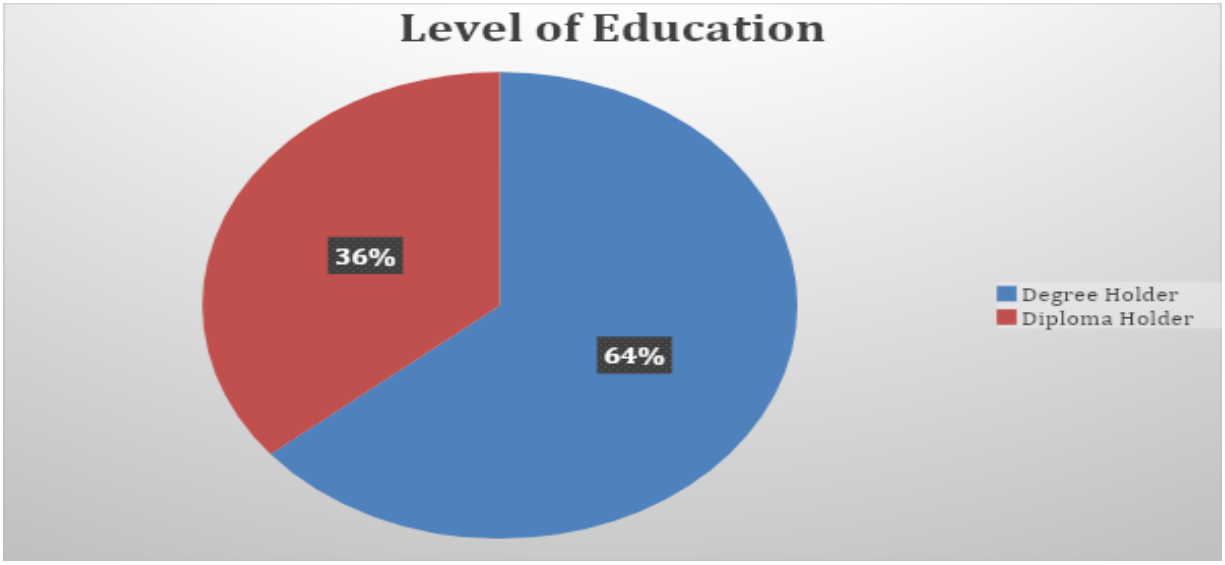


Figure 4.3 Level of Education Analysis of Results

4.3.4 Designation

The descriptive findings presented shows that 17 (8%) designation were program managers, 19 (9%) was represented by local authority, 133(62%) of the findings

represented beneficiary and finally, 46(21%) was represented by others. The findings are presented in Figure 4.4 of the study. The study findings noted that majority of the respondents are likely to be beneficiary due to the purport benefits associated with the study.

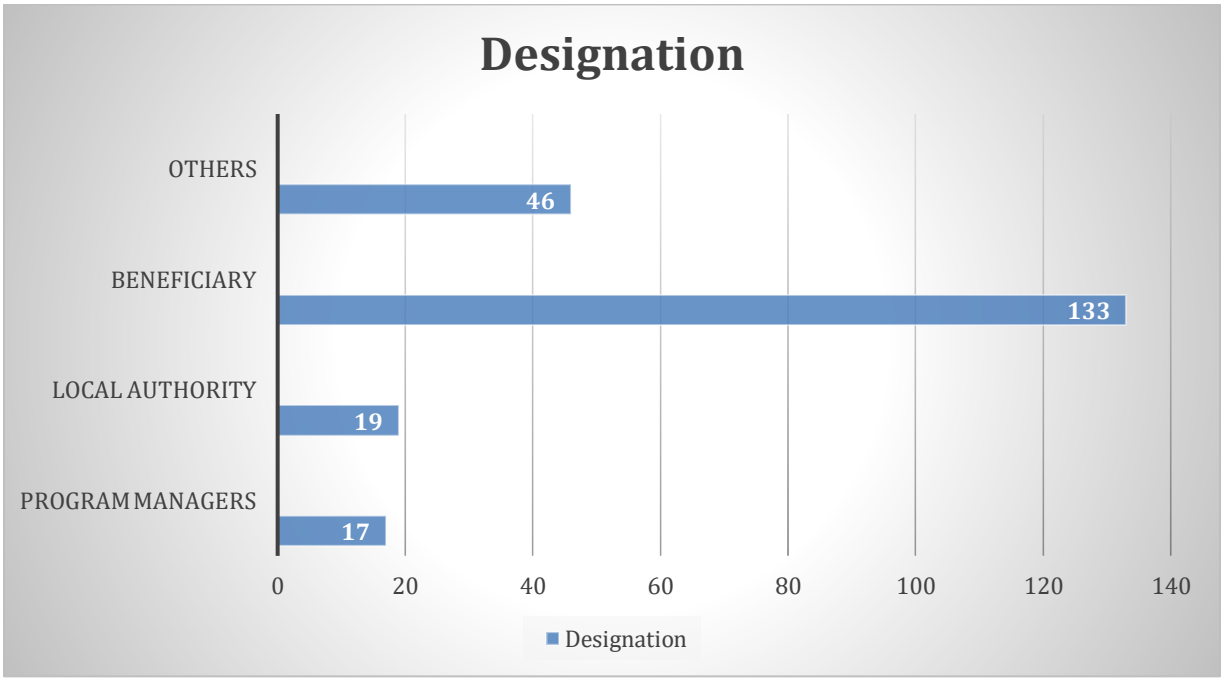


Figure 4.4 Designation Analysis of Results

4.3.5 Beneficiary Category

These descriptive statistics illustrate the beneficiary of food intervention programs. The results show that about 114(53%) of the respondents have benefited as host community, 43(20%) have benefited as IDP, 32 (15%) of the respondents have benefited as refugees while 26 (12%) of the respondents have benefited from the program as pastoralists. The results suggest that most of the respondents who benefited were the host community as show in Figure 4.5 of the study.

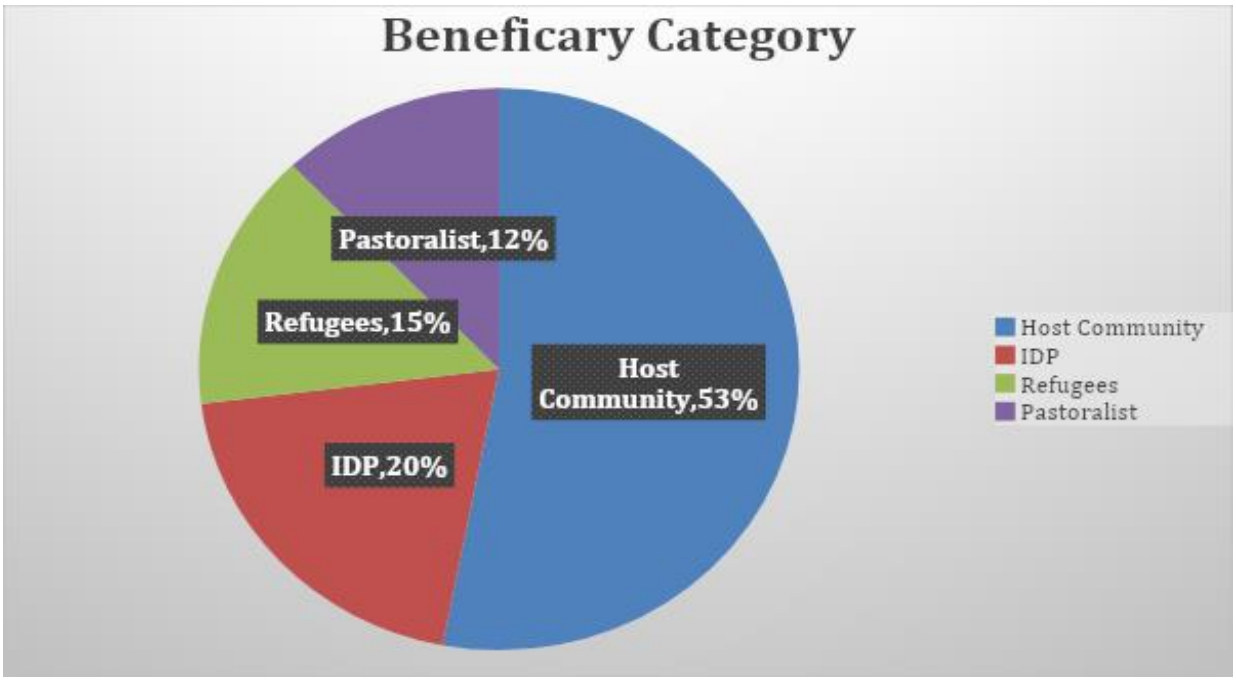


Figure 4.5 Beneficiary Category Analysis

4.4 Effect of Food Intervention Program

This segment highlights the descriptive findings of each study variable i.e. disaster response programs, mid-term food security intervention, long-term food intervention and coping strategies as independent variables while food security as the dependent variable. The objective was to depict respondent's level of agreement (on a scale of 1-5 where 5-strongly agree (SA), 4-agree (A), 3-neutral (N), 2-disagree (D), and 1-strongly disagree (SD) with various constructs under each variables of the study using frequency, percentages, mean, and standard deviation.

4.4.1 Emergency Response Program

Five statements were developed to measure the extent to which emergency response program has an influence on food security. As shown in Table 4.2 The discoveries established in statement (1) Do you think that the emergency response program address National, Inter-communal and localized conflict in Nassir County, out of 215 who participated in the study, 40(19%) of the respondents Strongly Agreed, 74(34%) Agreed,

45(21%) were Neutral, 29(13%) of the respondents Disagreed and 27(13%) Strongly Disagreed. This item had a mean 3.36 and standard deviation of 0.311, which is lower than the composite means of 3.2 with a standard deviation 0.28, implying that the statement does not positively influence food security linked with emergency response program.

The study also established that statement (2) noted that emergency response program has yielded to reduced cattle raiding, children & woman abductions, cyclical revenge killing and gender-based violence (GBP), out of 215, 33(35%) of the respondents Strongly Agreed, 80(37%) of the respondents Agreed, 51(24%) of the respondents were Neutral, 30(14%) of the respondents Disagreed and 21(10%) of the respondents Strongly Disagreed. This item had a mean of 2.97 and standard deviation of 0.343 which is lower than the composite mean implying that the statement did not address the issues of food security in Nassir County.

The statement (3) noted that the emergency response program has mitigated the occurrence of neutral calamites such as flooding and droughts, out 215, 36(17%) of the respondents Strongly Agree, 71(33%) of the respondents Agreed, 64(30%) of the respondents were Neutral, 26(12%) of the respondents Disagreed and 18(8%) of Strongly Disagreed. This item had mean of 3.34 and standard 0.142, which was higher than the composite means 3.2 and standard deviation 0.28. The item showed that majority of the respondents agreed with the statement implying that being an aspect of emergency response program enhances food security in Nassir County.

On the other hand, statement (4) that clearly pointed out on emergency response programs have addressed the manifestation of human disease, pests and conditions such as Covid-19 calamites, out of 215, 45(20%) of the respondents Strongly Agreed, 96(45%) of the respondents Agreed with the statement, 55(26%) of the respondents were Neutral,

12(6%) of the respondents were Disagreed and 9(4%) of the respondents Strongly Disagreed. This item had a mean of 3.21 and standard deviation 0.261. The study implied that having a mean of 3.21 equal to the composite mean clearly note that there is a strong implication of emergency response program on food security.

Finally, the statement (5) on having emergency response program fully addressed the economic challenges, out of 215, 39(18%) of the respondents Strongly Agree, 83(39%) of the respondents Agree, 47(22%) of the respondents were Neutral, 33(15%) of the respondents Disagreed and 12(6%) of the respondents Strongly Disagreed, with a mean of 3.28 and standard deviation 0.325. It was clear that that the mean was higher than the composite mean which clearly suggest that the item discussed strongly has an impact on food security.

Table 4.2 Emergency Response Program Descriptive Results

Statement	Level of agreement Frequency (%)					Mean	Std. Dev
	SA	A	N	D	SD		
Do you think that the emergency response programs address National, Inter-communal and localized conflict in Nassir County?	40(19)	74(34)	45(21)	29(13)	27(13)	3.36	0.311
The emergency response programs have yielded to reduced cattle raiding, children & women abductions, cyclical revenge killing and gender-based violence (GBP)	33(15)	80(37)	51(24)	30(14)	21(10)	2.97	0.343
Have emergency response programs have mitigated the occurrence of neutral calamities such as flooding and droughts	36(17)	71(33)	64(30)	26(12)	18(8)	3.34	0.142
Do you think emergency response programs have addressed the manifestation of human disease, pests and conditions such as Covid-19 calamities?	43(20)	96(45)	55(26)	12(6)	9(4)	3.21	0.261
Have emergency response programs fully addressed the economic challenges	39(18)	83(39)	47(22)	33(15)	12(6)	3.28	0.325
Composite Mean/SD						**3.2**	**0.28**

*Frequency percent are in Parenthesis

4.4.2 Mid Term Intervention

Six statements were developed to measure the extent to which mid-term intervention influences food security. As shown in Table 4.3, it was well outlined by statement (1) adoption of food consumption dietary diversity has enhanced food security, out of 215, 44(20%) of the respondents strongly agreed with the statement, 85(40%) of the

respondents agreed, 51(24%) of the respondents were Neutral, 21(10%) of the respondents disagreed while 14(7%) of the respondents strongly disagreed with a mean of 3.46,standard deviation 0.305 which is higher that the composite mean and composite standard deviation. It implies that majority of the respondents agreed that mid-term intervention enhances food security.

On the other hand, statement (2) claimed that over the past seven days, the main source of food was cereals, grains and roots, out of 215, 29(13%) of the respondents strongly agreed, 73(34%) of the respondents agreed, 66(31%) of the respondents were Neutral, 21(10%) of the respondents disagreed and 15(7%) of the respondents strongly disagreed with a mean of 3.05 and standard deviation 0.319. With a higher composite mean and composite standard deviation is clearly that majority of respondents agreed with the statement which an implication on food security.

Do you think that over the past seven days, the food supplied to every member of the household was sufficient being statement (3), out of 215, 47(22%) of the respondents strongly agreed with the statement, 76(35%) of the respondents agreed with the statement, 30(14%) of the respondents were Neutral, 37(17%) of the respondents disagreed while 25(12%) of the respondents strongly disagreed with mean 3.11 and standard deviation 0.214. With a lower composite mean and composited standard deviation, it was evident that the statement has no influence of food security.

The available source of food for every household was nuts and legumes, statement (4), out of 215, 41(19%) of the respondents strongly agreed, 69(32%) of the respondents agreed with the statement, 59(27%) of the respondents were neutral, 34(18%) of the respondents disagree, 12(6%) of the respondents strongly disagreed with a mean 3.03 and standard deviation of 0.222 which is lower than the composite mean and standard deviation

suggest that majority of the respondents disagreed with the statement that influences food security.

Statement (4) that claim that yesterday, during the day and night, did members of your household eat/drink, out of 215, 39(18%) of the respondents strongly agree, 74(34%) of the respondents agreed, 53(32%) of the respondents were neutral, 30(14%) of the respondents disagreed and 9(4%) of the respondents strongly disagreed with a mean of 2.99 and standard deviation 0.343. With a lower composite mean but a higher standard deviation suggest that majority of the respondents disagreed with the statement and its impact on food security.

Over the past seven days, members of your household were able to eat (Statement 5), out of 215, 37(17%) of the respondents strongly agreed, 87(40%) of the respondents agreed, 46(21%) of the respondents were neutral, 25(21%) of the respondents disagree and finally 20(9%) of the respondents strongly disagreed with mean of 3.17 and standard deviation of 0.189. With a mean higher than the composite mean suggests that statement being a factor of mid-term intervention influences food security.

Table 4.3 Mid Term Food Security Descriptive Results

Statement	Level of agreement Frequency (%)					Mean	Std. Dev
	SA	A	N	D	SD		
Adoption of food consumption dietary diversity has enhanced food security?	44(20)	85(40)	51(24)	21(10)	14(7)	3.46	0.305
Over the past seven days, the main source of food was cereals, grains and roots?	29(13)	73(34)	66(31)	21(10)	15(7)	3.05	0.319
Do you think that over the past seven days, the food supplied to every member of the household was sufficient?	47(22)	76(35)	30(14)	37(17)	25(12)	3.11	0.214
The available source of food for every household was nuts and legumes?	41(19)	69(32)	59(27)	34(16)	12(6)	3.03	0.222
Yesterday, during the day and night, did members of your household eat/drink?	39(18)	74(34)	53(25)	30(14)	9(4)	2.99	0.343
Over the past seven days, members of your household were able to eat	37(17)	87(40)	46(21)	25(12)	20(9)	3.17	0.189
Composite Mean /SD						**3.13**	**0.27**

*Frequency percent are in Parenthesis

4.4.3 Long Term Intervention

Four statements were developed in trying to establish the significance of long-term intervention on food security. Statement (1) noted that there food security safety nets to product vulnerable population, out of 215, 33(15%) of the respondents strongly agreed, 61(28%) respondents agreed, 58(27%) were Neutral, 41(19%) of the respondents disagree, 22(10%) strongly disagree with a mean of 3.10 and standard deviation 0.239. Moreover, statement (2) established that there are proper policy frameworks that clearly address long

term security, out of 215, 31(14%) of the respondents strongly agree, 64(30%) of the respondents agreed, 57(27%) of the respondents were neutral, 46(21%) of the respondents disagreed and 17(8%) of the respondents strongly disagreed with a mean of 3.24 and standard deviation of 0.119.

Statement (3) suggest that majority of the respondent's existence of specified institutions tasked with handling the food security policies. 40(17%) the respondents strongly agreed, 69(32%) of the respondents agreed, 60(28%) of the respondents were neutral, 33(15%0 of the respondents disagreed and 13(6%) of the respondents strongly disagreed with a mean of 3.52 and standard deviation 0.362. The researcher also established in statement (4) that there was active monitoring and evaluation of food security intervention, where out of 215, 41(19%) of the respondents strongly agreed, 71(33%) of the respondents agreed, 59(27%) of the respondents were neutral, 40(19%) of the respondents agreed and 4(2%) of the respondents strongly disagreed with a mean of 3.12 and standard deviation 0.321. With a mean lower than the composite mean showed that the statement does not sufficient implication on food security.

Table 4.4: Long Term Interventions on Food Security

Statement	Level of agreement Frequency (%) SA	A	N	D	SD	Mean	Std. Dev
Are there food security safety nets to protect vulnerable populations?	33(15)	61(28)	58(27)	41(19)	22(10)	3.10	0.239
Is there a proper policy framework that clearly addresses long term food security?	31(14)	64(30)	57(27)	46(21)	17(8)	3.24	0.119
Existence of specified institutions tasked with handling the food security policies?	40(17)	69(32)	60(28)	33(15)	13(6)	3.54	0.362
Is there active monitoring and evaluation of food security interventions?	41(19)	71(33)	59(27)	40(19)	4(2)	3.12	0.321
Is there a recent (within 1 year) food security baseline survey conducted?	41(19)	77(36)	30(14)	39(18)	28(13)	3.40	0.162
Composite Mean/SD						**3.28**	**0.24**

*Frequency percent are in Parenthesis

4.4.4 Coping Strategies on Food Security

Moreover, the research established level of agreement of respondents with the effect of coping strategies on food security as the measurement with construct developed i.e., Coping Strategies Index. As shown in table 4.5, a composite mean of 3.12 demonstrated that respondents agreed with the effect of coping strategies as an aspect of food intervention program on food security. The statement (1) pointed out on the CSI strategies adoption produces timely , reliable and meaningful information about the access

of food at the individual or household level, out of 215, 47(22%) of the respondents strongly agreed, 84(39%) of the respondents agreed, 40(19%) of the respondents were neutral, 27(13%) of the respondents disagreed and 17(8%) of the respondents strongly disagreed with a mean of 3.23 and standard deviation of 0.339. Since the mean is higher than the composited mean, it means that there is a positive impact of the statement in relation to food security.

Coping Strategies Index (CSI) is easy to apply at low cost in any individual or household survey. As a matter of fact, 38(18%) of the respondents strongly agreed, 66(31%) of the respondents agreed, 44(20%) of the respondents were neutral, 44(20%) of the respondents disagreed, 28(13%) of the respondents strongly disagreed with a mean of 3.25 and standard deviation of 0.314. A mean of 3.25 which is higher than the composite mean suggest that majority of respondents agreed with the statement which affects food security.

On the other hand, adoption of the CSI analysis has created prevalence rates which can be compared between cultures., out of 215, 49(23%) of the respondents strongly disagreed, 91(42%) of the respondents agreed, 52(24%) of the respondents were neutral, 20(9%) of the respondents disagreed and 3(1%) of the respondents strongly disagreed with a mean of 3.36 and standard deviation 0.302. A mean of 3.36 is higher than the composite mean, therefore claim that there is a positive relation between the statement and food security.

Table 4.5: Coping Strategies

Statement	Level of agreement Frequency (%) SA	A	N	D	SD	Mean	Std. Dev
CSI strategies Adoption produces timely, reliable and meaningful information about the access of food at the individual or household level.	47(22)	84(39)	40(19)	27(13)	17(8)	3.23	0.339
Coping Strategies Index (CSI) is easy to apply at low cost in any individual or household survey.	38(18)	66(31)	44(20)	37(17)	30(14)	3.06	0.313
CSI is a direct measure of food security experienced by people and households	29(13)	59(27)	55(26)	44(20)	28(13)	3.25	0.314
CSI allows for analysis of gender differences in food security when applied to individual level.	42(20)	73(34)	51(24)	37(17)	12(6)	3.02	0.310
Adoption of CSI analysis has created prevalence rates which can be compared between cultures	49(23)	91(42)	52(24)	20(9)	3(1)	3.36	0.302
CSI deepens our understanding of the determinants and consequences of individuals and households affected by food security when used in conjunction with other indicators.	35(16)	75(35)	64(30)	22(10)	19(9)	2.78	0.279
Composite Mean/SD						**3.12**	**0.31**

*Frequency percent are in Parenthesis

4.4.5 Food Security

Food security is the study's dependent variable and was determined using various constructs such as ability to access food, establish policy interventions, and food availability. The outcomes depicted in Table 4.6 demonstrates a composite mean of 3.20 suggesting that respondents agreed that access to food, policy interventions and availability of food are important indicators of food security Nassir County. Precisely statement (1) do you think there is sufficient funding to cover the needs of the food security program, out

of 215, 40(19%) of the respondents strongly agree, 58(27%) of the respondents agreed, 51(24%) of the respondents were neutral, 39(18%) of the respondents disagreed, and 27(13%) of the respondents strongly disagreed with a mean of 3.02 and standard deviation 0.112. With a mean lower than the composite site mean suggest there is minimal impact of the statement to food security. Statement (2) existence of programs which are implemented and completed within the stipulated timeframe, out of 215, 29(13%) of the respondents strongly agreed, 60(28%) of the respondents agreed, 71(33%) of the respondents were neutral, 29(13%) of the respondents disagreed and 26(12%) of the respondents strongly disagreed with a mean of 3.36 and standard deviation 0.239. A mean of 3.36 which is higher than the composite mean suggest that the statement has a positive implication on food security.

Moreover, it is true that completed programs always meet the set scope and quality standard (statement 3), out of 215, 42(20%) of the respondents strongly agreed, 65(30%) of the respondents agreed, 55(25%) of the respondents were neutral, 29(13%) of the respondents disagreed and 26(12%) of the respondents strongly disagreed with a mean of 3.36 and standard deviation 0.239. A mean higher than the composite mean suggest that the statement has a strong implication on food security. The statement (4) there is active participation among all stakeholders in fast tracking the progress of the program, out of 215, 41(19%) of the respondents strongly agreed, 59(27%) of the respondents agreed, 66(31%) of the respondents were neutral, 32(15%) of the respondents disagreed and 17(8%) of the respondents strongly disagreed with a mean 1.31 and standard deviation 0.181. A mean that is lower than the composite mean suggests that there is no positive impact by the statement on food security. In the statement (5) there is a clear exist plan which enhances the implementation of the program. 31(14%) of the respondents strongly

agree, 57(27%) of the respondents agree, 64(30%) of the respondents were neutral, 41(19%) of the respondents disagreed, 22(10%) of the respondents strongly disagreed with mean 3.08 and standard deviation 0.128. The mean lower than the composite mean suggest that the statement does not affect food security.

Table 4.6 Food Security Descriptive Results

Statement	Level of agreement Frequency (%)					Mean	Std. Dev
	SA	A	N	D	SD		
Do you think there is sufficient funding to cover the needs of the food security program?	40(19)	58(27)	51(24)	39(18)	27(13)	3.02	0.112
Do you think programs are implemented and completed within the stipulated timeframe?	29(13)	60(28)	71(33)	35(16)	20(9)	3.16	0.343
Is it true that completed programs always meet the set scope and quality standards?	42(20)	65(30)	53(25)	29(13)	26(12)	3.36	0.239
There is active participation amongst all stakeholders in fast tracking the progress of the program?	41(19)	59(27)	66(31)	32(15)	17(8)	3.31	0.181
Existence of feedback and response mechanisms as a backup plan for the program	47(22)	69(32)	48(22)	36(17)	15(7)	3.24	0.317
There is clear exist plan which enhances the implementation of the program	31(14)	57(27)	64(30)	41(19)	22(10)	3.08	0.128
Composite Mean/SD						**3.20**	**0.22**

*Frequency percent are in Parenthesis

4.5 Hypothesis Testing

4.5.1 Emergency Response Program

Hypothesis H_{01}: In Nassir County, there is no statistically significant relationship between emergency response program and food security.

Before testing the first hypothesis, the study demonstrated a correlation analysis-strength of linear relationship-between emergency response programs on food security. The results shown in Table 4.7 indicated that there exists a weak insignificant positive correlation

between emergency response program on food security $r(215), = 0.048, p = 0.489 > 0.05$. The results suggest the relationship between the two variables are insignificant and that the contribution of emergency response program in addressing the issues of food security is minimal.

Table 4.7 Correlation results on emergency response program on food security

Variables		**Food Security**
Emergency Response Program	Pearson correlation	.048
	Sig. (2-tailed)	.489
	N	**215**

**. Correlation is significant at the 0.01 level (2-tailed)

Therefore, the researcher performed a regression analysis to test the hypothesis of the study as indicated in Table 4.8. First, the ANOVA results demonstrated that there is insignificant change in the impact of emergency response programs on food security with $F(1,215), = 0.480, P = .489, R^2 = .002)$. The regression coefficient output reported insignificant positive impact of the emergency response program on food security. The findings mean that the study accepted the null hypothesis and concluded that there is no significant impact of emergency response programs on food security.

Table 4.8 Regression Results on the impact Emergency Response Program on Food Security

Model Summary & ANOVA					
R-Square	.002				
df	1, 207				
F-Statistics	.480				
Sig.	.489[b]				
		Coefficients			
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
1 (Constant)	2.163	.141		15.335	.000
Emergency Response	.030	.043	.048	.693	.489

a. Dependent Variable: Food Security

b. Predictors: (Constant), Emergency Response Program

4.5.2 Mid-term Food Intervention

Hypothesis H_{02}: In Nassir County, mid-term food interventions have no statistically significant impact on food security.

Second, the study demonstrated a correlation analysis-strength of linear relationship between mid-term food interventions on food security. The outcome provided in Table 4.9 showed that there is a significant and positive moderate correlation between mid-term food interventions on food security $r(215), = .232, p = .001)$. The findings suggest there is a moderate linear relationship between mid-term food intervention on food security.

Table 4.9 Correlation Results on the Impact of Mid-Term Food Intervention on food security.

Variables		**Food Security**
Mid-Term Food Intervention	Pearson correlation	.232**
	Sig. (2-tailed)	.001
	N	**215**

**. Correlation is significant at the 0.01 level (2-tailed)

Further, a regression analysis was conducted to test the second hypothesis of the study and the results presented in Table 4.10. The reported ANOVA findings indicated that there is a significant variation in the impact of mid-term food intervention on food security$(F(1, 207), = 11.728, P = .001, R^2 = .054$. Outstandingly, the regression coefficient results demonstrated a significant and positive impact of mid-term food intervention on food security $b = .180, p = .001)$. The outcome displays that the study

rejected the null hypothesis and determined that there is a significant positive impact of mid-term food intervention on food security.

Table 4.10 Regression Results on the Impact of Mid-term Food Intervention on Food Security

Model Summary & ANOVA	
R-Square	.054
df	1, 207
F-Statistics	11.728
Sig.	.001[b]

Coefficients

Model	**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
	B	Std. Error	Beta		
1 (Constant)	1.684	.170		9.921	.000
Mid-Term Food Intervention	.180	.053	.232	3.425	.001

a. Dependent Variable: Food Security

b. Predictors: (Constant), Mid-Term Food Intervention

4.5.3 Long-Term Food Intervention

Hypothesis H_{03}: In Nassir County, there is no statistically significant link between long-term interventions and food security.

The third hypothesis of the study aimed at establishing whether there is no significant relationship between long-term food interventions on food security. First, the results outlined in Table 4.11 exhibited that there is a significant and positive moderate correlation between long-term food interventions on food security $r(207), = .208, p = .003$. The study outcome depicts a moderate linear relationship between the two study variables.

Table 4.11 Correlation Results on the impact of Long-Term Food Intervention on Food Security

Variables	**Community livelihoods**

Long-Term Intervention	Food	Pearson correlation	.208**
		Sig. (2-tailed)	.003
		N	**215**

**. Correlation is significant at the 0.01 level (2-tailed)

Concerning regression analysis output as depicted in Table 4.11, the ANOVA findings discovered that there exist significant positive changes in the impact of Long-Term Food Intervention on Food Security $(F(1,207), = 9.316, p = .003, R^2 = .043)$. Generally, the regression coefficient findings provided that there is a significant and positive impact of long-term food intervention on food security $(B = .308, P = .003)$. The regression results, therefore, depicted that the study rejected the null hypothesis and determined that there is a significant and positive influence of long-term food intervention on food security.

Table 4.12 Regression Results of Long-Term Food Intervention on Food Security

Model Summary & ANOVA	
R-Square	.043
df	1, 207
F-Statistics	9.316
Sig.	.003[b]

Coefficients						
Model		**Unstandardized Coefficients**		**Standardized Coefficients**	**t**	**Sig.**
		B	Std. Error	Beta		
1 (Constant)		1.412	.279		5.064	.000
Long-Term Intervention	Food	.308	.101	.208	3.052	.003

a. Dependent Variable: Food Security

b. Predictors: (Constant), Long-Term Food Intervention

4.5.4 Coping Strategies

H_{04}: The impact of coping mechanisms on the availability of food in Nassir County is not statistically significant.

The fourth variable and final hypothesis of the study sought to report whether there is no significant relationship between coping strategies and food security. A correlation analysis provided in Table 4.13 of the study demonstrated that there exists adverse (negative) correlation between coping strategies and food security with $r(207) = -.017, p = .807 > 0.05$. The results confirm that there is no correlation between coping strategies and food security.

Table 4.13 Correlation Results on impact of coping strategies on food security

Variables		**Food Security**
Coping Strategies	Pearson correlation	-.017
	Sig. (2-tailed)	.807
	N	**215**

**. Correlation is significant at the 0.01 level (2-tailed)

Finally, the regression analysis output in Table 4.14 provides merits for accepting or rejecting the study's fourth hypothesis. However, the results in the ANOVA output first demonstrated that there are no significant changes on the coping strategies on food security $(F(1,207), .060, P = .807, R^2 = .000)$. Furthermore, the regression analysis outcomes illustrated that coping strategies has a negative impact on food security $B = -.014, P = .807 > 0.05$).

Table 4.14 Regression Results on the impact of coping strategies on food security

Model Summary & ANOVA	
R-Square	.000
df	1, 207
F-Statistics	.060
Sig.	.807[b]

Model	Coefficients			t	Sig.
	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta		
1 (Constant)	2.300	.168		13.707	.000
Coping Strategies	-.014	.058	-.017	-.244	.807

a. Dependent Variable: Food Security

b. Predictors: (Constant), Coping Strategies

The findings, therefore, demonstrated that the study accepted the null hypothesis and concluded that there is no significant association between coping strategies on food security.

4.6 Joint Impact on Food Security

Additionally, the study demonstrated a summary of the joint correlation and regression analysis results on the impact of food intervention programs (emergency response programs, mid-term food intervention, and long-term food intervention and coping strategies) on food security using multiple regression model.

4.6.1 Correlation Analysis

The Bivariate Pearson Correlation output in Table 4.15 indicated that mid-term food interventions, $r(204), = .232, p = .001,$ and emergency response programs, $r(204) = .208, p. 003,$ have a significant and moderately positive correlation with food security.

Table 4.15 Food Intervention Programs on Food Security Joint Correlation Analysis Results

Variables		Emergency Response Program	Mid-Term Food Intervention	Long-Term Food Intervention	Coping Strategies	Food Security
Emergency Response Program	Correlation	1				
	Sig. (2-tailed	215				
	N	.092	1			
Mid-Term Food Intervention	Correlation	.186				
	Sig. (2-tailed	215	215			
	N	-.089	-.279**	1		
Long-Term Food Intervention	Correlation	.199	.000			
	Sig. (2-tailed	215	215	215		
	N	.408**	-.393**	.199**	1	
Coping Strategies	Correlation	.000	.000	.004		
	Sig. (2-tailed	215	215	215	215	
	N	.048	.232**	.208	-.017	1
Food Security	Correlation	.489	.001	.003	.807	
	Sig. (2-tailed	215	215	215	215	215
	N					

**. Correlation is significant at the 0.01 level (2-tailed)

The results further provided that there is a weak insignificant positive correlation between emergency response program on food security, r (204), = .048, p = .489. Also, results indicated that there is inverse correlation between coping strategies on food security, r (204), = -.017, p = .807 (see Table 4.15).

4.6.2 Regression Analysis

The study further conducted a joint regression analysis to report a combined-on food intervention programs on food security (see Table 4.16). The established R = .370 is the coefficient of determination which illustrates the correlation between independent variables (emergency response program, mid-term food intervention, long-term food intervention and coping strategies) and food security as the dependent variable. The established R – Square = .137 indicate that food intervention programs only explain 13.7% changes in food security (F (4, 204), = 8.107, $p < .001$, $R^2 = .137$). This suggests that there could be other dimensions of food intervention program which has an impact on food security and not included in this study.

Additionally, the outcomes in Table 4.16 further demonstrated that though all the independent variables (emergency response program, mid-term food intervention, long-term food intervention and coping strategies) have positive coefficients, only mid-term food intervention and long-term food intervention have significant values less than 5% level. The findings showed that the study rejected the stated null hypotheses of both mid-term food intervention (B = .255, $p < .001$) and long-term food intervention (B = .435, $p < .001$) and concluded that there is a significant and positive influence of both mid-term food intervention and long-term food intervention on food security. As for emergency response programs and coping strategies, the study accepted the null hypotheses and concluded that there is no significant influence of both emergency response program (B = .017, p = .723) and coping strategies (B = .036, p = .604) on food security.

The findings, therefore, indicated that when all factors are held constant, food security would be .095. However, execution of food intervention programs would only contribute about 1.7% and 3.6% in terms of emergency response programs and coping

strategies to food security respectively. Also, improvement in the implementation of food intervention program would contribute about 25.5% and 43.5% in terms of mid-term food intervention and long-term food intervention on food security respectively.

Table 4.16 Food Intervention Programs on Food Security

Model Summary & ANOVA	
R	.370[a]
R – Square	.137
df	4, 204
F – Statistics	8.107
Sig.	000[b]

	Coefficients				
	Unstandardized Coefficients		**Standardized Coefficients**		
Model	**B**	**Std. Error**	**Beta**	**t**	**Sig.**
1 (Constant)	.095	.419		.228	.820
Emergency Response Program	.017	.047	.027	.355	.723
Mid-Term Food Intervention	.255	.059	.327	4.347	.000
Long-Term Food Intervention	.435	.102	.293	4.263	.000
Coping Strategies	.036	.069	.043	.520	.604

a. Dependent Variable: Food Intervention Programs

CHAPTER FIVE: SUMMARY, DISCUSSION, CONCLUSION, AND RECOMMENDATION

5.1 Introduction

The chapter briefly provides the study's summary including the findings with a broad discussion of the findings. This chapter further highlights conclusions, recommendations of the study, and areas of further research.

5.2 Summary

Food intervention programs are meant to address the issues of lack of access at all instances to satisfactory nutritionally suitable and safe food, without unwarranted danger of losing such access leads to malnutrition and hunger. This study generally established the effect of food intervention programs on food security in Nassir County, South Sudan. The research was guided by four specific research objectives including.

To effectively address the stated research objectives, the research adopted descriptive research design with a sample of 370 individuals determined using stratified sampling technique. Of the majority of the 215 respondents who successfully filled the questionnaires and returned for analysis, sixty percent were males. Besides, 120(56%) of the respondents were aged between (18-35 years). Also, the study ascertained that 138 (64%) of the respondents had degree certificates. Moreover, majority of the respondent's designation were local authority, 133(62%). However, the results provided that both mid-term food intervention and long-term food interventions at Nassir County have a significant and positive influence on food security. A joint regression analysis was conducted reported that jointly; food intervention programs explain 13.7% variation on food security in Nassir County.

5.3 Discussion

The section systematically discusses the study's findings and then demonstrates whether the findings agree or disagree with the previous studies highlighted in chapter two- the literature review of the study. The discussion follows the analysis results as provided per the objectives.

5.3.1 To ascertain how disaster response strategies affect food security

The first objective of the study was to ascertain how disaster response strategies affect food security in Nassir County. A regression analysis conducted to test the hypothesis of the study reported a higher p-value higher than the recommended significance level for testing the hypothesis. The findings confirmed the stated null hypothesis of the study that there is no significant influence of disaster response strategies affect food security. This was further supported by the descriptive findings where majority of the respondents disagreed that food intervention programs has addressed food security. Similarly, more respondents disagreed that food intervention fully addressed food security in Nassir County.

The study's findings are in tandem with the past outcomes by Shi et al (2020) conducted a study of disaster response programs in China that mitigated negative implication of food security. Moreover, effects of such response program such as the green program had a significant influence on the food security, where it was witnessed that there was a net decline in grains yields of 10.49 million tons between 1999 and 2001, increasing agricultural stress and reducing grain self-sufficiency.

On the other hand, findings by Muhire (2020) clearly highlighted the significance of land distribution programs that was meant to intensify farming on food security in

Rwanda. It was evident that even with the distribution of land based on family size and sum of cows was not enough to sustain the families. This was true since most farmers lacked enough knowledge which contributed to reduced food production, information dissemination on meteorological state which was insufficient to enhance preparedness. Ngure, Wandiga, Olago and Oriaso (2021) performed a study on the different emergency response programs that was used by the Kimandi-Wanyaga in Murang'a County. It was evident that farmers' crop output and sense of security were negatively impacted by climate change threats including droughts and floods.

5.3.2 Mid-Term Food Security Intervention on Food Security

The second aim of this research was to determine the effect of mid-term food intervention on food security in Nassir County. The study performance correlation and regression analysis to test the second hypothesis of the study; there is no factual significant relationship between mid-term food intervention on food security. From the established findings, the study accepted the alternate hypothesis and concluded that there is a significant and positive influence of mid-term food intervention on food security in Nassir County. This was further supported by the descriptive results where most of the respondents agreed that adoption of mid-term food intervention has not fully address the issues of food security.

Generally, this study confirms that indeed mid-term food interventions are a contributor of food security among communities in Nassir County especially due to increase in the resettlement levels. The outcome of this study agrees with Weather spoon, Miller, Ngabitsinze, Weather Spoon, and Oehmke (2019) findings that indeed, mid-term food interventions enable Rwanda to significantly witness remarkable economic growth, ensuring form of considerable developments in poverty reduction and living standards.

However, the author also identified a number of challenges, despite these developments, achievements in minimizing the prevalence of stunting smallholder farmers' rural children, predominantly boy children remain a major problem. Furthermore, it was echoed by the socioeconomic determinants, dietary diversity, and policies that might impact stunting in Rural Rwandan children were analyzed by means of a logit model with clustered variance-covariance estimators founded on household village membership.

This study also demonstrated that food intervention programs resulted improvements in the livelihoods of individuals. These findings are in line with Ali and Mwaura (2022) conducted a study on the significant on women empowerments at Islamic Relied Program in Garissa County. It was evident that the Islamic cash transfer program an aspect of mid-term food intervention made it possible for majority of women to be in a position of obtaining land, and livestock, partaking in societal events, possessing marketable securities and capacity to satisfy frequent domestic expenses through using Islamic cash transfers initiatives or programs.

5.2.3 Long Term Food Security Interventions on Food Security

Thirdly, this study established the effect of long-term food interventions on food security in Nassir County. With regards to testing the third hypothesis, there is no statistically significant relationship between long term food interventions on food security, the regression analysis results accepted the alternative hypothesis and rejected the null hypothesis. These outcomes suggested that there is a significant and positive influence long-term food intervention on food security.

The outcomes of this study relate to various studies explained in the empirical review. For instance, Zhong, Si, Crush, Scott and Huang (2019) suggested that in China,

the adoption long term food intervention such as the hybrid public-private food supply system was protected the family food security. The author further emphasized on the significance of security regulations and policies implemented such as having vegetables basket policy, crawling peg policy in urban planning, financial aids for advancing wet market facilities and minimizing rental charges and rules on vending of fresh produce in supermarkets or food stores. Hence, there is need of having the long-term food intervention programs if cities or countries are to improve their urban food security.

Additionally, the study's findings relate to the past discoveries of Tora, Degaga, and Utallo (2021) investigated the significance of long-term intervention strategies in the rural lowland people in Southwest Ethiopia. To address the issues associated with drought in the area, the author highlighted that adoption of family food balance model was of significance. They include; reducing daily intake frequency, selling small animals, reducing dietary quantity, and purchasing food on credit basis. A review of the study findings together with previous studies that reported similar findings like Ikutwa, Siringi, and Magani (2019) clearly pointed out on the significance of having the long-term food intervention programs which addressed food security in Makueni County. The author laid certain long-term strategies which clearly addressed the issue of food security by the residents especially in tough climatic conditions.

5.2.4 Coping Strategies on Food Security

The fourth and final objective of this study sought to provide information on coping strategies in food security in Nassir County. The aim was to test the hypothesis; there is no significant relationship between coping strategies and food security. From the regression analysis conducted, the findings clearly upheld the null hypothesis that there is no significant impact of coping strategies on food security in Nassir County. The descriptive

results further supported the regression analysis that the individuals involved in the study were unaware or were neutral regarding the coping strategies and how it influences food security. The results agree or disagree with various existing results.

For instance, the study agrees with Ibrahim and Othman (2020) who emphasized on the fact that during the Covid-19 pandemic it affected Malaysian households. Moreover, they had to adapt to household coping methods that was significance in enhancing food security. The findings of the study were that the ongoing and future government coping strategies had a long-term implication in addressing food security. Moreover, Abdullahi, Kiong and Mersat (2021) also highlighted elaborated the significance of family food security and coping mechanisms in Malaysia. The author noted that it was clear that the coping mechanisms found, such as collecting food from alternate sources such as homes vegetables gardens, internet purchasing, preserving, and storing extra food to make it last longer, were effective.

5.4 Conclusions

Following detailed analysis as well as comprehensive discussions of the research findings this study makes several conclusions as per the research objectives. Foremost, the research points out on the need for sufficient access to food which has been, and remains, a core challenge to the stability and security of many systems. Moreover, the increasing worldwide food bills, natural catastrophes and extreme weather event, food safety, and a universal monetary predicament have placed more focus on food as an item for security concerns. The study further concludes that indeed there is a significant impact of disaster response strategies and how it affects food security in Nassir County.

5.5 Recommendations

From the results and inferences, the study gives the following recommendations with regards to food intervention programs on food security in Nassir County.

5.5.1 Emergency Response Program

From the study, it was clear that the individuals from the various NGO's based in Nassir County should be aware of the existing loopholes in the effective management of food security. Therefore, there is need to maximally and rightfully utilize the four factors investigated in the study because they positively influence food security. Critical emergency stocks should be pre-positioned strategically within the area to avoid contextual as well as pipeline challenges. Moreover, heading forward, more effort should be put on community led disaster risk reduction strategies and early warning systems.

5.5.1.1 Early Warning and Emergency Systems

One of the things that needs to be done to enhance early warning and emergency systems in Nassir is strengthening information and communication systems. This will ensure that there is timely and effective dissemination of early warning messages. Early warning and emergency systems includes establishing and maintaining reliable communication channels, such as mobile phone networks, radio networks, and community-based communication systems. There must also be heightened community engagement and awareness sessions through workshops, training programs and campaigns on disaster preparedness and response. The local community in Nassir must be empowered to understand early warning signs, know how to respond appropriately and the local authorities must establish community-based early warning systems. This will involve training community members, including women and other vulnerable groups, to actively participate in monitoring, reporting and responding to potential disasters.

To ensure that early warning and emergency systems work, Nassir County needs to install weather monitoring stations, rainfall gauges, river level sensors, and other relevant equipment to gather real-time data in weather patterns, water levels, and other possible hazards. This recommendation is based on the need to establish mechanisms to effectively analyze and interpret such data to issue early warnings in a timely manner. Apart from installation of systems, Nassir County must also foster collaboration and coordination among different agencies, including government, non-governmental organizations and humanitarian actors. A multi-agency collaboration will help to design clear protocols and mechanisms for sharing information, coordinating response efforts, and conducting joint early warning systems. Such a collaborative approach will ensure that there is a comprehensive and efficient response to all potential disasters in Nassir County.

Apart from seeking and institutionalizing a collaborative approach among all partners, Nassir County needs to invest in capacity-building initiatives in different levels, including training the local authorities, emergency responders, and community members in early warning systems, disaster risk reduction, and emergency response techniques. This will enable a more efficient and effective response during emergencies and, in turn, strengthen the overall disaster resilience of Nassir County. There is also need for Nassir County to explore the use of technological innovations to enhance early warning and emergency systems. The integration of technology includes implementing automated alert systems, remote sensing technologies, Geographic Information Systems (GIS), and satellite imagery to improve the accuracy and speed of early warnings. Further, Nassir County can consider using mobile applications and SMS-based alert systems to reach more people, especially those in remote parts.

As part of establishing community led disaster risk reduction strategies and early warning systems, it is recommended that Nassir County develops evacuation plans that identify safe routes and locations for community members to move to during emergency instances. Also, there must be establishment and maintenance of safe shelters equipped with necessary supplies to accommodate and support displaced individuals during disasters. Finally, to ensure that established early warning and emergency systems are functional, there is need for continuous evaluation and improvement. During evaluation of the systems, areas for improvement have to be identified. As such, Nassir County needs to ensure that it incorporates feedback from affected communities, reviews response mechanisms, and adapts strategies based on lessons learned from previous incidents.

5.5.2 Mid-term Intervention

Emphasis should be put on the routine of periodic surveys and approaches that yield to short-term obligations. The mid-term food interventions should consider capturing real time data through fully integrating information systems. It will be important to adopt a variety of mid-term strategies that can help them reach wider stakeholders and audiences. To protect gains made from the emergency response, there should be a deliberate effort towards tailoring a context-based mid-term intervention that includes seasonal livelihood programming, while embracing a community led participatory approach. Where feasible, humanitarian agencies should adopt institutional support towards existing systems in governance, health, education, food security, psychosocial support, protection, and gender-mainstreaming instead of re-inventing the wheel. While responding, there should be a deliberate effort to compliment services and share best practices as opposed to operating in Silos that yield duplication of services as well as errors in targeting.

5.5.2.1 Productive Safety Net Program

One of the food intervention programs for Nassir County that can be considered is the productive safety net program. The Productive Safety Net Program (PSNP) is a social protection program implemented by the Government of Ethiopia. The program was launched in 2005 with the objective of improving food security and at the same time reducing poverty levels in the rural areas of Ethiopia. It is crucial to note that PSNP targets chronically food-insecure households and provides them with frequent transfers of cash or food in exchange for partaking in public work projects. Usually, these public work projects are designed to improve community assets such as irrigation systems, roads, and soil conservation measures. The productive safety net program functions on the principle of a "graduation model" where households are expected to transition from being dependent on safety net support, to achieving sustainable livelihoods. PSNP aims to build the resilience of households in Ethiopia through simultaneously addressing their immediate food needs and promoting long-term development.

Among the key objectives of the program is enhancement of food security and nutrition. By providing transfers and improving agricultural practices, the PSNP targets to improve household food security and nutrition outcomes. The second objective of the program is the protection of community assets that will manage to reduce vulnerability shocks. The PSNP also includes components focused on improving access to education and health services, targeting to enhance human capital and break the cycle of intergenerational poverty. Another important objective of the program is livelihood promotion. For instance, the program supports income-generating activities, skills training, access to financial services to help households transition out of poverty and become self-reliant. As part of short to mid-term strategy, the transfers by PSNP have helped to address

immediate food needs and protected vulnerable households from falling deeper into poverty. The PSNP has been one of the largest safety net programs in Africa, reaching millions of households in Ethiopia. The program has gained support from different international organizations and donors, including the United Nations, World Bank, and bilateral aid agencies.

The PSNP model can be applied in Nassir County where it targets food-insecure households. As structured, PSNP focuses on identifying and supporting households that are chronically insecure. Since food security is a concern in Nassir, the program can be utilized to provide assistance to vulnerable households that are struggling to meet their food needs. Secondly, PSNP provides regular transfers of cash or food to participating households. This consistent support can help to ensure a stable food supply for families in Nassir County over a medium-term period. Through offering reliable assistance, the program can contribute to reducing hunger and improving food security in the county. Among the key components of the program is the creation and protection of community assets such as infrastructure for water or agriculture management. These assets can enhance food production and improve the resilience of households in Nassir County. By investing in such projects, PSNP can have a lasting impact on food security in the region.

PSNP's graduation model is designed to assist households transition from dependency on safety net to sustainable livelihoods. In Nassir County, the program can assist vulnerable households by providing not only short-term food assistance, but also support for income generating activities, skills training, and access to productive resources. This approach will empower households to improve their food security in the mid-term and break the cycle of poverty. Overall, while PSNP provides immediate food assistance, its broader objectives and components make it a comprehensive program that focuses on mid-

term food security and poverty reduction. By combining short-term support with intervention aimed at building resilience and promoting development, the program will address both immediate and underlying causes of food insecurity in Nassir County.

5.5.2.2 Cash and Market Support

Cash and market support is another food intervention that can be considered on mid-term basis. Cash and market support is an intervention program provided to individuals in form of cash transfers or vouchers that can then be used to purchase food and other essential items from the market. Therefore, rather than providing direct food aid or in-kind assistance, cash and market support helps beneficiaries to make their choices and decisions regarding their immediate needs. Typically, cash transfers involve providing monetary assistance directly to individuals or households. In Nassir County, cash transfers can be done through mobile money, electronic transfers or physical cash distributions. For vouchers, beneficiaries in Nassir County will receive paper or electronic vouchers that can then be exchanged for specific goods or services, such as food items, at authorized local vendors. The objective of cash and market support is to empower individuals and households to actively participate in the local markets, make informed choices based on their needs and preferences, and support local economy.

Cash-based interventions will provide households in Nassir with the flexibility to prioritize their food needs based on their preferences and local market conditions. By getting cash transfers, individuals and households in Nassir can make informed choices about purchasing food items that best meet their dietary requirements and cultural needs. This approach will respect the autonomy and decision-making power of the beneficiaries. Cash transfers usually inject money directly into local markets, thus stimulating economic activity. Consequently, this has a positive multiplier effect through the support of local

businesses and market systems. In Nassir where market infrastructure and opportunities for income generation are limited, these cash transfers will contribute to revitalizing the local economy and creating livelihood opportunities. Cash transfers will help to build the resilience of households in Nassir through providing a means to address food insecurity and cope with existential shocks. By having access to cash, households in Nassir will save, invest or engage in income-generating activities, thus strengthening their ability to withstand future challenges. Also, cash-based interventions will promote social cohesion by enabling beneficiaries to actively participate in the local economy and community.

Cash-based interventions are characterized by cost-effectiveness and scalability. The lower administrative costs of these interventions allow resources to reach a larger number of beneficiaries. As a mid-term food intervention, this scalability can be crucial in Nassir County, where there is a need to assist a significant number of households and ensure sustained support. Also, cash and market support programs provide flexibility in responding to the changing needs and circumstances. These support programs can be adjusted depending on the specific needs of the different households. Therefore, by providing cash or vouchers, beneficiaries in Nassir County will have the flexibility to prioritize their most urgent needs, access a wider variety of food items, and stimulate local economy activity in South Sudan. To ensure that cash and market support programs succeed in Nassir, there is need for collaboration and partnerships. Coming together of community leaders, local authorities and relevant stakeholders will ensure that there is successful implementation of cash and market support program.

5.5.2.3 School-based Feeding Programs

School-based feeding programs is also recommended as a mid-term food intervention strategy to address food security in Nassir County. School-based feeding programs usually aim to address nutritional needs, improve educational outcomes, and promote the general well-being of students. There are various key characteristics of school-based feeding programs including meal provision, nutritional focus, targeted approach, community involvement, social and economic objectives, multi-sectoral collaboration, monitoring and evaluation. School-feeding programs are part of investing in human capital that is a key part of mid-term strategy for developing South Sudan's capacity to adapt to future shocks and ongoing structural changes. This investment in human capital will promote peace and stability by improving the capacity of the population, specifically the youth, to fulfill their aspirations and empowering of women and girls. While there is a South Sudan Country Strategic Plan (CSP), the CSP needs to expand school-feeding programs, prioritize nutrition-specific and nutrition sensitive interventions through a life-cycle approach and support expansion of national social protection systems through collaboration, particularly with the United Nations Children's Fund (UNICEF).

As part of its long-term strategy to support and safeguard human capital gains and connect humanitarian and development action, the WFP needs to expand school feeding programs, including areas affected by hunger, violence and climate shocks, to support integrated education, nutrition, health and protection objectives. The schools in Nassir County can serve as a platform for driving food system transformation, enhancement of livelihoods and boosting smallholder access, specifically for women. The effect of this intervention is that it will lead to having more stable markets, more finances and robust technologies through home-grown school feeding. It is also recommended that

humanitarian actors in South Sudan need to make school feeding adaptations, such as what WFP has done. School-based feeding program adaptations include doubling of rations for general food distribution, the introduction of take-home rations and the provision of food assistance through the urban safety net program.

Based on the positives that have been witnessed from school-based feeding programs, Nassir County and relevant stakeholders in the humanitarian sector must implement scholarship programs or provide conditional cash transfers that will incentivize girl's enrollment and regular attendance in schools. This strategy will also help to overcome barriers such as cultural norms, financial constraints, and gender inequalities. Humanitarian actors need to also organize awareness campaigns and workshops that are aimed towards girls' education and empower them with knowledge about their rights, health and life skills. The combination of these programs with school-based feeding will reinforce the importance of education and as such, improve girls' well-being.

On hot meals provision intervention, kitchens and cooking facilities must be established in schools or central locations within Nassir County. At the same time, there is need for proper infrastructure, equipment and hygiene standards to be accommodated to ensure there is provision of safe and nutritious meals. In line with this recommendation, there is need for food items to be sourced locally from farmers and suppliers within Nassir County. This strategy will go a long way to support the local economy, promote agriculture and ensure there is fresh and culturally appropriate meals for students. To enhance community ownership, participation and support for the school-based feeding program, relevant humanitarian actors and Nassir County must engage parents, community members and local organizations. Since children's food intervention needs are multi-sectoral, the education sector needs to include multi-sectoral interventions with WASH, nutrition and

health clusters. Previously, education clusters have been encouraging the inclusion of MHPSS, referral mechanisms and school feeding into the package of education services. Therefore, to build upon previous achievements, there is need to intensify the provision of WASH facilities in schools to encourage adolescent girls to stay in school.

5.5.3 Long-term Food Interventions

The study recommends that the individuals should put more emphasis on the use of feedback from mid-term interventions that were of significance to form the foundations for long term interventions. There is also need for all stakeholders to develop a contextualized seasonal programming approach that utilizes locally available resources like water bodies. There is a need for the community to embrace diet diversification away from the traditional feeding habits. This would be complimented by opening up large portions of land that are currently underutilized for agriculture. Other notable improvements relate to revising current food security policy to be context specific and an empowering of existing department of livelihoods and agriculture. Food security should also form part of the school curriculum.

5.5.3.1 Small Holder Market Support

Small holder market support is one of the long-term food interventions recommended for Nassir County and it includes the range of interventions and assistance provided to small-scale farmers, often referred to as smallholders, to enhance their participation in agricultural markets and improve their livelihoods. Small holder market support entails targeted efforts to address the challenges faced by smallholder farmers in accessing markets, obtaining fair prices for their farm produce, and building sustainable and profitable agricultural enterprises. There are different key aspects of smallholder market support including market access and linkages, value chain development, capacity

building and training, access to financial services, policy and institutional support. As a long-term food intervention strategy, smallholder market support strengthens the agricultural sector by providing assistance to small-scale farmers. This support includes improving access to farm inputs, training in farming techniques, facilitating market linkages, and enhancing productivity and profitability.

Smallholder market support programs also focus on empowering farmers to become self-reliant and to develop sustainable livelihoods. This includes enhancing their capacity to engage in market activities, improve production techniques, diversify crops and access fair prices for their products. These objectives require continuous support and interventions to build the skills, knowledge, and resources necessary for long-term success. It is crucial to note that supporting smallholder farmers to access markets and establish linkages with buyers is a complex process that requires time and effort. The process involves conducting market assessments, building relationships with market actors, establishing market infrastructure, and developing value chains. Also, smallholder market support programs require policy reforms and institutional strengthening to create an enabling environment for small-scale farmers. It usually involves advocating for fair trade policies, improving access to credit and financial services, and addressing market barriers and inequalities.

Therefore, one of the recommendations to increase the utilization of locally available resources in Nassir County is to conduct comprehensive market assessments to identify the demand and supply dynamics, market opportunities and potential value chains. These market assessments will help in understanding the local market context and guide smallholders in aligning their production with market needs. There is also need to support the formation and strengthening of local producer associations or cooperatives in Nassir

County. These associations will facilitate collective marketing, negotiation with buyers, and joint procurement of inputs. Local producer associations will be useful to provide a platform for sharing resources, knowledge and market information among all the stakeholders. Smallholder market support can also be enhanced through promoting value addition and processing activities within Nassir County and this will increase the market value of agricultural products. The recommended value addition and processing activities include training of smallholders on simple processing techniques, such as drying, sorting, packaging, or basic food processing, to improve product quality and extend shelf life. The high value products generated will have the potential to fetch higher process in local and regional markets.

As part of long-term food intervention program, the smallholders in Nassir need to be encouraged to establish direct market linkages with local businesses, hotels, restaurants, and institutions. Consequently, there is need for Nassir County administration together with other stakeholders to facilitate platforms or events where smallholders can showcase their products and then connect with potential buyers. This mechanism will create a reliable market for smallholders while at the same time reducing intermediaries and increasing their profit margins. In line with promoting the consumption and marketing of local food products within Nassir County, it is recommended that there must be collaboration with schools, hospitals and other institutions to incorporate locally produced food items into menus and procurement systems. This collaboration will support local farmers by creating a steady demand for their products and encourage the consumption of nutritious, locally sourced foods. By implementing these recommendations, smallholder market support in Nassir County will be enhanced while utilizing locally available resources.

5.5.3.2 Asset Creation

Asset creation is another recommendation and it refers to the process of providing individuals or communities with tangible resources or assets that contribute to their long-term well-being and development. Typically, these assets are productive in nature, denoting that they have the potential to generate income, improve livelihoods, and enhance food security.

One of the recommendations for asset creation is having a decentralized evaluation of food assistance for assets (FFA) that will help the local community to meet its immediate food and nutrition needs by providing food assistance. In the longer term, these FFA activities will contribute to the enhancement and resilience of Nassir County community by engaging them in the construction or rehabilitation of productive community and household assets such as water and soil conservation mechanisms. The other assets might include rehabilitated pasture and croplands, community access roads and reforestation and other activities that promote the sustainable use of natural resources. For instance, World Food Program organization has implemented FFA activities that target and support agro-pastoral and pastoral communities, including individuals living in temporary cattle camps, and the communities to which they are connected. Engaging Nassir County communities in resilience building activities through community asset creation will contribute to the enhancement of household food security and nutrition status.

In turn, this will improve livelihoods, reduce pressure and competition over depleted resources, tackle the root causes of social tensions and enhancing peace, improve gender equality and youth employment. There is also need to have community dialogues and transformative livelihood activities in Nassir County that will address norms that affect the production capacity and well-being of women and the youth such as age and gender-

segregated responsibilities in land and livestock ownership, and crop production. For this recommendation to be achievable, Nassir County needs to partner with FAO and design interventions linked to South Sudan's objectives in order to strengthen the agricultural productivity of the vulnerable households and maximize community-level savings and investment, including investments associated with income diversification. Such deliberate activities will contribute to the empowerment of women and youth, hence promoting equity in access to and control over productive assets and decision-making. Important to note is that such activities will highlight and reflect women's doable burden of unpaid household work and productive activities.

To help Nassir County to withstand and recover from shocks, asset creation must be complemented by capacity strengthening and investments in climate risk management services, including training on climate-smart agriculture and access to improved agricultural technologies, microcredits and climate information. As a recommendation, deliberate care needs to be taken to enhance sustainability of other humanitarian organizations' footprint, by focusing on energy efficiency and waste, and water management. Apart from capacity building, focus must also be shifted towards facilitating access to input and output markets, and financial and other services, constructing and rehabilitating rural market infrastructure, promoting post-harvest management and value addition at the household and at producer organization levels. Also, there is need to promote risk management and investments in micro and small agribusiness enterprises, and supporting institutional strengthening for producer organizations and enhancing the capacity of institutions that provide services to farmers.

Nassir County needs to develop, rehabilitate and maintain essential infrastructure for targeted communities. This recommendation is a critical enabler for emergency,

resilience building and adaptation activities and supports the realization of WFP's vision in South Sudan. By shifting towards a long-term strategy of building, rehabilitating and maintaining critical arterial roads, bridges, ports, river ways and flood protection structures, this will minimize the reliance on costly air transport in favor of road and river transport significantly. Apart from such improved infrastructure enhancing the efficiency of operations of humanitarian actors in South Sudan, the improved infrastructure will strengthen local trade and drive food system transformation by facilitating access to markets and services.

5.5.4 Coping Strategies

The study also established that due to localization of diet, Covid-19 related restrictions did not significantly affect the coping strategies but the challenges were mostly centered on access as well as options. High demand for hard currency has continued to affect the South Sudanese pound and by extension the purchasing power of households. Most beneficiaries resorted to barter trade to counter the inflation. Last year's erratic rains affected the sorghum yields and pasture which are the heart of the community's livelihood kitty.

Informal interviews with select beneficiaries noted that they have resorted to reducing the quantities of food they cook, frequency of meals and prioritized who received the little that is available i.e.: children, the elderly, men and finally women.

5.5.4.1 Sustainable Livelihoods and Ecosystems

The study recommends the promotion of sustainable agricultural practices among farmers in Nassir County. The focus needs to be shifted towards encouraging the use of organic farming techniques, such as crop rotation, composting, and agroforestry, to

improve soil fertility, conserve water, and reduce the need for chemical inputs. Implementing this recommendation will increase crop yields, minimize waste, and contribute to the overall resilience of agricultural systems. It is evident that sorghum and pasture form the community's livelihood kitty, and as such, the recommendation will be to diversify food sources. There is need for deliberate diversification of food sources by promoting the cultivation and consumption of variety of nutritious, locally grown crops. Farmers need to be encouraged to grow diverse food crops, including vegetables, fruits, legumes and traditional staples. This diversification will reduce reliance on a limited number of crops, promote dietary diversity, and decrease the pressure on specific food resources.

There is need for enhanced and improved gender-sensitive climate adaptation services and technologies that will enable the community to shift to more climate-adapted and sustainable livelihoods and better withstand and recover from climate shocks. This can be actualized through the introduction and promotion of agro ecological and permaculture principles in Nassir County. These approaches emphasize the integration of ecological principles in agricultural systems, such as using natural pest control, water conservation techniques and maximizing resource efficiency. Agro ecology and permaculture principles will enhance ecosystem health, reduce use of external inputs, and increase the resilience of food production systems. As a coping strategy, Nassir County needs to encourage individuals to establish community gardens and support home food production initiatives. The establishment of community gardens will provide opportunities for families and individuals to grow their own food, foster self-sufficiency, and reduce the need for

purchasing large quantities of food. Such initiatives will promote community engagement, knowledge sharing and social cohesion.

To ensure sustainable livelihoods and systems, another recommendation would be to promote proper food preservation and storage practices that are geared towards reducing waste. Individuals and households should therefore be trained on methods such as canning, drying, pickling, and freezing to extend the shelf life of perishable foods. This will allow for better utilization of available food resources and reduce the need for frequent cooking or meal preparation. As a coping strategy, there is need for awareness campaigns and educational programs to raise awareness regarding the importance of sustainable livelihoods, ecosystem conservation, and reducing food waste. Nassir County authorities need to provide information on the environmental impacts of food production and consumption patterns, as well as the benefits of adopting sustainable practices. When individuals and communities are empowered with knowledge and skills, they will manage to make informed decisions regarding their food choices and resource management.

Sustainable livelihoods and ecosystems are supported by use of sustainable energy options. As such, the South Sudan government must encourage the use of sustainable energy sources for cooking, such as improved cook stoves or renewable energy options such as solar cookers. These technologies will reduce the consumption of traditional or fossil fuels, thereby minimizing deforestation for fuelwood, and hence contribute to the conservation of ecosystems. All the humanitarian actors in South Sudan must advocate for supportive regulations and policies that will promote sustainable livelihoods, ecosystem conservation, and reduced food waste. The stakeholders must therefore engage with local authorities in Nassir County and relevant stakeholders to integrate sustainable practices

into agricultural policies, land-use planning, and waste management strategies. All the above recommended measures will contribute to resource efficiency, food security, and long-term resilience in the wake of challenges related to food availability and environmental sustainability in South Sudan.

5.6 Areas for Further Discussions

The study investigated just four factors i.e., Emergency response programs, mid-term food intervention, long-term food intervention and coping strategies results. The research acknowledges that there are several other factors that influence food security such as political willingness, use of technology and stability of the economy as well as the triple nexus approach where humanitarian, development and peace programs are integrated to broaden the knowledge base on the subject matter.

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APPENDICES

Appendix 1: Transmittal Letter

Dear Respondents,

RE: REQUEST FOR DATA COLLECTION

You have been selected to participate in this study which is investigating- **"Effects of food intervention programs on food security in Nassir County, South Sudan".** I kindly request you to fill the attached questionnaire. This data is purely used for academic purpose and will be handled with utmost confidentiality. Please do not indicate your name on this questionnaire. Your assistance and cooperation will be highly appreciated.

Yours Sincerely

Benard Nyataya

Student at Africa Nazarene University.

Appendix 2: Questionnaire

This questionnaire aims at establishing- **"The effects of food intervention programs on food security in South Sudan; A Case of Nassir County".** This questionnaire is designed to collect data that will help to achieve the objectives of the proposed study. I would appreciate if you would kindly respond to all the questions in this questionnaire as truthfully and accurately as possible. The information provided will be treated as confidential.

Please fill the required information in the spaces provided

SECTION A: GENERAL INFORMATION OF THE RESPONDENTS

1. Kindly indicate your sex: Male [ ] Female [ ]
2. Please indicate your age bracket:

   18 – 35 years [ ] 36 – 45 years [ ] 46 – 55 years [ ] 56 and above [ ]
3. Please indicate your education level:

   None [ ] Primary [ ] Secondary [ ] Tertiary [ ] University [ ]
4. Designation:

   Program Manager [ ] Local Authority [ ] Beneficiary [ ] Others: _____
5. Beneficiary category:

   Host Community [ ] IDP [ ] Refugee [ ] Pastoralist [ ]

SECTION B: EFFECTS OF FOOD SECURITY PROGRAM

1. Does the emergency response program influence food security?

Please indicate by ticking (√) the most appropriate response for the following aspects using these scores:

1-Strongly Disagree **2**-Disagree **3**-Neutral **4**-Agree **5**-Strongly Agree

Most common shocks in Nassir County

#	Shock description	Tick all applicable
1.	National, inter-communal and localized conflict	
2.	Cattle raiding, children & women abductions, cyclical revenge killing, gender-based violence (GBV)	
2.	Flooding	
3.	Drought	
4.	Livestock pests & diseases	
5.	Human diseases & other health related outbreaks (Covid 19)	
6.	Economic challenges (inflation)	

Emergency Response Programs					
Statements	**1**	**2**	**3**	**4**	**5**
Do you think that the emergency response programs address National, Inter-communal and localized conflict in Nassir County?					
The emergency response programs have yielded to reduced cattle raiding, children & women abductions, cyclical revenge killing and gender-based violence (GBV)?					
Have emergency response programs mitigated the occurrence of natural calamities such as flooding and drought?					

Emergency Response Programs					
Statements	**1**	**2**	**3**	**4**	**5**
Do you think emergency response programs have addressed the manifestation of human diseases, pests and conditions such as Covid-19 pandemic?					
Have emergency response programs fully addressed the economic challenges?					
Do you think emergency response program have addressed the manifestations of human disease, pests and conditions such as Covid-19 calamities					
Have emergency response program fully addressed the economic challenges					

2. Does Household Food Insecurity influence programs implementation?

Please indicate by ticking (√) the most appropriate response for the following aspects using these scores: -

1-Strongly Disagree **2**-Disagree **3**-Neutral **4**-Agree **5**-Strongly Agree

Mid-Term Food Security Intervention					
Statements	**1**	**2**	**3**	**4**	**5**
Adoption of food consumption dietary diversity has enhanced food security?					
Over the past seven days, the main source of food was cereals, grains and roots?					
Do you think that over the past seven days, the food supplied to every member of the household was sufficient?					
The available source of food for every household was nuts and legumes?					
Yesterday, during the day and night, did members of your household eat/drink?					
Over the past seven days, members of your household were able to eat?					

3. Do Policies or lack of them influence food security in South Sudan?

Please indicate by ticking (√) the most appropriate response for the following aspects using these scores: -

1-Strongly Disagree **2**-Disagree **3**-Neutral **4**-Agree **5**-Strongly Agree

Long Term Food Security Intervention					
Statements	**1**	**2**	**3**	**4**	**5**
Are there food security safety nets to protect vulnerable populations?					
Is there a proper policy framework that clearly addresses long term food security?					
Existence of specified institutions tasked with handling the food security policies?					
Is there active monitoring and evaluation of food security interventions?					
Is there a recent (within 1 year) food security baseline survey conducted?					

4. Do food security programs address the issues of food security?

Please indicate by ticking (√) the most appropriate response for the following aspects using these scores:

1-Strongly Disagree **2**-Disagree **3**-Neutral **4**-Agree **5**-Strongly Agree

Food Security Programs					
Statements	**1**	**2**	**3**	**4**	**5**
Do you think there is sufficient funding to cover the needs of the food security program?					
Do you think programs are implemented and completed within the stipulated timeframe?					
Is it true that completed programs always meet the set scope and quality standards?					

Food Security Programs					
Statements	**1**	**2**	**3**	**4**	**5**
There is active participation amongst all stakeholders in fast tracking the progress of the program?					
Existence of feedback and response mechanisms as a backup plan for the program?					
There is prudent utilization of programs' resources during implementation?					
There is a clear exit plan which enhances the implementation of the program?					

THANK YOU

Appendix 3: University Authorization Letter

8sth, March, 2023

E-mail: researchwriting.mba.anu@gmail.com

Tel. 0202711213

Our Ref: 20S01DMBA012

The Director.
National Commission for Science,
Technology and Innovation
(NACOSTI),P. O. Box 30623,
00100
Nairobi. Kenya

Dear Sir/Madam:

RE: RESEARCH AUTHORIZATION FOR: BENARD NYATAYA

Mr. Benard is a postgraduate student at Africa Nazarene University in the Master ofBusiness Administration (MBA) program.

In order to complete his program, Mr. Benard is conducting research entitled: "**The Effectsof Food Intervention Programs on Food Security in Nassir County, South Sudan"**

Any assistance offered to him will be highly

appreciated.Yours Faithfully,

DR. Kimani Gichuhi,
MBA, Coordinator, School of Business,
Africa Nazarene University.

Appendix 4: NACOSTI Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **491007**

Date of Issue: **25/March/2023**

RESEARCH LICENSE



This is to Certify that Mr.. Benard Nyataya of Africa Nazarene University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: THE EFFECTS OF FOOD INTERVENTION PROGRAMS ON FOOD SECURITY IN NASSIR COUNTY, SOUTH SUDAN for the period ending : 25/March/2024.

License No: **NACOSTI/P/23/24443**

491007

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

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See overleaf for conditions

Appendix 5: Nassir County

