



ADDIS ABABA UNIVERSITY
COLLEGE OF DEVELOPMENT STUDIES
CENTRE FOR FOOD SECURITY STUDIES

**HOUSEHOLD FOOD SECURITY SITUATION AMONG GOVERNMENT PENSIONERS IN KIRKOS
SUB-CITY, ADDIS ABABA**

**By
ELIZABETH TARIKU MAHETEMESELASSIE**

ADDIS ABABA, ETHIOPIA
NOVEMBER 2022



ADDIS ABABA UNIVERSITY
COLLEGE OF DEVELOPMENT STUDIES
CENTRE FOR FOOD SECURITY STUDIES

**HOUSEHOLD FOOD SECURITY SITUATION AMONG GOVERNMENT PENSIONERS IN KIRKOS
SUB-CITY, ADDIS ABABA**

**BY
ELIZABETH TARIKU MAHETEMESSELASSIE**

**THESIS ADVISER
MESKEREM ABI (PHD)**

A THESIS SUBMITTED TO THE CENTER FOR FOOD SECURITY STUDIES
COLLEGE OF DEVELOPMENT STUDIES
ADDIS ABABA UNIVERSITY
IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE DEGREE OF
MASTER OF SCIENCE IN
FOOD SECURITY AND DEVELOPMENT STUDY

ADDIS ABABA, ETHIOPIA
NOVEMBER 2022

Declaration

I declare that this thesis is my original work and has not been presented for a degree or certification in any other universities, institutions and that all sources of material used for the thesis have been duly acknowledged.

ELIZABETH TARIKU MAHETEMESELASSIE

NOVEMBER 2022

Addis Ababa

Approval Sheet

ADDIS ABABA UNIVERSITY
COLLEGE OF DEVELOPMENT STUDIES
CENTRE FOR FOOD SECURITY STUDIES

As supervisors/co-advisers of the thesis, we certify that we have read and evaluated the thesis proposal prepared by **ELIZABETH TARIKU MAHETEMESELASSIE** entitled “**HOUSEHOLD FOOD SECURITY SITUATION AMONG GOVERNMENT PENSIONERS IN KIRKOS SUB-CITY, ADDIS ABABA**” and recommend for Open Defence as fulfilling the requirement for the degree of **MASTER OF SCIENCE IN FOOD SECURITY AND DEVELOPMENT STUDY**.

.....
Name, Major Advisor

.....
Signature & Date

As members of the Examining Board of the Thesis Open Defence, we certify that we have read and evaluated the thesis prepared by **ELIZABETH TARIKU MAHETEMESELASSIE** entitled “**HOUSEHOLD FOOD SECURITY SITUATION AMONG GOVERNMENT PENSIONERS IN KIRKOS SUB-CITY, ADDIS ABABA**” and recommend that it is an acceptable thesis required for the degree of **MASTER OF SCIENCE IN FOOD SECURITY AND DEVELOPMENT STUDY**.

.....
Name, Chairman

.....
Signature & Date

.....
Name, Internal Examiner

.....
Signature & Date

.....
Name, External Examiner

.....
Signature & Date

Final approval and acceptance of this thesis is contingent upon the candidate's submission of the final copy of the thesis, incorporating all the comments by the Examining Board, to the Council of Graduate Studies (CGS) through the Centre Academic Committee (CAC) of the Centre.

Chairperson of the Centre or Graduate Program Coordinator

Acronyms

ADB:	Asian Development Bank
AU:	African Union
CBE:	Commercial Bank of Ethiopia
CSPF:	Civil Service Pension Fund
CSA:	Central Statistics Agency
CSI:	Coping Strategy Index
ENA:	Ethiopian New Agency
ESS:	Ethiopian Statistics Service
FAD:	Food Availability Decline
FAO:	Food and Agriculture Organization
FED:	Food Entitlement Decline
FEWS NET:	Famine Early Warning Systems Network
FI:	Food insecurity
FCS:	Food Consumption Score
FSS:	Forum for Social Studies
HFIAS:	Household Food Insecurity Access Scale
ILO:	International Labour Organization
KII:	Key Informant Interview
MoLSA:	Ministry of Labour and Social Affairs
MoWSA:	Ministry of Women and Social Affairs
MoUDHC:	Ministry of Urban Development, Housing and Construction
NCOA:	National Council on Aging
NGO:	Non-governmental organizations
NMA:	National Metrology Agency
NPUD:	National Policy on Urban Development
NSPP:	National Social Protection Policy
OAU:	Organisation of African Unity
OECD:	Organisation for Economic Co-operation and Development
PCA:	Principal Component Analysis
PSNP:	Productive Safety Net Program
PSOESSA:	Private Sector Organizations Employees' Social Security Agency
PSSSA:	Public Servants Social Security Agency
SDG:	Sustainable Development Goals
UN:	United Nations
UNECA:	United Nations Economic Commission for Africa
UNEP:	United Nations Environment Programme
USAID:	U.S. Agency for International Development
UN OHCHR:	Office of the United Nations High Commissioner for Human Rights
WFP:	United Nations World Food Programme

Acknowledgements

First and foremost, I would like to thank my almighty Lord God, who has made everything favourable throughout my life by His abundant generosity. I would like to express my deepest gratitude to my family who stood beside me and encouraged me during my studies. I also express my appreciation to my adviser Meskerem Abi (PhD) for her dedicated support, guidance, constructive suggestions, and encouragement throughout the development of this thesis from the inception of the proposal to the end of the research document. Finally, I would like to extend my sincere appreciation to the Public Servants Social Security Agency (PSSSA), Ministry of Women and Social Affairs (MoWSA), Kirkos sub-city and most importantly the government pensioners who provided me with all the support that was required for this thesis.

Abstract

This research examined the household food security situation among government pensioners in the Kirkos sub-city of Addis Ababa. Data was collected through household surveys with the selected 230 households and key informant interviews with staff at the PSSSA and MoWSA. The pensioner food security status was assessed on the basis of HFIAS, FCS and CSI. The elderly experience particular vulnerabilities due to higher-than-average poverty rates, declining health and rising healthcare costs, insufficient access to social services and adequate food, moreover high poverty levels limit the ability of families to care for older relatives. This research can contribute to all concerned organizations that implement projects which are related to food insecurity. The findings show 92.61% of the pensioner households were food insecure, and out of these 77.39% experienced food shortages. 96.09% of those surveyed claimed their pensions were insufficient to meet their basic household needs, 83.48% supplemented their pensions with other income, and food was the largest household expenditure for 93.66% of them. The surveyed pensioners resorted to both; consumption change coping strategies of switching to less preferred cheaper food (63%) or limiting meal sizes (33%), and assistance coping strategies of petty trading (57%) or buying food on credit (31%). Statistically significant predictors of determinant factors associated with their household food insecurity with multivariable logit regression were: wealth ($p=0$), family members without chronic disease ($p=0$), market shopping frequency ($p=0$), market distance ($p=0.004$), housing ($p=0.005$), credit ($p=0.014$) and savings ($p=0.014$). The study concludes poverty causes food insecurity through a failure to access sufficient and quality food that meets minimum dietary needs, and it also erodes or nullifies rights to food and social security. A holistic approach that explicitly positions and addresses food insecurity within the broader public policies of urban poverty is recommended. Accordingly, the government should give emphasis to wealth creation, public assisted low-cost housing and quality standards in education. Furthermore, the government should put in place preventive and curative subsidised medical care to prevent or manage chronic diseases, encourage the establishment of infrastructure for more food markets to lower distances.

Keywords: food security, determinant factors, coping strategy, government pensioners, Kirkos sub-city

Table of Contents

Declaration	i
Approval Sheet	ii
Acronyms	iii
Acknowledgements	iv
Abstract.....	v
Table of Contents.....	vi
List of Tables	vii
List of Figures.....	viii
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the study.....	1
1.2 Statement of the problem	4
1.3 Objective of the research	6
1.4 Research questions.....	6
1.5 Scope and limitation of the research.....	6
1.6 Significance of the study.....	7
1.7 Ethical consideration	8
1.8 Organization of the thesis.....	8
CHAPTER TWO: LITERATURE REVIEW.....	9
2.1 Concepts and definitions of Food security	9
2.1.1 Food availability.....	9
2.1.2 Food access.....	10
2.1.3 Food utilization	11
2.1.4 Food stability	12
2.1.5 Theoretical review	12
2.1.6 Food Entitlement Decline (FED) theory	12
2.1.7 Inflation theory	13
2.1.8 Implicit or activity theory of ageing.....	14
2.1.9 Right to food	15
2.2 Issues and policies in urban food insecurity	15
2.3 Social protection	18
2.3.1 Gaps in social protection and social insurance in Ethiopia.....	21
2.4 Empirical literature review	23
2.4.1 Coping strategies	24
2.4.2 Determinant factors associated with the food insecurity	24
2.5 Literature gap	26
2.6 Conceptual framework	26
CHAPTER THREE: DESCRIPTION OF THE STUDY AREA AND RESEARCH METHODS	28
3.1 Description of the study area	28
3.1.1 Economic activities in Addis Ababa	29
3.1.2 Housing in Addis Ababa	30
3.1.3 Transportation in Addis Ababa	31
3.2 Research design	32
3.3 Data types and sources.....	32
3.3.1 Questionnaire survey.....	32
3.3.2 Key informant interviews (KII)	32
3.4 Sampling techniques.....	33
3.5 Tools of data collection.....	34
3.6 Techniques of data analysis.....	35
3.6.1 Household Food Insecurity Access Scale score (HFIAS).....	36
3.6.2 Food Consumption Score (FCS)	37

3.6.3 Coping Strategies Index	38
3.6.4 Ordered logit regression	38
3.6.5 Multiple logit regression (MLR)	38
3.7 Study variables	39
3.7.1 Dependent variable	39
3.7.2 Independent variables	39
3.8 Data validity and reliability	44
CHAPTER FOUR: RESULTS AND DISCUSSION	45
4.1 Respondents demographic and economic characteristics	45
4.1.1 Respondents demographic characteristics	45
4.1.2 Respondent economic characteristics	47
4.2 Respondent food security status	53
4.2.1 Household Food Insecurity Access Scale (HFIAS)	53
4.2.2 Food Consumption Scores (FCS)	56
4.3 Respondent food coping strategy	61
4.4 Determinants of household food security	66
CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS	73
References	76
Annex	84

List of Tables

Table 3.1: Summary of independent variables	42
Table 4.1: Respondents demographic characteristics	46
Table 4.2: Respondents age dependency ratio	47
Table 4.3: Respondents economic characteristics	47
Table 4.4: Analysis of respondents monthly pension	48
Table 4.5: Pension sufficiency to meet respondent basic household needs	49
Table 4.6: Analysis of respondents total monthly income	49
Table 4.7: Respondents household asset ownership	50
Table 4.8: Respondents capable of working by age bracket	51
Table 4.9: Respondents currently capable of working by gender	51
Table 4.10: Respondents housing	53
Table 4.11: Respondents monthly savings	53
Table 4.12: Respondents HFIAS category summary	54
Table 4.13: Respondents responses to HFIAS questions	56
Table 4.14: Type of food consumed by respondents within past 7 days	57
Table 4.15: Food Consumption Scores of respondents by gender	58
Table 4.16: Respondents with backyards and their use	58
Table 4.17: Analysis of respondent FCS against backyard use	59
Table 4.18: Analysis of respondents FCS against additional sources of income	59
Table 4.19: Analysis of respondents FCS against remittances	60
Table 4.20: Analysis of respondents FCS against wealth	60
Table 4.21: Average number of days of food group against FCS in prior 7 days	61
Table 4.22: Analysis of respondents wealth asset index against food shortage	62
Table 4.23: Respondents consumption related coping strategies	64
Table 4.24: Respondents asset and assistance based coping strategies	65

Table 4.25: Ordered logit regression analysis of respondents	67
Table 4.26: Average marginal effect MLR of factors affecting food insecurity	68

List of Figures

Figure 2.1: Conceptual framework of the study	27
Figure 3.1: Study Area Kirkos Sub-city	28
Figure 4.1: Household Food Insecurity Access Score (HFIAS) of Respondants.....	55
Figure 4.2: Food Consumption Scores of Respondents	58
Figure 4.3: Respondents reporting food shortage during the last 4 weeks	63
Figure 4.4: Respondents reporting food shortage by wealth quintile.....	63
Figure 4.5: Model of Respondents coping strategies to food insecurity	66

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Food security is a wide-ranging concept that encompasses conditions associated with the demand and supply of food, it was defined by the World Food Summit in 1996 as a condition within which “all people at all times, have physical and economic access to sufficient, safe and nutritious food to satisfy their dietary needs and food preferences for an active and healthy life” (FAO, 2002). The amount of food a household needs for survival is considered based on different measures, including the traditional calories approach. Measures of food insecurity have evolved overtime and have become stronger and more encompassing taking into account all aspects of food security including, availability, access and dietary diversity. Accordingly, food insecurity is inadequate or indeterminate availability of nutritionally safe and sufficient, or inadequate, or uncertain ability to get food in socially acceptable ways (Anderson, 1990), with studies having identified women, children and the elderly as the most vulnerable groups at risk of food insecurity and poverty (Grobler and Dunga, 2019).

Globally as many as 828 million people are food insecure, and those facing acute food insecurity has increased from 135 million in 2019 to 345 million in 2022 (WFP, 2022). Although, the UN Sustainable Development Goal SDG 2 has set the year 2030 to achieve zero hunger this target seems to be currently unachievable if current trends persist. The recent intensification of major drivers of food insecurity and malnutrition trends combined with the high cost of nutritious foods and growing inequalities will continue to challenge food security and nutrition. (FAO, 2022).

Poverty causes food insecurity through a failure to access sufficient and quality food that meets minimum dietary needs, and it also erodes or nullifies human rights (ADB, 2012; UN OHCHR, 2022; WFP, 2019). Poverty and human rights, such as the right to food and social security are interrelated. The right to adequate food is an essential human right, yet hundreds of millions remain food insecure. Article 25 and 26 of the 1948 UN Universal Declaration of Human Rights affirm the right to social services that meet one’s basic necessities such as food, housing, clothing, medical care, education; and the right to social security in the event of a lack of livelihood due to circumstances beyond one’s control such as old age, unemployment, sickness, disability or bereavement. Furthermore, the 1952 ILO Social Security Convention (102) confirms these rights to social services and social security

through benefits for old-age, unemployment, sickness, employment injury, maternity, invalidity and survivors. Moreover, Articles 9, 10, 11, 12 and 13 of the 1966 UN International Covenant on Economic, Social and Cultural Rights reaffirm the significance of social security and social services. The paradox however is despite these affirmations, social protection and social security coverage globally is low partly due to how social protection and social security are understood, designed and implemented within broader development strategies to reduce poverty and inequality (Ilcheong, 2010). Moreover, Maslow notes “a person who is lacking food, safety, love, and esteem would most probably hunger for food more strongly than for anything else” (Maslow, 1943).

As the principal focus and consideration of individuals is the necessity of satisfying their immediate basic food needs and securing future food availability, food takes pre-eminence over shelter, clothing, education or healthcare, and to deal with the problem of poverty and food vulnerability in developing countries policies must encompass social protection (Armando and Daniele, 2020). Social protection can play a key role in the progressive realisation of the right to adequate food for all, and the elderly in particular. National social protection programs therefore fundamentally ensure acceptable living standards for citizens throughout their lives. The proportion of citizens under social protection cover also shows the extent of a nation’s food security and standard of living for their most vulnerable. Globally, 47% of all people are supported by social security and therefore it is not yet a reality for 4.1 billion individuals, however, 78% of the elderly worldwide receive a pension (ILO, 2020). Social pensions have been recognized as a key component of the United Nation’s Social Protection Floor. As one of the nine UN initiatives agreed in 2009 to reduce the social impact of global economic and financial crises that leads to food insecurity, social pensions reduce poverty and vulnerability not just for older people, but also for their families and children in their care.

According to Melis, in some Sub-Saharan African (SSA) countries, many working citizens face challenges in securing their food requirements, essential services or medical care, this exposes them to vulnerability, and is very likely that the older they become the more they get deprived. Specifically, the absence of efficient social security systems in these countries is a major deep-rooted concern that makes them unable to offer income security for their elderly, moreover, contribution-based pension schemes in SSA are very limited and hence universal social pensions and non-contributory cash transfer programs have become key policy

instruments to safeguard the elderly. Therefore, improving social protection coverage of the elderly in SSA through universal social pensions are considered as a key means of protecting the elderly people from falling into poverty (Melis et. al, 2016). In this regard, the Government of Ethiopia has put in place the necessary legal framework which is favourable for the formulation and implementation of a National Social Protection System in the country (ILO, 2021). Moreover, Article 41/5 and 90/1 of the Ethiopian Constitution affirm: “the State shall, within available means, allocate resources to provide ... assistance to ... the aged”, “to the extent the country's resources permit, policies shall aim to provide all Ethiopians access to ... food and social security”. On the basis of these statements, the Ethiopian government developed a National Social Protection Policy (NSPP) which was adopted in 2014.

A contributory social insurance pension scheme in Ethiopia was decreed through proclamations 209/1963 and 714/2011 for public servants; this includes civil servants, public enterprise employees, the police, and defence forces. These contributory social insurance pension schemes, provide benefits on retirement, disability, employment injury or for survivors, and cover less than 1% of the national population (MoLSA, 2012). Moreover, nearly the entire self-employed and unemployed workforce in Ethiopia has no access to any formal social insurance (MoLSA, 2012).

The 5-year strategy document (2020 to 2024) prepared by the Federal Public Servants Social Security Agency (PSSSA) (2019), estimates the current national population aged 60 and above to be about 4% of the total population, and in the coming 10 years this is estimated to reach 7%. Furthermore, the national proportion of the population that is economically productive (from 15 to 59 years) compared to those above 60 years is currently 11:1. However, in the next 50 years this is expected to lower dramatically to 4.3:1. Accordingly, this is expected to have a significant impact on the national pension mechanism.

Ethiopia's Public Servants' Pension Scheme (PSPS) is managed by the PSSSA. The retirement age in the public sector is 60 years, and employees should have had a minimum service requirement of 10 years. However, for military personnel, the retirement age is 55 years with a similar minimum service requirement of 10 years. The minimum monthly public sector pension of ETB 744 Birr was raised in 2020 to ETB 1,265 (USD 35.8), while the maximum amount is 70% of their average monthly basic salary. In 2021 there were 642,000

public sector pensioners in Ethiopia, of which 164,973 were in the capital Addis Ababa and out of which 18,117 were located in Kirkos sub-city where this study took place.

This study investigated the status of household food security in Kirkos sub-city among government pensioners to contribute to the understanding of the current status of their food security and their coping strategies in cases of food shortages.

1.2 Statement of the problem

Although Ethiopia has a relatively young population, currently 4.90% or 5.894 million of its inhabitants are above the age of 60 (UN Population Division, 2022), and this segment of the population is expected to rise to 9% by 2050 (HelpAge International, 2011). Moreover, despite Ethiopia having an average life expectancy of 67.81 years (Worldometer, 2022), men and women who live to 60 are expected to live an additional 15 to 16 years respectively beyond their 60th birthday (HelpAge International, 2011). A reduction in material family support for the elderly, including pensioners, in recent decades has increasingly exposed them to entrenched destitution and poverty, especially in urban centres, due to increasing material constraints and weakening traditional values (Aboderin, 2004; Migana, 2018). Consequently, HelpAge International (2013) notes the elderly including pensioners with fixed monthly incomes in urban settings have a propensity to be food insecure unless they have adequate family or community support. This is primarily due to the decline of the purchasing power of their pensions, the gradual erosion of their social nexus and the tradition of intergenerational support due to urbanisation and modernization (HelpAge International 2013; Misgana, 2018).

The elderly experience particular vulnerabilities due to higher-than-average poverty rates; declining health and rising healthcare costs; insufficient access to social services, water and adequate food; and problems of abuse and neglect where high poverty levels function to limit the ability of families to care for older relatives (FAO, 2015). Hu and Stewart (2009) note pensioners above 60 years of age, disabled military veterans and retired civil servant employees also tend to be less productive in the labour force. Usually, their monthly expenditures are allotted to different commitments like food, healthcare, utilities, other household members, savings/investments, education, social participation and debt payments which may exacerbate their food insecurity (Hu and Stewart, 2009).

According to the NCOA (2022) poverty is the primary factor that makes it difficult for the elderly to ensure their food security or meet their other basic needs, with the underlying cause of their poverty being low incomes due to retirement. They also note food insecurity rates are also significantly higher in adults with incomes significantly lower than the national poverty level, as they typically depend on fixed payments from inflexible sources like social security, pensions or retirement savings. Hence, during periods of economic instability, like high inflation, living on these fixed incomes become challenging, as costs escalate while their ability to pay for them stays the same (NCOA, 2022). Moreover, in Ethiopia reliance on a single economic coping strategy does not enable the elderly to have sustainable livelihoods (HelpAge International, 2011).

Although the elderly in Ethiopia plays a crucial role in the social and economic fabric of their households, their capacity to offer dependable support and ensure household security is challenged as a result of unreliable sources of income, instability in their livelihood, and a lack of diversified livelihoods. Moreover, a combination of livelihoods strategies including working, accessing NGO support, donations from children and other family members, and begging are necessary for survival (HelpAge International, 2011).

Research studies have investigated household food insecurity and associated factors in Ethiopia (Abraham et al. 2017; Meskerem and Degefa, 2015; Malla et al. 2015), however, most of these studies have focused on representative population households rather than on specific vulnerable groups like government pensioners. Recently, Misgana et al. (2018) and Yawukal et al. (2018) investigated the food insecurity status and coping strategies among pensioners in Jimma and Debre Markos towns both their results depicted that 83.5% and 82.5% of households surveyed respectively were food insecure. However, their thematic area focused on public health.

Given Ethiopia's high urbanization rate of 4.7% (World Bank, 2021) and the high prevalence of urban food insecurity in Addis Ababa at 77% (Birhane, 2014), the food security situation of fixed income government pensioners should be given due consideration. This research is different from previous studies, that have usually focused on socio-economic determinant factors and coping strategies of household food security in Ethiopia, because it specifically focuses on government pensioners in Addis Ababa. The food security status of government pensioners in Addis Ababa and Kirkos sub-city has not been investigated to the best

knowledge of the researcher. Therefore, this study was designed to assess the household food security situation among government pensioners in the Kirkos sub-city of Addis Ababa, Ethiopia.

1.3 Objective of the research

General objective

The general objective of this research was to examine the household food security situation among government pensioners in the Kirkos sub-city of Addis Ababa, Ethiopia

Specific objectives

Specifically, the research aimed to:

- Analyse the socio-economic characteristics of government pensioners in the study area.
- Assess the food security status of government pensioners in the study area.
- Identify coping strategies adopted during food shortage by government pensioner households in the study area.
- Identify factors associated with the food insecurity of government pensioners in the study area.

1.4 Research questions

Based on the above specific objectives, this research attempted to answer the following formulated questions:

- What are the socio-economic characteristics of government pensioners in the study area?
- What is the food security status of government pensioners in the study area?
- What are the common coping strategies adopted by government pensioners during periods of food shortages in the study area?
- What are the factors associated with household food insecurity among government pensioners in the study area?

1.5 Scope and limitation of the research

The research was primarily to assess the food security situation of government pensioners in the Kirkos sub-city of Addis Ababa during February of 2022. The research encompassed a

review of secondary information, key informant interviews with individuals who had specialized knowledge and information about the government pensioners. Most importantly, the research had a scope of survey using a structured questionnaire to collect quantitative information to better understand the issue under investigation.

One research limitation was it was impossible to get the list and contact details of government pensioners from the PSSSA due to their confidentiality policy. Accordingly, snowball sampling was used in this research as the researcher had difficulty finding a list of participants to carry out random sampling. The snowball sampling method creates biased samples as respondents with greater numerical social networks will tend to provide researchers with a higher share of other respondents and these might have similar circumstances to the initial respondents (Ilker et. al, 2015). In addition, other empirical studies covering the food security situation of government pensioners in Addis Ababa are unavailable to the best knowledge of the researcher. The other limitation of the research was its inability to generalize the results gained from the sample pensioners to the general government pensioner population as the snowball sampling technique cannot be representative of the population.

1.6 Significance of the study

Although extensive studies pertaining to food insecurity, coping strategies and associated factors have been conducted, similar studies concerning pensioners have not been studied in Addis Ababa. Hence, research on this area was identified as being crucial. This will provide valuable input on effective measures to be taken to implement appropriate strategies and enhance food security. Moreover, the output of this research can be helpful to development practitioners and policy makers in acquiring empirical understanding in carrying out development interventions at the right time and place to decrease vulnerability to food insecurity among government pensioners. This research can also be input to researchers who want to conduct further studies on the food security situation of government pensioners.

The results of the research can be useful to regional and national level planners, policy makers, researchers, and development actors in both governmental and nongovernmental organizations working in the locality as well as elsewhere with similar socio economic, cultural, and physical environments. This research is also helpful in identifying the different food coping strategies of government pensioner households in Kirkos sub-city of Addis

Ababa that can be used for the appropriate intervention or further research. The outcome of the research can also contribute to all concerned organizations that implement projects which are related to food insecurity in Addis Ababa, this may include governmental bodies, nongovernmental and civil society organizations and the private sector.

1.7 Ethical consideration

The process of data collection, analysis and dissemination of findings was conducted in a way that protects the respondent's privacy, maintains anonymity and confidentiality of their personalities. Respondents were not identified by name during the research process. The researcher requested for explicit consent when any data collection was involved. Consent was signed by the respondents wherever images were involved in the research process. The research process was guided by informed consent, do no harm, confidentiality, and respect for privacy principles.

1.8 Organization of the thesis

The thesis is composed of five chapters. Chapter one is the introduction and includes the background of the study, statement of the problem, objective of the research, research questions, scope and limitation of the study, significance of the study, ethical consideration, and organization of the thesis. The second chapter includes the literature review, theoretical review, issues and policies in urban food insecurity, social protection issues and policies, gaps in social protection and social insurance in Ethiopia, empirical literature review, literature gap, and the conceptual framework. The third chapter deals with the description of the study area, research methods of the study and includes the research design, data types and sources, sampling techniques, tools of data collection, techniques of data analysis, study variables, data validity and reliability, and problems or challenges encountered during data collection. Chapter four deals with the results from the analysis of socioeconomic and demographic data, food security status, food coping strategy, and determinants of household food security, as well as discusses the findings of the research. Finally, chapter five includes a summary of the research, conclusions, and recommendations.

CHAPTER TWO: LITERATURE REVIEW

To examine and better understand the household food security situation of government pensioners in Kirkos sub-city, a clear understanding of the theories of food security is essential. Here, theoretical frameworks that underpin the principles that explain household food security are used to explain the observed realities.

2.1 Concepts and definitions of Food security

The 1996 World Food Summit definition of food security is a situation that exists when “all people, at all times, have physical, social and economic access to sufficient, safe and nutritious food that meets their dietary needs and food preferences for an active and healthy life”. This definition gives attention to availability, access, utilization, and stability pillars of food security. According to FAO (2005), food insecurity is when people are unable to acquire adequate, safe, and nutritious food for normal growth and an active, joyful and healthy day-to-day life, this can be a result of the unavailability of food, low income, inability to afford, food non-utilization at household levels, or poor distribution. Due to these reasons when an individual, household, or community fails to avail and access food this could be considered as a state of food insecurity.

When we look at how the concept of food security evolved through the years, in the 1970s, it was mostly concerned with localized and worldwide food supply. During the 1980s, more attention was given to access to food at the household and individual level (Maxwell and Frankenber, 1992). From the 1970s to the early 2000s, food security terminology has been defined and used in different ways, for instance it has been used as a conceptual framework, to define a policy or as a goal of developmental programming. It has been a prominent tool in the integrated approaches to rural development, which brings the poor to the centre so that food security helps to find and fill the gaps. It has also been used as a proxy for poverty, in the “structural adjustment” agenda of the 1990s, as well as malnourished individuals and the need to fix non-working economic systems (USAID, 2001).

2.1.1 Food availability

The World Food Programme (WFP) defines food availability as “national-level food production, food imports, food reserves and food aid that is present in the country” (WFP, 2009). Food availability therefore tends to be applied at a regional or national level. Urban

food security is different from rural food security, in the latter household production factors take the lead in determining the level of food availability while in the former it is a combination of factors such as a competitive retail network, the existence of safety nets like public distribution systems coupled with the supply position of the state. However, in the current context of food price increases and the impact of climate change on food production, even urban food availability gets affected. The cost of living in urban centres, their peripheries and adjacent rural zones are increasingly expensive, and farmers often sell land for non-agricultural uses, which leads to further urban expansion and less food availability (WFP, 2009). Consequently, if the food availability decreases in a country the most vulnerable segment of the population will tend to be the most affected like the urban poor or fixed low-income pensioners.

2.1.2 Food access

According to the WFP (2009), food access is when a household manages to get sufficient food either through production, purchases, barter, borrowing, food assistance or gifts. Three elements of food access are physical, economic, and social-cultural. The physical dimension can be portrayed by a situation where food cannot reach or be delivered to another location due to poor or inefficient marketing or transport infrastructures which can cause a lack of food. From the economic viewpoint, food security occurs when people develop their purchasing power to buy adequate food. Hence, although food might be available if people have low purchasing power this could cause food insecurity, and this is still quite a recent development in the history of food security (WFP, 2009). The third element is the socio-cultural dimension which occurs due to discrimination of gender or a particular social group where food may be physically available, and the potential consumer has the money to buy the food but is prevented from doing so. Social conflict and unrest can also seriously disrupt food production, loss of livestock and livelihood with dire consequences for a household's future food security. Physical food access is not a concern in highly developed countries because individuals who are unable to access grocery shops may have the possibility of home delivery, which facilitates food access for the sick and disabled, however in developing countries it is controversial due to inadequate infrastructures (Szabo, 2016).

According to a FAO (2012) report, to ensure food security both physical and financial access to food plays a crucial role. For this farming contributes towards economic development and improves physical access to a variety of foods. Farmers living in rural areas benefit from their

own production vis-à-vis people living in urban areas, where most often they must purchase their food. For vulnerable households, higher prices have an immediate impact on the quantity and quality of food consumed. They switch to cheaper foods and reduce the number and size of meals and the expenditures on non-staple foods. Non-staple foods are often the main sources of fat, minerals and vitamins, which are essential for growth and maintenance of a healthy and productive life (WFP, 2009). Government pensioners living in Addis Ababa usually purchase their food from markets using their limited financial access through pensions, remittances, or other income, these make them dependent on the physical access to urban market and are disproportionately affected by inflation (FAO, 2012).

2.1.3 Food utilization

To bring about food security, availability and access to food on their own are not enough; people must be certain of having safe and nutritious food. WFP (2009) defines food utilization as the selection and intake of food and the absorption of nutrients, and it is influenced by proper and sufficient diet, sanitation, childcare, clean water, and knowledge on nutrition and how to cook. The World Food Summit (1996) defined food utilization as obtaining safe and nutritious food which meets dietary needs. In order to carry out routine physical activities, the food that is eaten should provide sufficient energy to the person. Clean drinking water and proper sanitary facilities are also part and parcel of utilization. Having these in place help to minimize the wide spread of disease and to raise awareness about food preparation and storage procedures (WFP, 2009).

As urban residents largely depend on the market to purchase their food items and these markets are highly affected by price inflation, this forces households to make some adjustments to their expenditures to meet their basic food requirements. Poor urban residents living in developing countries are at risk of taking inadequate and poor-quality food which might include street vendor food that might be unhygienic and expose them to health risks. Urbanization is highly associated with access to processed foodstuffs, which tend to have higher sugar levels or artificial sweeteners; processed food also tends to contain artificial colouring agents, hydrogenated fats, preservatives, and chemical pesticides (Matuschke, 2009). Consequently, the effects of high price inflation and effects of urbanization on food supply have the propensity for fixed low-income pensioners and poor households to eat less nutritious low-quality food.

2.1.4 Food stability

The World Food Summit (2009) stated that stability implies that food must be present “at all times” in terms of availability, access, and utilization for food security to exist. There should however be differentiation between, chronic food insecurity where food needs cannot be met over an extended period of time; and transitory food insecurity, where the time period is more temporary. It is therefore very important that the three food security dimensions discussed above of availability, access and utilization, and their associated indicators are stable over time to ensure sustainable food security (Smith, et. al. 1992).

2.1.5 Theoretical review

A theory is a supposition, or a system of concepts, intended to something based on general principles independent of the thing being explained, it thereby accounts for a situation (Oxford Dictionary). To understand and explain household food security among government pensioners and its implications, various theoretical frameworks were examined that explain this, as there is no single theory that conclusively and comprehensively explains this.

2.1.6 Food Entitlement Decline (FED) theory

The Food Entitlement Decline (FED) and the Market Failure Food Entitlement Decline theories were developed by the Nobel Laureate Amartya Sen (1981). The central argument of the FED theory is that the mere presence or supply of food in an economy or market does not entitle a person to consume them, and that famine or hunger can occur without aggregate availability decline due to a failure in exchange entitlements (Sen, 1976). Unlike the Food Availability Decline (FAD) theory that emphasises supply or availability, Sen believes that it is access to food that plays a crucial role in securing command over food which is determined by four sources of entitlement: production, exchange, own labour, and transfer (Sen, 1981). Accordingly, Sen postulates only segments of society on the lowest steps of the economic ladder are prone to hunger. FED therefore has the potential capacity to identify which groups of people are affected by various threats of availability or access to food differentiation depending on the degree of vulnerability (Degefa, 2005). Therefore, for Sen food security for an individual becomes an issue of accessibility of food and associated issues including entitlement, economic factors, political regime and governance, natural disasters, civil disturbances, climate change and environmental issues (Samwel, 2014). Hence, an investigation into these determinants of food access in different sectors of society, like government pensioners, is required as their food insecurity could be due to their loss of

endowment caused by their retirement or a loss of exchange entitlement due to overall inflation and rises in food prices more specifically. Hence, an investigation in the food security of government pensioner households should contrast their endowment, or pensions, with their exchange entitlement. However, despite its strength, the FED theory also has some drawbacks to be addressed before directly applying it as a framework to study food security. The FED theory fails to consider intra-household distribution of food and excludes relief entitlement (food aid), it is heavily focused on food deprivation and presumes that famine mortality is induced by starvation, and neglects cultural preferences and tastes in food consumption (Messay, unpublished).

A Market Failure approach views market problems from both a demand (pull failure) and supply (response failure) perspectives. Pull failures refer to the people's lack of purchasing power, which is caused by poverty and can therefore be explained in terms of lack or collapse of exchange entitlements to food, likewise, response failure can happen when markets fail to meet the effective demand of people (Degefa, 2006).

2.1.7 Inflation theory

Inflation theory suggests inflation may strain household resources, especially if incomes do not increase at similar rates as prices. Households facing food insecurity may be unable to spend a greater share of their household budgets on food when food prices increase, especially if general inflation has risen also. Considerable escalations in food price inflation have become a worldwide concern, for both rural and urban households in low-income countries (Tesfaye et. al., 2014).

According to Fernando (2022), an increase in money supply is the root of inflation. Money supply can be increased by a country's monetary authorities by several ways. The authorities can do this by printing bank notes and giving away more money to citizens, devaluing or reducing the value of the currency, or loaning new money into the banking system through reserve account credits by purchasing government bonds from banks. In all these cases, money in the economy loses its purchasing power. This drives inflation in three methods: demand-pull inflation, cost-push inflation, and built-in inflation. Demand-pull inflation is where rises in money supply stimulates increases in demand for goods and services more rapidly than the economy can produce. This increase in demand leads to higher prices, for when consumers have more disposable income, this leads to positive sentiment that leads to

higher spending, which then pulls prices higher. Cost-push inflation is due to rises in prices caused by production process inputs. Here, increased money supply that are channelled into commodities or asset markets lead to rises in prices for intermediate goods. This leads to higher costs for finished goods or service and therefore rising consumer prices. Built-in inflation on the other hand is due to adaptive expectations or the concept people expect current inflation rates to continue in future as prices of goods and services rise. Therefore, citizens demand more incomes to maintain their current standards of living. Consequently, increased incomes result in higher costs of producing goods and services, and in turn this spiral in incomes and prices induces further spirals in each other (Fernando, 2022).

In Africa, after Dakar, Addis Ababa was ranked as the second most expensive city to live in (Statista, 2022). Furthermore, the impact of inflation has been a key element resulting in increased food insecurity in the urban areas of Ethiopia, with data suggesting commodity prices in 2022 were on average over 1,415.9% higher than they were in 2002; or ETB 100 in 2002 corresponds to an amount of ETB 1,516 in 2022 (WorldData, 2022).

The prices of staple cereals in Ethiopia increased substantially in 2005-2008, 2011-2012, and 2017-2022 with the country facing a spiral of price increases. Between June and September 2021, the national inflation rate rose from 24.5% to 34.8% driven primarily by food price inflation especially for starchy and nutrient-dense foods (CSA 2021). Ethiopia's inflation rate remains persistently high, reaching 34.5% in January and 33.6% in February 2022, while food inflation was 39.95% in January and 41.9% in February 2022 (Gain, 2022). Accordingly, food insecurity will be common among individuals whose entitlements have not improved in real terms to match these high rates of food-price inflation, therefore their declining purchasing power will affect their economic access to food. Macroeconomic policies should therefore seek to maintain constant prices, as price increases, devaluation in the exchange rate, and the removal of key consumer or producer subsidies can all increase prices (Garrett, 2000).

2.1.8 Implicit or activity theory of ageing

The implicit or activity theory of ageing, as postulated by Havighurst (1961), assumes sustaining a high level of activity and social interactions is essential for satisfaction among older adults as they age. This theory arose in opposition to the disengagement theory of ageing (Cumming and Henry, 1961) that assumes it is expected and acceptable for older

adults to withdraw or disengage from the society they belong to as they age. The implicit theory, however, implies a direct correlation between the active social and economic contributions older adults make and their satisfaction with life. This theory advocates for sustained social involvement and psychological engagement for the elderly, while they adjust to activities suitable to their physiological, psychological, and social circumstances.

2.1.9 Right to food

As food insecurity implies the absence of food security, it can happen at multiple levels or at individual, family, community, and nationwide levels (DeRose et. al., 1998). This creates several impacts from micronutrient to protein deficiencies that can cause serious health issues affecting attention and cognitive ability (WFP, 2009). Therefore, social and economic processes that cause poverty or deter access to food bring about food insecurity. These tend to be due to; the absence of adequate living wages; insufficient education; lack of sufficient health infrastructure, medical professionals and pharmaceuticals; poor housing; unhygienic water; and unsafe neighbourhoods, all of which are associated with poverty (Hamelin, et. al. 2002; DeRose, et al.). Consequently, the provision of all food and nutrition services should consider the human rights of all citizens. In this regard, the Ethiopian Food Policy (2018) stipulates that all Ethiopians should always have safe food in sufficient quantity and quality throughout their stages of life cycle to satisfy their nutritional needs for optimal health (Food and Nutrition Policy, 2018).

The right to food is the right to have regular, permanent and unrestricted access, either directly or by means of financial purchases, to quantitatively and qualitatively adequate and sufficient food corresponding to the cultural traditions of the people to which the consumer belongs, and which ensure a physical and mental, individual and collective, fulfilling and dignified life free of fear (UN Human Rights, 2022). The 1999 UN CESCR General Comment No. 12 on The Right to Adequate Food (Art. 11) states, “the right to adequate food is realized when every man, woman and child, alone or in community with others, has physical and economic access at all times to adequate food or means for its procurement”.

2.2 Issues and policies in urban food insecurity

According to Garrett (2000) urban food insecurity and malnutrition can be affected by several factors. This is because urban residents get their food from markets and their food security depends on their purchasing power or their ability to afford buying food, given their incomes

and food prices. Consequently, the urban poor are forced to buy small quantities of food rather than in bulk because of high per-unit costs of food due to inefficient urban food-marketing systems. To improve urban food security, it is important to consider macroeconomic policies. These policies should also try to enhance market efficiency and maintain constant prices. Price increases, devaluation in the exchange rate, and the removal of key consumer or producer subsidies can all increase prices. This is supported by Tesfay et al. (2014) who conclude that policies should be established to stabilize food markets and create livelihood opportunities that increase the purchasing power of households. Moreover, with inadequate human or financial capital, the urban poor usually have few alternative options but to take on casual, insecure jobs. These casual and insecure jobs often create seasonal ups and downs, like in rural areas. For instance, construction labour demand can decline when building work slows down during the rainy season or when inputs like cement are in short supply, or workers in the apparel industry may be released when demand for garments decline after festivities or special events. Consequently, the poor with little human or financial capital, however, with their abundance of labour, find competition for jobs severe (Garrett, 2000).

In urban settings, public policies must be grounded in a holistic approach that explicitly positions and addresses food and nutrition insecurity within the broader context of urban poverty and intra-urban inequalities. This implies taking under consideration the multiple dimensions of urban poverty from incomes and nature of income-generating activities to the availability of adequate housing and infrastructure, and the impacts of urban planning on access to inexpensive nutritious food (Tacoli, 2019). Moreover, the association between housing assistance and food insecurity demonstrates that high housing costs limit food access among the urban poor, and that public housing assistance and cash assistance alleviates food insecurity (Cambridge University, 2021).

Garrett (2000) further states, to bring the poor out of poverty, programs and policies should concentrate on crafting jobs and increase the competency of the poor to search out and hold more secure, higher paying employment or to develop their own livelihood ventures and create new employment opportunities. Therefore, for the poor to become successful private sector businesses, the government, communities, and the private sector should come together to enhance the capacity of the poor. Concurrently, to people who are left behind or cannot work because of their age or illness, assistance should be considered through social security

and unemployment programs. Additionally, programs like targeted income or food aid are necessary to provide for the poor. Moreover, secure contracts also help make sure that the poor do not lose their investments in tangible assets or in social networks; accordingly, programs may have to also address issues of land and housing security, nevertheless, efforts to encourage urban livelihoods must go beyond simply concentrating on urban jobs (Garrett, 2000).

Income poverty is the primary cause of urban food insecurity, and this can be because urban residents purchase much of their food, which is in many cases their largest household expenditure (Tacoli, 2017). Populations living within both rural and urban settings have their lives interlinked through agricultural goods and services, as urban residents highly rely on rural agriculture supplies to urban centres. Accordingly, agriculture is part and parcel of food systems where people are highly dependent on their nourishment and livelihood through employment in food processing, packaging, transportation, marketing and distribution. Therefore, urban enhancement policies on urban livelihoods should take into consideration the linkages and connections between both the urban and rural. This is because rural conditions directly or indirectly affect urban livelihoods, and where agriculture and urban food security have a more direct link. Consequently, as a coping strategy to food insecurity, the urban poor might be engaged in fruit and vegetable home gardening and the rearing of small farm animals, and these urban domestic household farming activities are mostly run by women and as a result this improves the incomes and diets of their households (Garrett, 2000). Accordingly, local government and city planners should incorporate environmentally friendly and sound urban farming systems in their plans. Furthermore, food security alone cannot guarantee a household's good nutrition, as the threats to this for children and adults in urban localities vary from those in rural, and therefore, good food preparation, cooking, and feeding practices together with a healthy environment are also essential (Garrett, 2000).

As urbanisation and poverty rates increase in urban settings when compared to rural communities, it should therefore be assumed that food insecurity here will proportionately tend to continue to increase. Furthermore, dependence on food purchases by urban dwellers exposes them to food insecurity risks. Although, overall financial access to food and food availability are expected to continue to be greater in urban areas than in rural communities, if food commodity markets are not adequately regulated, they could potentially lead to price volatility. This risk of rising food insecurity in urban settings will therefore be of concern in

low-income households, neighbourhoods or informal settlements where socio-economic development tends to be lower than in rural areas (FAO, 2015; Smith. et. al. 1992).

2.3 Social protection

According to Armando et. al. (2008) social protection is defined as ‘public actions taken in response to levels of vulnerability, risk and deprivation which are deemed socially unacceptable within a given polity or society’. Social protection has been linked with public organisations, policies and programs aimed at protecting individuals and their households from poverty and deprivation (Armando et. al. 2008). Social protection comprises provisions of state insurance schemes such as pensions or unemployment benefits, social sector policies such as payment waivers, and programs that transfer resources to poor households (Hoddinott et al., 2019). According to Devereux (2012), social protection reduces income poverty and manages vulnerability, for increasing household incomes reduces poverty, while regular steady incomes can be utilised to better manage vulnerable livelihoods. The 2012 ILO Social Protection Floors Recommendation No. 202 provides that all members of society should enjoy at least a basic level of social protection throughout their lives, it notes social protection has proven to be a powerful mechanism to mitigate the negative impact of crises; and that social dialogue promotes the democratic participation in the policy-making process of the people most directly concerned and ensures that the involvement of the social partners helps ensure that social protection policies are legitimate, fair and adapted to the real needs and priorities of workers and employer (ILO, undated). Moreover, universal social protection is an integrated set of policies designed to ensure income security and support to all people across the life cycle, paying particular attention to the poor and the vulnerable (ILO, World Bank, undated).

The 1952 ILO convention on Social Security Minimum Standards No. 102 is the foundational global reference for the design of rights-based, sound and sustainable social protection systems (ILO, 2020). It is the only international instrument that establishes worldwide-agreed qualitative and quantitative minimum standards for all nine branches of social security; medical care; sickness benefit; unemployment benefit; old-age benefit; employment injury benefit; family benefit; maternity benefit; invalidity benefit; and survivors’ benefit. The convention establishes common rules of collective organization, financing and management of social security systems, as well as principles of good governance of the systems, including the representation of workers’ representatives, under the general responsibility of the State.

Convention 102, together with Recommendation 202, plays a central role for the achievement of Sustainable Development Goals (SDG) 1 and 3. Furthermore, effective social dialogue enables the representative participation in the policy-making process of the people most directly concerned. The involvement of the social partners helps ensure that social protection policies are legitimate, fair and adapted to the real needs and priorities of workers and employers. C102 contributes to building a culture of social dialogue particularly useful in periods of crisis (ILO, undated).

Empowering citizens can address the social dimensions of vulnerability related to marginalization and exclusion, and these can be categorized under three groups: social insurance, social assistance, and labour market regulation. Social insurance entails programs giving protection against unforeseen events arising from life contingencies such as sickness, maternity and old age, or from work-related possibilities such as unemployment, and normally, this is financed from contributions by workers and their employers. Social assistance, or public assistance, on the other hand delivers support for those in poverty and is usually tax-financed. Finally, labour market regulations ensure basic standards at work, and extends rights to organizations and citizens (Armando et. al. 2008).

Social insurance is grounded on the principle of risk distribution and is essentially the amalgamating of individual contributions to state or private service providers in lieu of a pay-out if a setback or change in conditions occur. Contributory social insurance schemes seek to return a specified portion of the beneficiary's previous earnings in the event of the complete or partial loss of earnings due to a pre-specified contingency like old age, invalidity, or employment injury. As illness is a main source of poverty; the poor are more likely to suffer from illness than the wealthy, and in response to this some governments have established social health insurance schemes for employees and pensioners to provide quality and sustainable universal healthcare through pooling risks and lowering financial obstacles at the point of service delivery (MoLSA, 2012). In other instances, community-based health insurance for people in the informal sector also supports expanded health coverage to the entire population. Another key social insurance pillar are pensions, which can be defined as regular payments made by the state or organizations to people of or above the official retirement age and to some widows and disabled people, hence, a pensioner is a person who receives a pension, most commonly because of retirement from the workforce (MoLSA, 2012).

Research conducted by Leroux et. al. (2018) showed the causes of food insecurity were found to be closely interrelated to poverty and social policies, whereas social protection supplements to income, like pensions, were found to have significantly lowered food insecurity in the elderly population segment. Social pensions are also a key component of the UN Social Protection Floor (2009); one of the nine UN initiatives to lessen the social impact of the worldwide economic crisis and consequently on global food insecurity. Pensions aid in reducing household poverty and vulnerability not just for the elderly, but also for their families. However, pensioners are usually non-productive members of society and their limited monthly pensions are allocated for different purposes including food, rent, utilities and medical care which may lead to food insecurity.

Recently, the numbers of SSA countries using social pension programs have increased. Eight countries have commenced old-age social pensions and out of these countries a universal program is being provided in six, namely in Botswana, Lesotho, Mauritius, Namibia, Seychelles, and Swaziland, while the remaining two, Cape Verde and South Africa, use a means test to decide on the eligibility. Kenya, Nigeria, Uganda, and Zambia are also carrying out pilot testing for universal social pensions, while Kenya and Nigeria are also simultaneously trying out means-tested social pensions in addition to the universal pensions (Melis et. al, 2016).

In this regard, the Ethiopian government has established both rural and urban social protection programs to address the food security needs of vulnerable households. Although the Productive Safety Net Program (PSNP) is the current flagship Ethiopian social safety net program, in addition to significant investments in agricultural productivity to reduce poverty, improve livelihoods and food security, social insurance schemes are also a key component of this matrix. Ethiopia has provisions for both public and private sector employee pensions, however, these contributory social schemes only cover a small portion of the population. Workers in the formal public or private sectors usually have access to a contributory pension and provident fund that offers some guard against hardship in old age, invalidity, or employment injury contingent on pre-specified guidelines.

2.3.1 Gaps in social protection and social insurance in Ethiopia

Social protection is defined differently according to different country contexts and professional interests. The Ethiopian National Social Protection Policy (NSPP) defines social protection broadly as part of its social policy framework that focuses on reducing the poverty, vulnerability, exclusion, and social or economic risks of all citizens, by taking measures through formal and informal mechanisms to ascertain accessible and equitable growth (MoLSA, 2012). In the policy, segments of society that are especially vulnerable to different social and economic problems; like children, women, persons with disabilities, the elderly, unemployed or labour constrained and unable to make earnings, and those living under difficult circumstances are given special attention. The policy document consists of five focus areas, namely: promoting productive safety net; promoting and improving employment and livelihoods; promoting social insurance; increasing equitable access to basic social services; and providing legal protection and support to those exposed to abuse and violence.

According to Melisew and Cochrane (2019) social protection in Ethiopia is not presented as a right of citizens nor as an obligation of the state to its citizens even when constitutional rights are referred to as it is prefaced with the condition of ‘progressive realization of social and economic rights’ (MoLSA, 2012); therefore, they note which rights would be progressively realized, for whom and why is left unstated. Furthermore, the constitution is vague about rights and responsibilities: Article 41(5) preconditions support ‘within available means’; Article 41(6) stipulates the ‘state shall pursue policies’ but not unequivocally protect rights of individuals; and Article 41(7) states ‘to the extent the country’s resources permit’, therefore it is unclear how the available means and resources are determined within broader developmental objectives, which policies will be pursued, and for whom (Melisew and Cochrane, 2019). Consequently, this could hypothetically imply that citizens are passive beneficiaries of their government’s benevolent protection based on what it regards as essential (Melisew and Cochrane, 2019; Lefort, 2013). The rights that one could theoretically demand include the international conventions and instruments that the Government of Ethiopia has ratified, such as those outlined in the Universal Declaration of Human Rights (UN Universal Declaration of Human Rights, 1948), the African Charter on Human and Peoples’ Rights (OAU, 1981), Convention on the Rights of the Child (UN, 1989), Convention on the Elimination of all forms of Discrimination Against Women (UN, 1995), and the African Charter on Rights and Welfare of the Child (OAU, 1999).

Moreover, according to MoLSA, the initiatives being implemented under the NSPP are ‘limited in geographical coverage, have inadequate inter-sectoral linkages and coordination, weak institutional capacity and lack of clarity regarding accountability or delivering social protection outputs’ (OECD, 2016). Based on personal interviews conducted by Melisew and Cochrane (2019) with the Director of Social Security Development Directorate at the MoLSA who was involved in crafting the current social protection policy, there are perceptions of policy incoherence and uncoordinated implementation instead of having the optimal synergistic and synchronised interventions required to meet the diverse needs of citizens. Furthermore, having limited national resources, numerous partners and diverse strategies have led to slow social protection policy making and interventions. These constraints should not however be a source to validate delays or the continued policy incoherence, particularly as it results in the inefficient utilization of scarce resources. These shortcomings are illustrated in established policies not being implemented due to national economic budget allocation constraints, like the proposed universal old age pension scheme for those over 70 regardless of any employment contributions. However, given Ethiopia’s relatively low economic capacity due to its present stage of economic development and very high unmet needs on many national priorities and basic services, social protection policies like universal pensions or school feeding programs that are available in other developing countries, are presently economically unfeasible and raise the challenges of equity for other citizens not being covered under these provisions but still have no access to their basic services rights on access to health, water or electricity that must be prioritized. Therefore, in the foreseeable future universal social protection would be highly unlikely given unmet national priorities but should be progressively feasible with sustained economic development (Melisew and Cochrane, 2019).

Nevertheless, Melisew and Cochrane (2019) based on the ILO’s Social Protection Floor Calculator argue Ethiopia could achieve universal social protection coverage for the elderly, orphaned and disabled with a budget of just 3.47% of national GDP, and claim this is feasible for the economy and would not affect other government priorities. This national spending would contribute positively to the domestic economy as these beneficiaries further spend on their expenditures in local markets and improve their household healthcare needs thereby contributing to other social protection objectives (Menendez A, 2007, FAO, 2014).

A study conducted by the ILO (2021) identified numerous gaps in Ethiopia's social insurance and government pension scheme in particular. These included uncertainty of the financial soundness of the Civil Service Pension Fund (CSPF) given the current total contribution rate from employers and employees (for old-age, disability, incapacity, and death) is 18% while the general average premium needed over their 85-year projection period is 35.3%, therefore making the CSPF financially unsustainable over the next 85 years. Accordingly, the study predicts unless appropriate changes are made to CSPF's investment policies its reserves would be completely exhausted within the next fifty years and hence the need to make it financially viable through a tailored investment strategy, philosophy and process, before considering other parametric reform like changes to the normal retirement age or pension accrual rate.

2.4 Empirical literature review

Ethiopia with almost 120 million people is a country with a relatively young average population with a growth rate of 2.6%, a median age of 17.9 years, where 47.5% are under the age of 18 and 60% below 25 years (World Population Prospects, 2019). Moreover, currently 4.90% or 5.894 million of its inhabitants are above the age of 60 (UN Population Division, 2022), and this segment of the population is expected to rise to 9% by 2050 (HelpAge International, 2011), and despite having an average life expectancy of 67.81 years (Worldometer, 2022), men and women who live to 60 are expected to live an additional 15 to 16 years respectively beyond their 60th birthday (HelpAge International, 2011). Although an estimated 78.3% of Ethiopians lived in rural areas in 2020 (World Bank, 2022), urban migration due to work, family support and better healthcare are increasingly bringing the elderly to urban centres.

Attaining national food security has been a challenge for Ethiopia, where an estimated 15 million people were food insecure in 2022 (FEWS NET, 2022). In Ethiopia, poverty is severe and entrenched among the elderly, with the main factors for this being ill health, unsuitable neighbourhoods, poor housing conditions, inadequate family or community support, few social security services, an absence of education or training opportunities, insufficient access to employment or income generating opportunities, and food insecurity (HelpAge International, 2013).

2.4.1 Coping strategies

According to Maxwell (1996) household responses to food insecurity are classified into two categories, these being coping and adaptive strategies. Coping strategies are the responses made by households to improve the declining situation of a household's food security, while adaptive strategies involve permanent changes in the mix of ways in which food is required, regardless of the year being considered and it refers to long term changes. The most commonly practiced coping strategies during abnormal seasons include, using less quality food, skipping adult meals to feed children, decreasing the portion of the meal, reducing the frequency, taking gifts from relatives, borrowing, selling productive assets or wood and charcoal and support from relief assistance. According to Maxwell, when measuring food insecurity in urban and peri-urban areas, the coping strategy commonly practised by lower-income households were eating cheaper and less preferable foods, reducing portion sizes, taking loans to buy or borrow food, maternal buffering, and reducing the frequency of meals to only once or twice per day. The lowest income groups at certain times of the year however coped with food insufficiency by not eating for whole days.

According to the Urban Food Insecurity (2014) survey conducted in the context of high food prices in Addis Ababa, found coping strategies to food insufficiency included not eating for an entire day (3.3%), reducing the variety of food consumed (52%), reducing the amount of food consumed (35.8%), and reducing meal frequencies (25.5%). A study conducted by Ephrem (2015) found in the study area of Durame, Wolenchiti and Debresina high food insecurity rates existed at 77%, with 48% being moderately or severely food insecure, while common coping strategies against high food price were shifting to lower quality or less expensive foods and reduction in the number of daily meals. Misgana et al. (2018) in a study among pensioners in Jimma found, food insecure households used both consumption and asset-based coping strategies such as changing consumption patterns (44%), eating inexpensive foods (72.4%), reducing meal frequency (62.4%) and selling household assets such as household food utensils (30.8%).

2.4.2 Determinant factors associated with the food insecurity

The elderly are a vulnerable group at risk of poverty and food insecurity (Grobler and Dunga, 2019). Poverty causes food insecurity through a failure to access sufficient and quality food that meets minimum dietary needs, and it also erodes or nullifies human rights (ADB, 2012; UN OHCHR, 2022; WFP, 2019). The leading causes of poverty have been identified as:

inequality and marginalization; conflict; hunger; malnutrition and stunting; poor healthcare systems; little or no access to clean water, poor sanitation and hygiene; climate change; absence of education; insufficient public works and infrastructure; absence of state backing; unemployment or a lack of livelihoods and reserves (Concern Worldwide, 2020). The elderly are susceptible to poverty, food insecurity, inadequate access to social and health services, and limited livelihood options, and since they are also subject to need care and protection while also supporting other more vulnerable family members in their care, family structures tend to change because of social and economic stress factors (HelpAge International, 2019).

According to WFP (2009), factors that determine urban food-insecurity in Ethiopia are; household family size, age, gender of household head, marital status, education level, dependency ratio, access to credit, ownership of saving accounts, total income per adult equivalent, food and non-food expenditure levels, possession of assets, access to social services, ownership of a home garden, access to subsidized food, sources of food, and availability and supply of food commodities. Similarly, research by Sisay (2012) in Addis Ababa urban households suggested educational status, household size, age of household head, household income, remittances, gifts and ownership of a bank account significantly determine food security. Furthermore, findings by Tesso (2015) showed that the gender, educational and marital status of the household head, household sizes, types of livelihoods and household access to credit services were factors associated with household food insecurity in Nekemte, Western Ethiopia. Similarly, Gebre (2012) showed that family size, age and education level of household head, access to credit services, possession of assets and access to employment were predictors of household food insecurity in Aksum, northern Ethiopia.

Birhane et al. (2014) in Addis Ababa found household income, possession of assets, house ownership, educational and employment status of household heads and family size affected household food security. Their analysis indicated lower monthly income was associated with food insecurity, while uneducated household heads, daily labourers and government employees were more likely to have higher food insecurity. Similarly, Tesfay et al. (2014) who studied food insecurity in rural and urban areas of Ethiopia, found urban food insecurity has become increasingly alarming due to the adverse combination of high rates of urban poverty, high dependency of urban households on food supplied by the market and fluctuating food prices. The study found urban household food insecurity was particularly

high among low-income households with low levels of education, daily labourers and household heads working in the public sector.

Yawukal et al. (2018) in Debre Markos town found; living in rented housing, being young, having low monthly incomes and poor health were key predisposing factors to food insecurity of pensioners. Atimen et al. (2021) found the illiteracy of the household head, family sizes of 4 or more, high dependency ratios, lack of access to credit, and low to medium household incomes were significantly associated with household food insecurity in Addis Ababa. Likewise, Misgana et al. (2018) found household food insecurity of pensioners was associated with household heads with low levels of education, those that were widowed, security guards, and households with a large family size. Ephrem (2015) (in Durame, Wolenchiti and Debre Sina towns) also found household annual income, source of livelihood, household size and educational status of household heads were determinants associated with food insecurity. Similarly, Motbainor, et al. (2016) in East and West Gojjam zones of Amhara Region showed that maternal education status, household family size, maternal and paternal occupation, family income, residential area, agro-ecological zones, house roofing and number of rooms, were statistically significant predictors of food insecurity.

2.5 Literature gap

There are studies in Ethiopia on urban food insecurity in the context of high food prices (Tesfay et al. 2014), urban food security and vulnerability (WFP, 2009), improving food security in urban and peri-urban areas (Senait et al. 2021), the invisible crisis of urban food security (Arega, 2020), social protection and food security studies on rural and urban Productive Safety Net Program (PSNP) (Bezawit et. al. 2021), and the household food insecurity and coping strategies among pensioners in Jimma (Misgana, 2018) and Debre Markos (Yawukal, 2018). However, there is so far no research on the food security situation and coping strategies of government pensioners in Addis Ababa, and specifically Kirkos sub-city to the best knowledge of the researcher.

2.6 Conceptual framework

According to Svinicki (2010), a conceptual framework is a set of ideas regarding the particular phenomenon and shows how parts are functioning; it lays out the main factors, constructs, or variables and relationships among them. Conceptual frameworks support researchers clarify their thoughts and conduct better research (Miles and Huberman, 1994).

The conceptual framework of this research is portrayed in figure 2.1 and incorporates four variables affecting household: food access from physical markets through financial sources like pensions, remittance, other incomes or from savings; food availability from production, reserves, imports, or food aid and utilization based on the household education and health which in turn determine the household's food security situations. The four variables in the conceptual framework are demographic, physical, socioeconomic, and institutional factors. Demographic factors comprise of age of household head, gender of household head, family size and dependency ratio. Physical factors consist of household asset ownership and availability of backyard gardens. Socioeconomic factors are annual income, pension income, remittance and support from relatives, educational level of the household head and health status. While, institutional factors include access to credit, ownership of bank accounts (savings), distance to the nearest market and food market shopping frequency.

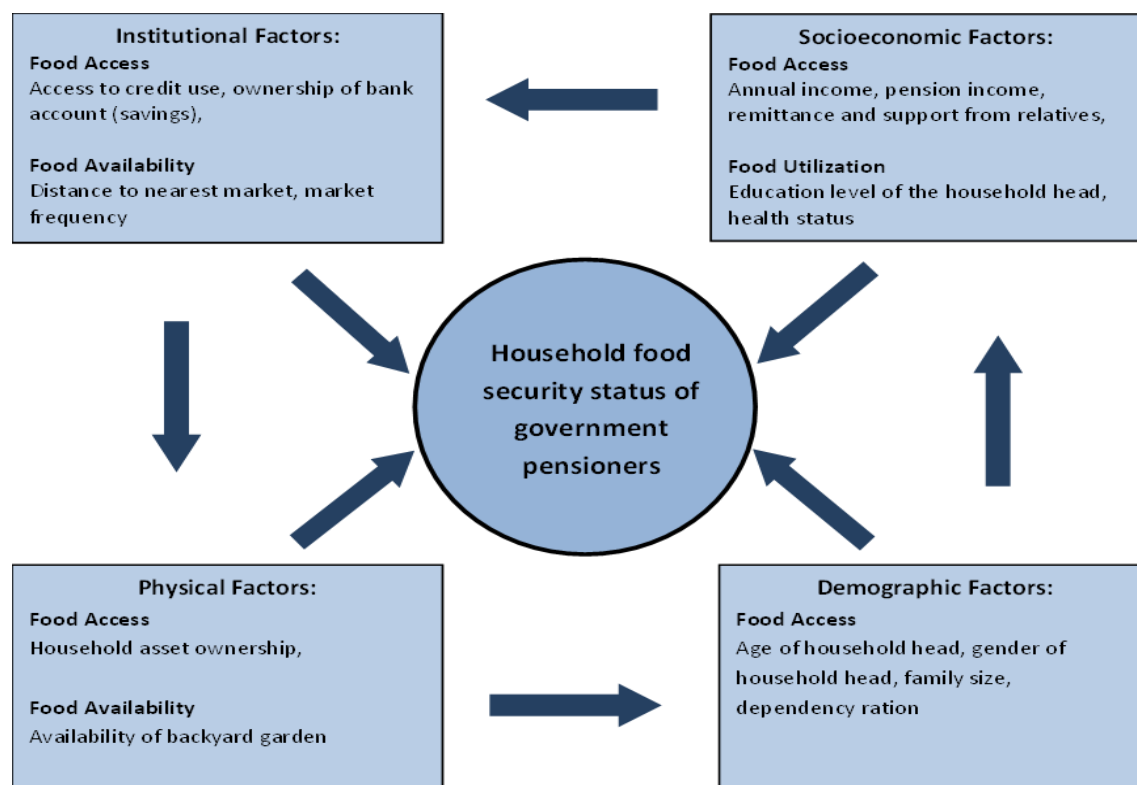


Figure 2.1: Conceptual framework of the study
(Source: developed after reviewing literature)

CHAPTER THREE: DESCRIPTION OF THE STUDY AREA AND RESEARCH METHODS

3.1 Description of the study area

Located in East Africa, Ethiopia is a country with an ancient civilization and archaeological findings dating over 3.8 million years (Yohannes, et al., 2021). Addis Ababa is the political and commercial capital, and is located in the heart of the country, at 9°2'N latitude and 38°45'E longitude (Figure 3.1). Founded in 1886, its altitude ranges from 2,300 to 3,200 meters above sea level, with the highest elevations at Entoto in the north, making Addis Ababa among the few high-altitude capitals in the world. As the preeminent diplomatic capital of Africa, Addis Ababa is the host of the African Union (AU), the United Nations Economic Commission for Africa (UNECA) and numerous diplomatic embassies.

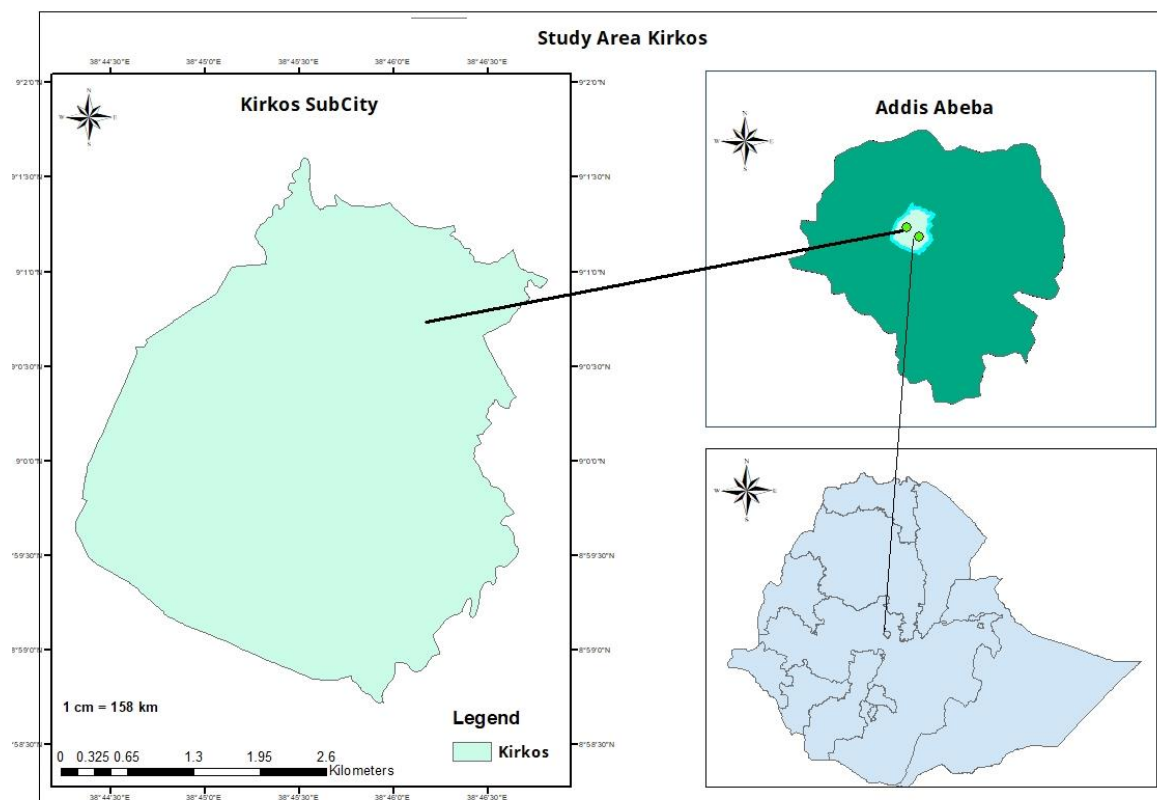


Figure 3.1: Study Area Kirkos Sub-city
(Source: developed from Geographic Information System 2022)

Addis Ababa is surrounded by mountainous terrain and covers over 527 km² with notable small rivers and streams intersecting it. Kirkos sub-city covers a total of 14.62 km². Given its

proximity to the equator and high altitude, Addis Ababa enjoys a subtropical highland climate with moderate temperatures year-round of between 11°C and 23°C on average. The main long *kiremt* rains season last from mid-June to mid-September while the shorter *belg* rains season last from March to April, which together provide on average 1,200mm annual rainfall of which 80% falls during the *kiremt* rains (NMA, 2022).

Addis Ababa is an autonomous self-administered chartered federal city within a national federal government system with an elected mayor and city-government. Accordingly, the Addis Ababa city council is accountable to both its inhabitants and the federal government. The city is sub-divided into 11 sub-cities and 121 weredas and has an estimated population of over 5 million inhabitants or a quarter of Ethiopia's urban population, of which 304,817 live in Kirkos sub-city (ESS, 2021). Addis Ababa is by far the largest metropolis in Ethiopia, dwarfing the second largest city of Adama by over tenfold (MoUDHC 2015). Addis Ababa is considered a rapidly developing city with a skyline and attractions that has seen numerous modern additions in the recent past.

Addis Ababa's population has been growing by up to 4.44% annually (World Population Review, 2022). The city has a life expectancy higher than the national average which stands at almost 67 years (Statista, 2019). Addis Ababa also hosts the largest number of public and private sector pensioners in Ethiopia. The social and physical infrastructure of the national capital has improved significantly within the past few decades but there is still a need for great improvements in terms of quality and distribution. The government's strategies behind its extensive urban investments, that integrate improvement of the urban environment with creation of economic opportunities, especially for the urban youth, have shown some promising results. However, these policies and strategies need to be evaluated, modified, or replaced based on their contribution to alleviating the chronic problems of the city (Abenet et al., 2017).

3.1.1 Economic activities in Addis Ababa

Addis Ababa hosts a multitude of different ministries, civil services, banking, educational institutions, and commerce centres. Accordingly, trade, commerce, construction, and the service sector dominate economic activity in the city. The city also has a growing manufacturing industry as well as relatively better transport and communication infrastructure as home to Ethiopian Airlines and Ethio-telecom (Government of Ethiopia,

2018). Addis Ababa has around 1,240 ha of irrigated land dedicated for vegetables using the Akaki river basin that drains most of the city's wastewater (Alebel, et. al., 2011; UNEP, 2014), and the government has recently actively begun to encourage the population at large to engage in micro home vegetable gardening to address food security concerns. The Prime Minister Abiy Ahmed has also stressed the importance of home gardens noting “regardless of the size of backyards or lack of one, home gardens are essential to bolstering urban agriculture for enhanced food security and nutrition as our cities continue to grow,” however most urban dwellers do not produce their own food in sufficient amounts but rather need to purchase these from food stalls and markets (ENA, 2022).

The recent Addis Ababa City Government Civil Servants' Position Rating, Grading and Salary Scale Regulation No. 124/2022, indicates the starting monthly base salary for their Grade 1 employees is ETB 1,100. The Addis Ababa civil servant salaries range to a maximum ceiling of ETB 26,959 for their top Grade 22 employees, the starting base salaries for their Grade 1 to Grade 6 level employees are below the World Bank designated poverty line of USD 1.9 per day or ETB 2,800 per month (Addis Negarit Gazeta, 2022).

3.1.2 Housing in Addis Ababa

Data from the World Bank (2015) indicates there is a severe housing shortage of standard quality housing in Addis Ababa despite concerted government investment in both low-cost housing and infrastructure over the last two decades that has nevertheless had notable impacts in poverty reduction. An estimated 80% of Addis Ababa's housing are slums or classified as overcrowded, dilapidated, and lacking in basic services and sanitation, with only 44% of residents having access to clean water and 30% to sewerage services (World Bank, 2015). Most of these low-cost mud houses were built by feudal landlords during the imperial reign and nationalized under the Derg regime through decree 47/1975 that rented them out at very low rates through kebele associations, consequently the current government still possesses most of these land rights in the capital (UN Habitat, 2008). This subsidized public housing assistance to the urban poor has significantly contributed to their welfare, as high housing costs limit food access among the urban poor (Cambridge University, 2021).

The acute housing issue is especially severe for poor households who account for 92% of Addis Ababa's population (Azeb, 2007). Despite notable efforts to tackle the severe housing shortage through a government led 'Grand Plan' that commenced in 2004, the rapidly

expanding population and construction of new neighborhoods has brought on new challenges in terms of creating enough affordable housing, efficient transport links, social infrastructure and jobs, that need to be addressed with multispectral expert participation engaged in different fields. The city administration has been improving slum urban areas by building more access roads, providing public toilets, and improving the public tap water supply. Moreover, the Ethiopian National Policy on Urban Development (NPUD) includes housing as a key component (MoLSA, 2012). Accordingly, the government has adopted several programmes to improve access to urban housing by moving families from poorer densely populated inner city slum neighborhoods to condominiums in the suburbs. However, most of these evicted poorer families still cannot afford the payments on these new ‘low-cost’ apartments while their old neighborhoods have been demolished and replaced by new upmarket modern housing and high-rise business districts (Habitat for Humanity, 2017), this with the influx of job-seeking rural migrants has further exacerbated the shortage of affordable low-cost housing.

3.1.3 Transportation in Addis Ababa

Currently, public transportation in Addis Ababa is provided by Anbessa buses from the city administration and other private sector transportation service providers. Buses with a nominal capacity of 50 to 100 passengers, minibuses, taxis and three wheeled auto-rickshaws ‘*bajaj*’ also provide transportation services to the community. There are flat rates for buses on each route, with rates varying from route to route. However, minibuses and *bajajs* have different regulated fares that vary with the length of the trip within bands of kilometre distances. The rates of minibuses are up to four-time higher than that of the Anbessa bus (Public Private Infrastructure Advisory Facility, 2005). The recent introduction of the two metro train lines in 2015 with a track length of 31.6 km and 39 stations provide much needed support to Addis Ababa commuters especially during the morning and evening rush hours; however, they become very overcrowded and may not be convenient for most people during these hours.

The elderly tends to make fewer journeys than other adults, and access to public transport is essential to avail themselves of goods, services, employment, and other activities. With the present generation of older people being more active than in previous generations of equivalent age, public transport will increasingly play a vital role in maintaining their active lifestyles even once they are unable to drive, hence, public transport is important to older people’s quality of life, their sense of freedom and independence (Shrestha et al. 2016).

3.2 Research design

A cross sectional research design was employed in this study. Unlike a longitudinal study, a cross-sectional research design does not follow up on individuals over time, instead it only collects data from them at a single point in time. The benefit of a cross-sectional study design is that it allows researchers to compare many different variables at the same time (IWH, 2015). The research used a mixed research approach, with both a quantitative and qualitative methodology. Accordingly, in terms of the quantitative approach, a questionnaire survey data collection technique was used, while regarding the qualitative approach a Key Informant Interview (KII) data collection technique was employed.

3.3 Data types and sources

Both secondary and primary data were used for this research. Survey questionnaires and KII data were used as primary data, while a desk review of secondary data from books, journals, reports, reviews, working papers, guidelines and internet sources were also applied during the study.

3.3.1 Questionnaire survey

To generate quantitative information at the pensioner household level, a household survey was undertaken by developing structured questionnaires. A questionnaire was created for the survey administered to gather quantitative information from sampled government pensioner households to statistically analyse responses (Kabir, 2016). Experienced and qualified enumerators with BSc degrees were selected from Addis Ababa and trained on the questionnaire. To ensure data quality and avoid redundancy, the questionnaire was pilot tested and questions with similar or overlapping results were removed and those that were vague clarified, structures were also rearranged, and more sensitive questions placed towards the end. The content validity of these tools was checked against the conceptual framework of the study, and all the questions were uploaded onto a free open mobile application called Kobo Toolbox to ensure data quality and to enable remote monitoring of the data collection process.

3.3.2 Key informant interviews (KII)

In addition to the questionnaire-based survey carried out, in depth KIIs with key personnel from PSSSA, MoLSA and Kirkos sub-city administration were conducted to provide relevant information about government pensioners in Kirkos. These in-depth face to face open ended

KIIs helped the researcher have a deeper understanding of the food security situation of the study group.

The sample size selected was made to be large enough to appropriately describe the phenomenon under investigation and address the research queries but also avoid oversized sample sizes that risked having repetitive data. The qualitative research therefore sought to attain a point of saturation, and this occurs when addition of more participants in the study would not bring about a gain in additional perspectives or information. Benjamin et al. (2018), accordingly states saturation has attained widespread acceptance as a methodological principle in qualitative research and is commonly taken to indicate that based on the data collected or analysed further data collection or analysis would be unnecessary. Therefore, in this research 6 KIIs (3 from PSSSA, 2 from Kirkos sub-city administration, and 1 from MoWSA) were conducted. The 6 KII interviewees were selected purposely to ensure detailed information on the study area and government pensioners. These KIIs provided information which might not have been collected from the questionnaire-based survey.

3.4 Sampling techniques

The sampling technique employed for this research was non-probability sampling used for both quantitative and qualitative samples. This study area conducted in Kirkos sub-city was selected purposely from the 11 sub-cities of Addis Ababa for this research. Kirkos is a sub-city located in the heart of the city and has the second largest population of government pensioners in Addis Ababa, with about 18,117 individuals. The diverse residents of Kirkos are also relatively representative of Addis Ababa inhabitants and have a wide difference in socio-economic status. Furthermore, Kirkos is also conveniently located and is relatively representative of Addis Ababa in terms of infrastructure and facilities. Here, snowball sampling was used in both the quantitative and qualitative research, which relied on the social networks of the participants to gather participants for the study (Allen, M., 2017). Snowball sampling is usually used for explorative research where researchers do not have much prior information, it commences by finding respondents that satisfy the selection conditions for inclusion in the study and then lead the researcher to other respondents and hence proceed further in the study. Snowball sampling is suitable when the study participants or groups are unreachable or difficult to find (Singh, 2007). The Snowball sampling method was used as the official list of names of the observants was unattainable from the PSSSA due to their

confidentiality policy. The data collected for this sampling technique was both qualitative and quantitative in nature.

Snowball sampling has a sampling bias and margin of error, since people refer others whom they know and these might have similar traits.

Yamane (1967) provides a simplified formula to calculate sample sizes.

$$n = N / (1 + N(e)^2)$$

Where, n- is the sample size

N- population size

e- margin of error

Since similar studies were unavailable, the population proportion estimate was taken to be 50%, at a 93% confidence level and 7% margin of error. Therefore, this research was carried out based on a total sample size of 230 study participants.

$$\begin{aligned} n &= N / (1 + N(e)^2) \\ &= 18,117 / (1 + 18,117(0.07)^2) \\ &= 18,117 / (1 + 18,117(0.0049)) \\ &= 18,117 / 90.7733 = 199.58 \end{aligned}$$

Survey studies usually have non-sampling (non-response) errors due mainly to defective definitions of important variables, failure to and bias of respondents, coverage and compiling error of the researcher. Researchers are, therefore, advised to oversample by between 10% to 20% of the computed number of samples based on their anticipation of such discrepancies (Naing et al., 2006). Accordingly, the total estimated sample size considering a 15% contingency worked out to be 230 participants.

3.5 Tools of data collection

The tool used for the quantitative data collection technique was a questionnaire survey and for the qualitative aspects a KII guide was developed first in English and then translated into Amharic. The respondents were interviewed by experienced data collectors, who were also trained by the researcher on the data collection tools and procedures to be used during data collection and on how to first obtain consent from the pensioners. The overall data collection activity was controlled, and all completed questionnaires were examined every day for completeness and consistency by the researcher.

The quantitative data gathered for in this study involved the collection of information through a structured questionnaire administered to sampled households in Kirkos sub-city in Addis Ababa. According to Cohen et al. (2000), there is no universal law for determining an optimum sample size since it depends on the purpose of the study and the nature of the population under study. Accordingly, in determining the sample size for the present study a workable sample of 230 households was decided upon as there was no previous related research and due to limitations on available resources in terms of finances, human resources and time.

3.6 Techniques of data analysis

Data for this study was generated and analysed through qualitative and quantitative techniques. The information generated from KIIs were analysed qualitatively, while quantitative data generated from the household survey were coded and entered into the computer-based Stata software. Descriptive statistics were used to analyse data, expressing and testing assumed relationships between variables. Apart from frequency distributions, measures of central tendency such as the mean, minimum, maximum, and standard deviation were used to describe the data.

To estimate the respondent food security status, Household Food Insecurity Access Scale scores (HFIAS) and their Food Consumption Scores (FCS) were computed. Multiple measures of food security were also used to understand slightly different aspects of the issue. To analyse household coping strategies during food shortages their Coping Strategies Index (CSI) was computed. As food security is a broad and complex concept which is determined by the interaction of a range of agro-physical, socioeconomic, and biological factors. Like the concepts of health or social welfare, there is no single, direct measure of food security. However, the complexity of the food security problem can be simplified by focusing on three distinct, but interrelated dimensions of the concept as mentioned above: food availability, food access, and food utilization (FANTA 1999). Food consumption information use indicators as a proxy for actual caloric food intake and diet quality. Such proxies generally include information on dietary diversity and food frequency (WFP, 2008). Food access is determined by the purchasing power of households, efficiency of markets, infrastructural facilities, and social support. Hence, efficient allocation and utilization of resources determine household food supplies and access to resources plays a key role in promoting food security or increasing vulnerability to food insecurity (Debebe, 1995).

3.6.1 Household Food Insecurity Access Scale score (HFIAS)

The HFIAS score was developed between 2001 and 2006 by the USAID-funded Food and Nutrition Technical Assistance II project (FANTA) in collaboration with Tufts and Cornell Universities and other partners (Ballard et al., 2011). HFIAS is a simple and manageable method for measuring the access component of household food insecurity (Coates et al., 2007). The HFIAS indicator is computed from a short survey of a household's behavioural and psychological manifestations of insecure food access, where for example due to a lack of resources households decrease the number of meals or reduce the quality of the food they consume. The responses to the survey therefore enable the researcher to pinpoint a particular household on a spectrum that indicates the degree of severity of insecure food access (Ballard et al., 2011).

The HFIAS score uses a 30-day recall period and is made up of nine "occurrence" and nine "frequency-of-occurrence" questions. The respondents were first asked if they experienced a given condition (yes or no), and if yes, then they were asked at what frequency (rarely, sometimes, or often). The resulting responses were then transformed into a continuous or categorical indicator of food security. When a continuous indicator was used to calculate HFIAS, each question was scored from 0-3, where 0 was the lowest frequency of occurrence and 3 was the highest, and then the scores for each were added together. Therefore, the total HFIAS scorings would range from 0 to 27, thereby representing the level of the household's insecure food access, and as recommended by Coates et al (2007) the households were then categorized as categorical variables in terms of food secure, mildly food insecure, moderately food insecure, or severely food insecure. Households that responded affirmatively to the more severe behaviours (or experienced them more frequently) were also classified as more severely food insecure as suggested by Coates et al (2007).

Household Food Insecure Access Categories

HFIA Category 1 will be if [(Q1a=0 or Q1a=1) and Q2=0 and Q3=0 and Q4=0 and Q5=0 and Q6=0 and Q7=0 and Q8=0 and Q9=0].

HFIA Category 2 will be if [(Q1a=2 or Q1a=3 or Q2a=1 or Q2a=2 or Q2a=3 or Q3a=1 or Q4a=1) and Q5=0 and Q6=0 and Q7=0 and Q8=0 and Q9=0].

HFIA category 3 will be if [(Q3a=2 or Q3a=3 or Q4a=2 or Q4a=3 or Q5a=1 or Q5a=2 or Q6a=1 or Q6a=2) and Q7=0 and Q8=0 and Q9=0].

HFIA category 4 will be if [Q5a=3 or Q6a=3 or Q7a=1 or Q7a=2 or Q7a=3 or Q8a=1 or Q8a=2 or Q8a=3 or Q9a=1 or Q9a=2 or Q9a=3].

(NB: see Annex III for the HFIA questionnaire used)

3.6.2 Food Consumption Score (FCS)

Food consumption patterns are important indicators of the food security status of households. Those who frequently consume a wide variety of foods (from different food groups) are assumed to be more food secure than people who endlessly consume the same foodstuff. To assess food consumption patterns of the sampled government pensioner households in the study area, information on their dietary diversity and the consumption frequency of foods was analysed. WFP (2008) notes that dietary diversity is a good proxy indicator of household per capita consumption and household per capita caloric intake, both of which are measures of the “food consumption” component of food security. Based on the number of days a food item was consumed by the respondents during the previous seven days before the assessment, a “food consumption score” (FCS) was calculated by examining the number of times certain basic food groups were consumed, and then weighting them by approximate nutrient density values. WFP has created a custom dietary diversity tool intended to capture different consumption patterns in terms of both the number and frequency of food groups consumed. The eight food group categories and their corresponding weights were classified (see Annex IV). The food consumption groups encompass starches, pulses, vegetables, fruit, meat, dairy, fats, and sugar. To capture the dietary habit of the sampled households, a seven-day recall period was used which further reduced the risk of selection bias. Frequency of consumption and weights attached to each food group were used for computing the FCS. A household’s FCS was estimated using a typical seven-day food dataset through categorizing food items into food groups and subsequently adding the consumption frequency of food items belonging to that particular group. The FCS was calculated by multiplying the number of days in a week that a household consumed a given food group by the food group’s weight, and finally summing these values. The FCS could range from a score of 0 to 112, where indicators of 21 or less were considered “poor”, those between 21.5 and 35 were “borderline” and indicators showing greater than 35 were “acceptable” (Vhurumuku, 2014), and therefore households with higher FCS were considered more food secure.

3.6.3 Coping Strategies Index

Although the Coping Strategies Index (CSI) is a relatively quick and simple measure of household food security it correlates well with more complicated indicators of food security. The CSI is composed of a sequence of questions on how households cope with a deficit in food for consumption and this results in a tabulated score. Therefore, monitoring variations in household CSI scores could show whether their food security status was improving or worsening. The research attempted to identify different coping mechanisms used to mitigate household food shortages of the sampled government pensioner households facing food insecurity. Usually, individuals respond in numerous ways when coping to situations under which they do not have sufficient food to eat. These coping strategies could range from the extreme strategies such as selling household assets, sometimes not eating for whole days, reducing the number of meals consumed in a day, reducing consumption during each meal, increasing consumption of street food, and consuming lower quality less preferred cheap foods. Therefore, in principle the more people had to implement these coping strategies, the less food secure they were. Accordingly, the research used consumption related and asset based coping strategies for this, as suggested by Daniel and Richard (2008).

3.6.4 Ordered logit regression

The ordered logistic regression analytical framework was appropriate for modelling 4 variables, as HFIAS classified household food access into four categories; food secure, mildly food secure, moderately food insecure and severely food insecure households. The ordered logistic regression model then provided a framework for detecting the likelihood of being food secure or otherwise by a household. By using the HFIAS score as a dependent variable, the determinants of the household's food security status were then estimated by means of an ordered logistic regression model.

3.6.5 Multiple logit regression (MLR)

Like all model-building techniques, multiple logit regression (MLR) seeks to attain the “best-fitting, most parsimonious (smallest or most efficient), and reasonable model to describe the relationship between an outcome and a set of predictors” (Hermine et al., 2011). Here, the independent variables were considered as covariates, and the predictor variables could be of any data level (continuous, categorical, or ordinal). More importantly, this technique was used to examine a series of predictor variables to determine those that best predicted a certain outcome

3.7 Study variables

3.7.1 Dependent variable

Household food security was considered as the dependent variable.

3.7.2 Independent variables

Age (AGE): This was defined as the period from the pensioner's birth to the time of the interview and was measured in years. According to WFP (2009) age is a determinant of urban food insecurity. It was considered a continuous variable. This Variable has been categorized as 45-54, 55-64, 65-74, 75-84 and 85-95. In this study, age and food security were hypothesized to be related negatively.

Gender (GEN): This was either of the two sexes (male and female). This was a dummy independent variable indicating sex of pensioner. It was represented by 1 for females and 0 for males. Ayenew et al. (2020) showed female-headed households had 1.94 (95% CL) times the odds of developing food insecurity as compared with male-headed households in Ethiopia. It was hypothesized that gender would affect the dependent variable negatively.

Marital Status (MS): Marriage was considered as a legal and social engagement of partners to support each other both socially and economically. Marriage is established with a view of helping each other and married people pool their resources and also reduce costs that would have been spent separately. Moreover, it is more likely for households with married couples to save some resources for future unforeseen circumstances or contingencies. Single headed households were 4 times more likely to be food insecure compared with married headed households in Wolaita Sodo town (Abraham et al. 2017). In this study marriage and food security were hypothesized to be related positively. This was a categorical variable.

Household Size (HS): Household size refers to the total number of household members who live and consume from the same household and is expressed in adult equivalent. According to Bashir et al. (2012), in Punjab Pakistan an increase of one member in the household decreased the chances of food security by 31%. Similarly, Alem et al. (2018) also indicates that households with larger family sizes were more likely to be food insecure than their counterparts with smaller families in south Wollo, Ethiopia. Family size was a discrete variable measured in terms persons living together in the household. This independent variable would affect the dependent variable negatively. Hence, it was hypothesized that the

increase of the family size would have a negative influence on the food security of the households. This was a discrete variable.

Education (EDU): This refers to the education status of the pensioner. Education equips individuals with the necessary knowledge of how to make a living. Being moderately or severely food insecure decreases with increased level of education; higher educational attainment has a positive effect on food security (Mutisya et al. 2016). Education was a categorical variable. This independent variable would affect the dependent variable positively. The unit of measure is primary, secondary and university.

Remittances (RMT): This was a sum of money sent by someone working abroad to his or her family back home here in Ethiopia. Remittances lower the frequency and the severity of coping strategies, and households with remittances have lower anxiety about not being able to procure sufficient food; higher ability to secure adequate quality food; and lower experience of insufficient quantity of food intake than those without remittance (Nigussie et al., 2018). This independent variable would affect the dependent variable positively. It was represented by 1 for yes and 2 for no.

Additional Income Source (AINC): This is the assistance and provision given to the household in the form of money, food or other valuable things. Social support and social cohesion reduce the risk of food insecurity, reduce the risk of remaining food insecure, and reduce the risk of becoming food insecure. Social control has an indirect effect on food insecurity, which is mainly through social cohesion. Social participation also has an indirect effect through social support and social cohesion (King, 2017). This independent variable would affect the dependent variable positively. This was a categorical variable which the support is either in monetary value, in kind or both.

Pension Income (PEN): This was the amount of pension received monthly. In research conducted by Leroux et al. (2018) the causes of food insecurity were found to be closely interrelated to poverty and social policies, whereas social protection supplements to income like pensions were found to have significantly lowered food insecurity in the elderly population segment. This independent variable would affect the dependent variable positively. This was a continuous variable.

Total Income (INC): This was the total amount of income a household earned in a month. Jensen et al. (2013) and Sharkey et al. (2011) showed the risk for food insecurity increased when money to buy food was limited or not available. Jensen et al. (2017) also showed that 31.6% of low-income households in America were food insecure, compared to the national average of 12.3%. This was a continuous variable. It was hypothesized that this variable would have a positive relation with food security.

Chronic Health Disease (CHD): This denoted the wellness of the household members. This independent variable would affect the dependent variable positively if family members are healthy. This was a dummy variable. It was categorized as a family member who has a chronic disease as 1 or not as 0.

Wealth (WLT): This was the legal ownership of material assets that were held by the household. Gebre (2012) in Addis Ababa showed that possession of assets was a predictor of household food insecurity. This independent variable would affect the dependent variable positively. This was a categorical variable. The unit of measurement is wealth quantiles which are wealthiest, wealthy, middle, poor and poorest quintiles.

Backyard Farming (BFM): This was the presence of an area in the compound of a house to plant different vegetables, fruit trees or rear small livestock. This independent variable would affect the dependent variable positively. Galhen et al. (2013) found that the inclusion and promotion of home gardens as an eco-friendly sustainable agricultural practice improved food security and enhanced economic growth. This independent variable would affect the dependent variable positively. This was a dummy independent variable indicating the presence of a backyard garden. It was represented by 1 for garden and 0 for no garden.

Credit (CRE): Credit is an important source of investment for expansion of income through different income generation activities. It was a dummy variable that takes a value of 1 if households have access to credit and 0 otherwise. It was hypothesized that access to credit would positively affect the household food security by increasing the income of households through income generation activities.

Saving (SAV): This referred to the pensioner regularly and purposefully setting aside a portion of income in a bank account, and not spending it on current expenditures, so that it is

available when needed to pay household bills and other expenses. Using empirical data from the Southern African Development Community Machili (2021) shows financial inclusion is associated with improved food security in terms of lower prevalence of undernourishment and increased average dietary energy consumption. This was a dummy independent variable indicating ownership of a bank account used for savings by the household head. It was represented by 1 for saving and 0 for not. This independent variable would affect the dependent variable positively.

Distance to Nearest Market (DIS): This denoted the distance of the marketplace to the house of the pensioner. Distance to market increases the cost of transportation, time involved and physical effort of the household to attain food supplies. This independent variable would affect the dependent variable positively if the market distance is close. It was a continuous variable measured in kilometres which are stated as: < 0.5km, 0.5km to 1km and >1km.

Market Shopping Frequency (MFQ): This is the number of times that a pensioner household member makes a purchase within a month period of time. This independent variable would affect the dependent variable negatively if the market shopping frequency is high. The poor usually buy small quantities of food, their market shopping frequency will be high (Garrett, 2000). This was a categorical independent variable represented by: once a month, twice a month, three times a month, four to seven times a month, and more than seven times a month.

Housing (HSE): Housing refers to the building structure used by the pensioner's household to live in. This independent variable would affect the dependent variable positively if the pensioner owns a house. This was a dummy independent variable represented by 1 for rent and 2 for own.

Table 3.1: Summary of independent variables

Variable	Description	Value Labels	Variable Type	Expected Sign
AGE	Age of pensioner	45-54	Continuous	-
		55-64		
		65-74		
		75-84		
		85-95		
GEN	Gender of the pensioner	Male	Dummy 1 for female and 0 for males	-
		Female		

MS	Marital status of the pensioner	Single/never married	Categorical	+
		Married		
		Divorced/Separated		
		Widowed		
HS	Number of family members in pensioner's household	1 to 2	Categorical	-
		3 to 4		
		5 to 6		
		7 to 8		
EDU	Education level of the pensioner	Primary School	Categorical	+
		Secondary School		
		University		
RMT	A sum of money sent by someone working abroad to the pensioner's household	Yes	Dummy 1 for yes and 2 for no	+
		No		
AINC	The assistance and provision given to the pensioner from family and/or others in the form of money, in kind or both	Money	Categorical	+
		In Kind		
		Both		
PEN	The amount of pension received monthly	450-1000	Continuous	+
		1001-2000		
		2001-3000		
		3001-6000		
INC	The total amount of income the pensioner earns monthly	600-4000	Continuous	+
		4001-6000		
		6001-8000		
		8001-10000		
		10001-27000		
CHD	The wellness of the household members	Yes	Dummy 1 for yes and 2 for no	+
		No		
WLT	Legal ownership of material assets	Wealthiest Quintile	Categorical	+
		Wealthy Quintile		
		Middle Quintile		
		Poor Quintile		
		Poorest Quintile		
BFM	The presence of an area in the compound of a house to plant different vegetables, fruit trees or rear small livestock	Yes	Dummy 1 for yes and 2 for no	+
		No		
CRE	Pensioner has access to credit	Yes	Dummy 1 for yes and 2 for no	+
		No		
SAV	Pensioner has savings	Yes	Dummy 1 for yes and 2 for no	+
		No		
DIS	The closeness of the food marketplace to the pensioner's house	< 0.5Km	Continuous	+
		0.5Km -1Km		
		>1Km		
MFQ	The number of times that a pensioner household member makes food purchases in a given month	Once a month	Categorical	-
		Twice a Month		
		Three Times a Month		
		Four to Seven Times a Month		
		>Seven Times a Month		
HSE	A building structure that	Rent	Dummy 1 for rent	+

	provides shelter or accommodation.	Own	and 2 for own	
--	------------------------------------	-----	---------------	--

3.8 Data validity and reliability

This research placed great emphasis and used concepts of reliability and validity to ensure the quality of the methodology and techniques deployed during the entire process to produce stable and consistent results. Hence, through reliability procedures the research ensured the data gathered were complete and accurate, while also ascertaining the quality and accuracy of the source data were valid prior to utilizing them. Accordingly, all data underwent a thorough cleaning exercise before processing and analysing to ensure their validity, while the results from the gathered data were compared with outcomes from other similar research data or relevant theories to ensure their reliability.

CHAPTER FOUR: RESULTS AND DISCUSSION

This chapter presents the results of the research. The first section summarizes the results using descriptive statistics such as percentages and frequencies to describe the socioeconomic and demographic characteristics of the sample households. The second section focuses on measuring food security using the Household Food Insecurity Access Scale to determine the food security status of the sampled government pensioner households in the study area and the relationship between explanatory variables; it also looks at their Food Consumption Scores. The third section of this chapter describes the coping strategies of the sampled households in the study area. The fourth and final section of this chapter highlights the determinant indicators which had statistically significant effects on household food security.

4.1 Respondents demographic and economic characteristics

A range of basic demographic and economic characteristics data was collected from the surveyed government pensioners. The data collected included their age, gender, marital status, household size, education, remittances, monthly pension amount, total monthly income, savings, monthly healthcare expenses, wealth quintile, monthly food expenses, current occupation, housing, availability of backyard garden, access to credit, distance to food market and their food shopping frequency.

4.1.1 Respondents demographic characteristics

The data analyse of the socio-economic characteristics of government pensioners in the study area shows: 43.48% were between 65-74 years old; 38.26% were between 55-64; 14.78% were between 75-84; and only 1.74% were either between 45-54 or 85-95 years old respectively (Table 4.1). The majority of the respondents, 61.74% were male, while 38.26% were female pensioners (Table 4.1). The majority or 53.48% of the respondents were married, 33.91% were widowed, 9.57% were divorced or separated and only 3.04% were never married (Table 4.1). The findings also show that 56.41% of the widowed and 68.18% of the divorced or separated respondents were female. In terms of educational status, most or 40.43% of the respondents had completed secondary school; 30.87% had attended primary school and 28.7% had attended university (Table 4.1). However, most of the pensioners or 77.39% do not currently work, while 11.74% are employed as service workers or operatives, 6.96% are self-employed, 2.17% work as technicians or craft or clerical workers and only 1.74% are either managers or professionals (Table 4.1).

Table 4.1: Respondents demographic characteristics

Variable	Category	Frequency	Percentage
Age	45-54	4	1.74
	55-64	88	38.26
	65-74	100	43.48
	75-84	34	14.78
	85-95	4	1.74
Gender	Male	142	61.74
	Female	88	38.26
Marital Status	Single/never married	7	3.04
	Married	123	53.48
	Divorced/Separated	22	9.57
	Widowed	78	33.91
Family Size	1 to 2	28	12.17
	3 to 4	126	54.78
	5 to 6	69	30
	7 to 8	7	3.04
Education Level	Primary School	71	30.87
	Secondary School	93	40.43
	University	66	28.7
Current Occupation	Not Working	178	77.39
	Operatives and Service Workers	27	11.74
	Self Employed	16	6.96
	Technicians, Craft and Clerical workers	5	2.17
	Managers and Professionals	4	1.74
Own house	Rent	140	60.87
	Own	90	39.13
Own toilet	Yes	113	49.13
	No	117	50.87

Age and education have a statistically significant relation with pensioners currently working with a chi square p value of 0.001 for both. The mean family size of the pensioner households was 3.961 members with a standard deviation of 1.365 and a range from 1 to 8 family members (Table 4.1), these figures are similar to the EDHS (2019) average urban household size of 4.1 and the national average of 4.7 members.

Age distribution in the respondent households show that 11.91% of their family members were children under the age 15 years, while 27.18% of the household members were elderly aged 65 and older (Table 4.1). This gives a total dependency ratio of 39.08% (Table 4.2).

Table 4.2: Respondents age dependency ratio

Dependency Ratio	Ratio (Percent)
Total Dependency Ratio	39.08
Child Dependency Ratio	11.91
Aged Dependency Ratio	27.18

In the sampled pensioner households there were 78 household members below 15 years of age. There were 655 household members from 15 to 64, and 178 household members above 64 years. Accordingly, to find the child dependency ratio this was calculated as $\frac{\text{members} > 15}{\text{members} 15 \text{ to } 64} \times 100$ and to find the aged dependency ratio this was calculated as $\frac{\text{members} > 64}{\text{members} 15 \text{ to } 64} \times 100$.

4.1.2 Respondent economic characteristics

The monthly average pension amount received by the sampled respondents was ETB 1,854.14 (Table 4.3) or USD 1.19 per day, significantly less than the World Bank international poverty line of USD 1.9 per day or ETB 2,964 per month (USD 1 = ETB 52), but slightly higher than the Kirkos sub-city pension average amount of ETB 1,652.43 (KII 2, 2022)¹. The monthly pensions ranged from the lowest ETB 450 to the highest of ETB 5,485 and had a standard deviation of 895.23 (Table 4.3 and 4.4).

Table 4.3: Respondents economic characteristics

Variable	Category	Frequency	Percentage
Monthly Pension	450-1000	47	20.87
	1001-2000	89	38.7
	2001-3000	70	30
	3001-6000	24	10.43
Monthly Total Income	600-4000	78	33.91
	4001-6000	78	33.91
	6001-8000	35	15.22
	8001-10000	19	8.26
	10001-27000	20	8.7
Monthly Savings	0-49	130	57%
	50-100	27	12%
	101-1000	69	30%
	1001-5000	4	2%
Monthly Food Expenses	500-2000	51	22.17
	2001-4000	151	65.65
	4001-6000	25	10.87
	6001-8000	2	0.87

¹ Kirkos sub-city PSSSA

	8001-10000	1	0.43
Monthly Health Expenses	150-1000	58	78.38
	1001-2000	13	17.57
	2001-3000	3	4.05
Wealth Quintiles	Wealthiest Quintile	48	20.87
	Wealthy Quintile	45	19.57
	Middle Quintile	45	19.57
	Poor Quintile	47	20.43
	Poorest Quintile	45	19.57

To gain insight into the respondent's household expenditure patterns, they were asked to provide their top-three monthly expenses. They listed these in order from a list comprising of: food, utilities (electricity and water), transport, housing, health, children school fee and social life. The results obtained revealed that food was the largest household expenditure on average for 93.66% of the households, and their spending on food ranged from ETB 500 to 10,000 per month. This corresponds with assertions from Tacoli (2017) who suggests, income poverty is the primary cause of urban food insecurity, usually because urban residents purchase much of their food, which is in many cases their largest household expenditure. Furthermore, 32.17% of the sampled respondents had a member in their household with a chronic disease and 78.38% of them spend between ETB 150 to 1,000 per month on medical bills, 17.57% spend ETB 1,001 to 2,000 while 4.05% spend between ETB 2,001 to 3,000. This average monthly household medical expense was ETB 808.10 (Table 4.3).

Table 4.4: Analysis of respondents monthly pension

Percentiles		Smallest	
1%	600	450	
5%	675	560	
10%	813	600	Obs 230
25%	1168	614	Sum of Wgt. 230
50%	1648.5		Mean 1854.143
		Largest	Std. Dev. 895.2265
75%	2493	3712	
90%	3138	4528	Variance 801430.6
95%	3400	4663	Skewness .7478663
99%	4528	5485	Kurtosis 3.422674

Nearly all sampled respondents in the survey population, or 96.09% (Table 4.5), claimed their monthly pension was not enough to meet their household basic needs. These basic needs included expenditures for food, rent, healthcare, water, and electricity. Only 3.91% of respondents felt their pension was enough to meet their basic household needs.

Table 4.5: Pension sufficiency to meet respondent basic household needs

Pension is sufficient for basic HH needs	Freq.	Percent
Yes	9	3.91
No	221	96.09
Total	230	100

For the purposes of this research, the respondent's total household income included their pensions, income from work and remittances or contributions from their family members. It was observed the respondents were not eager to reveal their financial incomes or sources; perhaps they did not want to disclose this or were not able to correctly estimate their household incomes by month. Similarly, Maxwell, et al., (2000) notes questions related to incomes are usually sensitive in urban household surveys. In the survey, 33.91% of the respondents had a total monthly income between ETB 600 to 4,000, a similar proportion or 33.91% had income between ETB 4,001 to 6,000, 15.22 % had income between ETB 6,001 to 8000, 8.26% had incomes from ETB 8,001 to 10,000, and 8.7% of the respondents had total monthly incomes over ETB 10,001 (Table 4.3). The average monthly household income of the respondent households was ETB 5,564.47 or USD 3.6 per day. The monthly incomes ranged from ETB 614 to ETB 26,147 and had a standard deviation of ETB 3,897.26 (Table 4.6). Consequently, although total household income figures raised most households just above the World Bank poverty line, there were still a significant portion of respondents with very low total incomes.

Table 4.6: Analysis of respondents total monthly income

Percentiles	Smallest			
1%	712	614		
5%	1000	631		
10%	1461.5	712	Obs	230
25%	3300	714	Sum of Wgt.	230
50%	4850		Mean	5564.474

		Largest	Std. Dev.	3897.262
75%	6700	21000		
90%	9601	21500	Variance	1.52e+07
95%	12375	24663	Skewness	2.204614
99%	21500	26147	Kurtosis	10.31318

Unlike the poverty line a wealth index is an indicator of relative wealth and therefore cannot be an absolute measure of poverty. Hence it is a measure of households being either poorer or wealthier relative to each other and should not be an indicator to necessarily designate individual households as absolutely poor or wealthy. A wealth index classifies a population into five equal quintiles according to their relative wealth (WFP, 2017). Accordingly, using the Principal Component Analysis (PCA), the sampled government pensioners were split into five quintiles based on the level of their wealth or assets into: the ‘poorest’, ‘poor’, ‘middle’, ‘wealthy’ and ‘wealthiest’. The most common type of assets owned by the respondents were mobile phone with 100% ownership, charcoal stove at 97.83%, bed at 96.96%, television at 90.43%, sofa set at 63.48%, table and chair at 62.61%, refrigerator at 50.43%, and radio at 46.09% of the households (Table 4.7). Hardly any respondent owned a transportation asset, with only 1.74% having a bicycle and 2.61% owning a car (Table 4.7).

Table 4.7: Respondents household asset ownership

Household Asset Ownership	Freq.	Percent
Mobile Phone	230	100
Bed	223	96.96
Sofa Set	146	63.48
Chairs	143	62.17
Tables	191	83.04
Television	208	90.43
Radio	106	46.09
Refrigerator	116	50.43
Cylinder	7	3.04
Electric stove	199	86.52
Kerosene stove	26	11.3
Charcoal stove	225	97.83
Washing machine	25	10.87
Bicycle	4	1.74
Bajaj	3	1.3
Car	6	2.61

Elderly pensioners above 64 years are usually considered a sedentary non-productive age group in society and accordingly only 28.26% of respondents in this category responded they were currently capable of actively working, while as expected in younger respondents in the 55-64 age bracket 71.59% responded that they were capable of working (Table 4.8). The results also show that 47.18% of the total male respondents reported that they were currently capable of working while only 39.77% of the female respondents reported that they were currently capable of actively working (Table 4.9). This finding is supported by the implicit or activity theory of ageing, as postulated by Havighurst (1961). This theory assumes sustaining a high level of activity and social interactions is essential for satisfaction among the older adults as they age. The implicit theory, however, implies a direct correlation between the active social and economic contributions older adults make and their satisfaction with life. This theory advocates for sustained social involvement and psychological engagement for the elderly, while they adjust to activities suitable to their physiological, psychological, and social circumstances.

Table 4.8: Respondents capable of working by age bracket

Age	Currently Capable of Working		
	Yes	No	Total
45-54	0	4	4
55-64	63 (71.59%)	25 (28.41%)	88
65-74	37	63	100
75-84	2	32	34
85-95	0	4	4
Total	102	128	230

Table 4.9: Respondents currently capable of working by gender

Gender	Currently Capable of Working		
	Yes	No	Total
Male	67	75	142
Female	35	53	88
Total	102	128	230

These findings have implications in terms of the implicit or activity theory of ageing, as postulated by Havighurst (1961). For the inability of sustaining a high level of activity or work and social interactions by those who claim they are still capable of working may have negative repercussions on their satisfaction of life as they age.

“Retirees can be very good mentors to younger personnel as they have a lot of knowledge and experience that they can transfer. In addition, retirement can be a difficult period and before public servants go on retirement, counselling should be made available in order for them not to be depressed and adjust to the next phase of their lives ... they could get involved in some appropriate income generating activities suitable for them in order to stay active and generate additional income to supplement their pensions” (KII 1, 2022)².

However, as pensioners are regarded as having the security of their pensions, they are omitted from pro-poor government livelihood incentives.

“In terms of creating employment or livelihood opportunities, unlike the national PSNP Public Works for qualifying beneficiaries under 59 years, or for those above 59 years covered by the PSNP Direct Support, former government employees with pensions do not qualify for these pro-poor programs ... households who have incomes are excluded from PSNP despite them having low incomes” (KII 4, 2022)³.

“It is not the mandate of the PSSSA to either create income opportunities or reassign pensioners to different job positions despite our research data showing some retirees responded that they were still active, willing, and capable of working” (KII 3, 2022)⁴.

The majority, or 60.87%, of the respondents are living in rental houses while the remainder 39.13% live in their own houses (Table 4.10). A significant portion of the rental houses are relatively cheaper subsidised kebele and Kiray Betoche houses subsidised by the government. A significant portion of the respondents, 82.17%, live in a house with 3 or less rooms (Table 4.10). While about half of those surveyed, or 50.87%, responded they did not have their own independent toilet, but rather had access to communal facilities. However, the *“PSSSA undertakes cross-cutting activities like supporting low-income pensioners by renovating their deteriorated houses” (KII 3, 2022)⁴.*

² MoLSA Directorate Director for Senior Citizens and Family Affairs

³ Kirkos sub-city Head of Urban PSNP

⁴ PSSSA Head of Planning and Strategy

Table 4.10: Respondents housing

Numbers of rooms in house	Own or Rent House			
	Own	Rent	Total	Percentage
1	3	37	40	17.39
2	23	76	99	43.04
3	26	24	50	21.74
4	23	2	25	10.87
5	9	1	10	4.35
6	5	0	5	2.17
8	1	0	1	0.43
Total	90	140	230	100

The survey revealed that 57% of the respondent pensioners do not save any money (Table 4.11), despite all of them having bank accounts to receive their monthly pensions. Among the households that do save, the average value of the monthly saving was ETB 968.75 while the highest amounted to ETB 5,000 (Table 4.11). Education has a statistically significant relation with the pension amount, wealth and savings with a chi square test.

Table 4.11: Respondents monthly savings

Monthly Savings	Freq.	Percent
0-49	130	57
50-100	27	12
101-1000	69	30
1001-5000	4	2
Total	230	100

4.2 Respondent food security status

This section focuses on measuring the level of food security of the sampled government pensioners in Kirkos sub-city using the Household Food Insecurity Access Scale (HFIAS), their Food Consumption Scores (FCS) that measures dietary adequacy and determining the relationship between explanatory variables.

4.2.1 Household Food Insecurity Access Scale (HFIAS)

HFIAS categorized the respondents into four levels of food insecurity, from: food secure; mildly food insecure, moderately food insecure and severely food insecure. The data collected indicates the majority, or 92.61%, of the surveyed pensioners were food insecure (Table 4.12) as they did not have an adequate supply of optimal diets for their household

members. Consequently, only 7.39% (Table 4.12) of the surveyed pensioner households reported being food secure. These latter households had experienced none of the food insecurity conditions, or just experienced worry, but rarely.

Table 4.12: Respondents HFIAS category summary

HFIAS Category	Freq.	Percent
Food Secure	17	7.39
Mildly Food Insecure	32	13.91
Moderately Food Insecure	95	41.3
Severely Food Insecure	86	37.39
Total	230	100

Of the sampled respondents, the data indicates 37.39% (Table 4.12) of the households were severely food insecure. These households within the past 30 days of the survey had resorted to cutting back on their meal sizes or the number of meals they consume a day, often, and/or had experienced any of the three most severe food insecure conditions: running out of food, going to bed hungry, or going a whole day and night without eating. Additionally, 41.3% (Table 4.12) of the households surveyed were reportedly moderately food insecure. These households sacrificed the quality of the food they consumed more frequently, by eating a monotonous diet or consuming undesirable foods sometimes or often, and/or had started to cut back on quantity by reducing the size of meals or number of meals, rarely or sometimes. However, this category did not experience any of the three most severe food insecure conditions mentioned above. Furthermore, 13.91% (Table 4.12) of the pensioner households reported being mildly food insecure. These households had worried about not having enough food sometimes or often within the last 30 days from the survey, and/or were unable to eat preferred foods, and/or ate a more monotonous diet than desired and/or some foods were considered undesirable, but only rarely. But this group did not cut back on the quantity of food consumed nor experienced any of the three most severe food insecure conditions of running out of food, going to bed hungry, or going a whole day and night without eating.

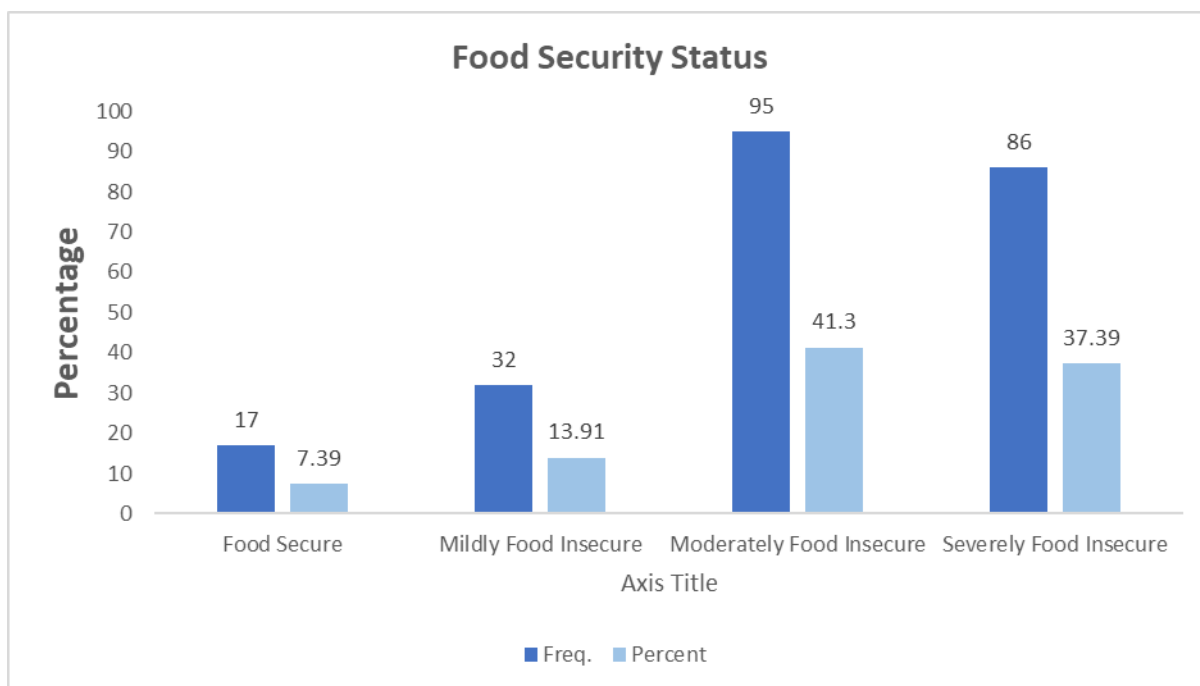


Figure 4.1: Household Food Insecurity Access Score (HFIAS) of Respondents

These high prevalence rates of food insecurity among the surveyed government pensioners reflects the broader scenario among government pensioners in Ethiopia found in a PSSSA study:

“a study carried out in 2020 on the approximately 700,000 government pensioner households found: 82% of the pensioners, 92% of survivor spouses, and 99% of survivor children lived below the national poverty line. Moreover, the PSSSA notes the World Bank’s international poverty line set at USD 1.9 per person per day or ETB 2,800 per month assumes a national poverty rate of 27%, however, the PSSSA’s minimum pension in Ethiopia amounts ETB 1,265, showing that there is a significant gap. Moreover, the pension amounts paid to survivors (spouse, children or parents of primary pensioner) are even less and hence the main reason why 99% of them live below the national absolute poverty line” (KII 3, 2022)⁵.

Of the total households surveyed, 30.43% of them reported that they had experienced going to sleep hungry involuntarily during the last 30 days, 35.65% of the pensioners reported they had experienced a day of having no food of any kind available, 91.3% had to reduce the variety of food they consumed, 79.57% had eaten foods they really did not want to eat,

⁵ PSSSA Head of Planning and Strategy

57.39% had reduced the amount of food they consumed, and 42.17% had to reduce their frequency of meals (Table 4.13).

Table 4.13: Respondents responses to HFIAS questions

Questions	Yes		No	
	Freq.	Percent	Freq.	Percent
Q1: Worry about food	163	70.87	67	29.13
Q2: Unable to eat preferred foods	208	90.43	22	9.57
Q3: Eat just a few kinds of foods	210	91.3	20	8.7
Q4: Eat foods they really do not want to eat	183	79.57	47	20.43
Q5: Reduce amount of meal	132	57.39	98	42.61
Q6: Reduce frequency of meal	97	42.17	133	57.83
Q7: No food of any kind in the household	82	35.65	148	64.35
Q8: Go to sleep hungry	70	30.43	160	69.57
Q9: Go a whole day and night without eating	45	19.57	185	80.43

The research findings are also similar to other studies that show high levels of food insecurity documented among the urban poor in the developing world and in Ethiopia in particular. Kimani et al. (2014) found 85% of households in the slums of Nairobi were food insecure; Birhane (2014) recorded a 75% prevalence rate of urban household food insecurity in three sub-cities of Addis Ababa; Ephrem (2015) found a 77% rate of food insecurity in Durame, Wolenchiti and Debreseina towns, Ethiopia; and research conducted in Jimma by Misgana (2018) and in Debre Markos by Yawukal (2018) also depicted 83.7% and 82.5% prevalence rates of food insecurity among pensioner households which broadly correlates to this research result.

4.2.2 Food Consumption Scores (FCS)

The Food Consumption Score (FCS) is a measure of food security which is commonly used by the WfP (WFP, 2008), and captures the food groups consumed and their frequency of consumption. However, in contrast to the HIFAS (access) a high level of the respondents (80.87%) were classified as having an acceptable FCS (utilization). It should be noted the FCS analysis assumes those who frequently consume a wide variety of foods are more food secure than people who endlessly consume the same type of foodstuff within a 7-day window prior to the survey. Accordingly, the survey found that almost all respondents, or 99%, consumed teff, other cereals and legumes in the seven days prior to the survey (Table

4.14). The next most common food group consumed was oils, at 93%, followed by roots and tubers 90%, and tomatoes 82% (Table 4.14). Teff, wheat, legumes, tubers, oils, onion, banana and egg, were consumed the most frequently by respondents. The result shows none of the respondents consumed fish. This information is important for macro-level decision making, as any interventions related to the pricing of agricultural products could take these consumption patterns into consideration.

Table 4.14: Type of food consumed by respondents within past 7 days

Food group	Percentage of households
Teff and other Cereals	99
Root and Tubers	90
Legumes	99
Vegetables	54
Tomato	82
Fruit -Mango, papaya	36
Fruit- Banana	67
Offal	19
Meat	28
Dairy Products	47
Egg	53
Oils/Butter	93
Sugar	47

Households were categorized into three food consumption groups according to their food consumption scores: namely, poor food consumption, borderline food consumption, and acceptable food consumption. Accordingly, the majority, or 80.87% of the study participants had an acceptable FCS, 16.96% were classified as having borderline FCS, while 2.17% of the study participants were reported as having poor FCS (Table 4.15). The overall FCS of female respondents were lower when compared to male pensioners, where 52% of male pensioners had an acceptable FCS while women pensioners with an acceptable FCS were only 29% (Table 4.15).

Table 4.15: Food Consumption Scores of respondents by gender

FCS	Gender			Percent		
	Male	Female	Total	Mal	Fem	Total
Acceptable	120	66	186	52	29	81
Borderline	20	19	39	9	8	17
Poor	2	3	5	1	1	2
Total	142	88	230	62	38	100

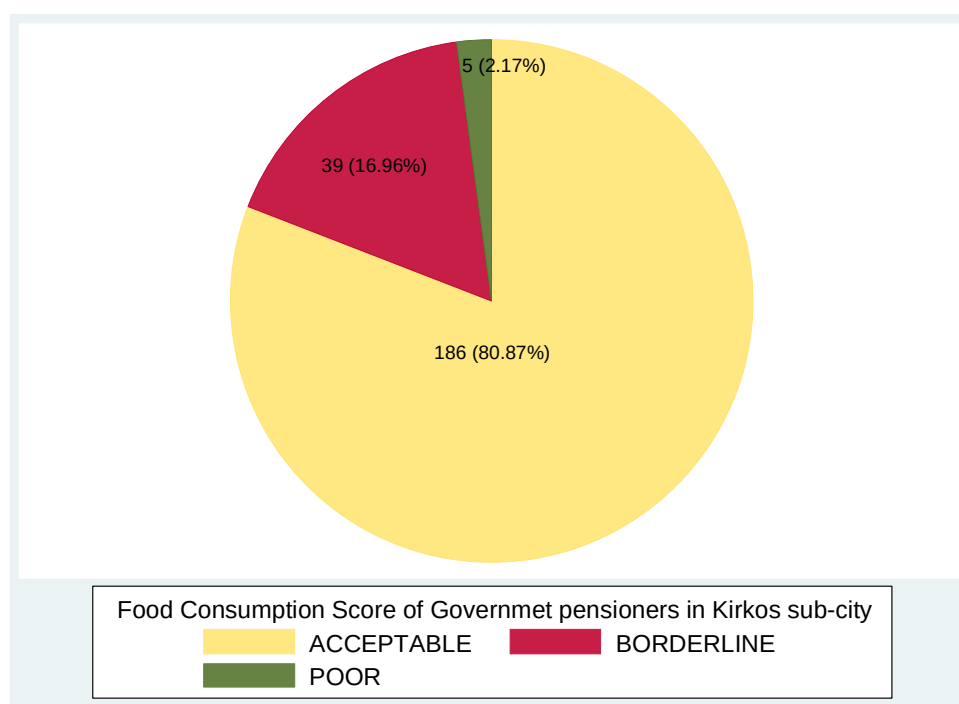


Figure 4.2: Food Consumption Scores of Respondents

Only an insignificant portion, or 6.09%, of the surveyed pensioners had a backyard, and out of these most, or 71.43% of them, used their backyards for growing vegetables, 7.14% of those who had backyards reared sheep, goats or dairy, while 14.29% raised poultry (Table 4.16). The data indicates all pensioners with backyards were classified as having a borderline or acceptable FCS.

Table 4.16: Respondents with backyards and their use

Backyard use	Freq.	Percent
Other	1	7.14
Poultry	2	14.29
Sheep, goats, dairy	1	7.14

Vegetables	10	71.43
Total	14	100

For some government pensioners with backyards suitable for growing vegetables; *“the PSSSA provides support to pensioners that have backyards, but lack household labour, to carry out food-based home gardening activities, by hiring or partnering them with young volunteers to support them” (KII 3, 2022)⁶.*

Similarly, Galhen et al. (2013) found that the inclusion and promotion of home gardens as an eco-friendly sustainable agricultural practice improved food security and enhanced economic growth.

Table 4.17: Analysis of respondent FCS against backyard use

FCS	House Backyard		
	Yes	No	Total
Acceptable	13	173	186
Borderline	1	38	39
Poor	0	5	5
Total	14	216	230

Most respondents who have additional sources of income, 82.81%, were predominantly classified under the acceptable food consumption category, while the 28.94% of surveyed pensioners without additional income sources were categorized as having borderline or poor food consumption (Table 4.18). Consequently, the elderly including pensioners with fixed monthly incomes in urban settings have a propensity to be food insecure unless they have adequate family or community support, primarily due to the decline of the purchasing power of their earnings (HelpAge International 2013).

Table 4.18: Analysis of respondents FCS against additional sources of income

Additional Income Source	FCS			
	Acceptable	Borderline	Poor	Total
Yes	159	30	3	192
No	27	9	2	38
Total	186	39	5	230

⁶ PSSSA Head of Planning and Strategy

All households who receive remittances from abroad were categorized as having an acceptable or borderline FCS of (Table 4.19).

Remittances lower the frequency and the severity of coping strategies, and households with remittances have lower anxiety about not being able to procure sufficient food; higher ability to secure adequate quality food; and lower experience of insufficient quantity of food intake than those without remittance (Nigussie et al., 2018).

Table 4.19: Analysis of respondents FCS against remittances

Remittances	FCS			
	Acceptable	Borderline	Poor	Total
Yes	13	2	0	15
No	173	37	5	215
Total	186	39	5	230

Similarly, pensioner households in the richest wealth index quintile (Table 4.20) tended to consume more diverse, quality foods, as compared to households in the poorest wealth quintile. Hence reinforcing the suggestion poverty causes food insecurity through a failure to access sufficient and quality food that meets minimum dietary needs, and it also erodes or nullifies human rights (ADB, 2012; UN OHCHR, 2022; WFP, 2019).

Table 4.20: Analysis of respondents FCS against wealth

FCS	Wealth Index					
	Wealthiest	Wealthy	Middle	Poor	Poorest	Total
Acceptable	46	41	34	38	27	186
Borderline	2	4	11	9	13	39
Poor	0	0	0	0	5	5
Total	48	45	45	47	45	230

The poorest wealth quintile (asset poorest) households, on average consumed pulses for 3 days in the prior seven days of the survey, staples for 2.6 days, tomatoes for 2 days, oils and fat for 1 day and sugar for 0.2 days (Table 4.21). On average, consumption of staple foods was regular in all consumption groups. Basically, every surveyed pensioner consumed teff or other cereals, however, those classified in the acceptable food consumption group ate these foods on

average on 6.33 days on the prior 7 days (Table 4.21). Moreover, households classified as having borderline or acceptable consumption were more likely to diversify their staple food intake with different other cereals, vegetables, pulses and other food groups with higher frequency.

Table 4.21: Average number of days of food group against FCS in prior 7 days

Food Groups	Poor	Borderline	Acceptable
Teff and other Cereals	2.60	4.59	6.33
Root and Tubers	0.40	1.69	2.02
Legumes	3.00	3.97	4.60
Vegetables	-	0.69	1.24
Tomato	2.00	2.05	3.65
Fruits- Mango and papaya	-	0.33	0.63
Fruits-Banana	0.40	0.41	1.25
Offal	-	0.03	0.33
Meat	-	0.08	0.59
Dairy Products	-	0.05	0.91
Egg	-	0.08	0.99
Fish	-	0.03	0.10
Oils/Butter	1.00	4.05	5.90
Sugar	0.20	0.49	1.28

The consumption of green vegetables, fruits like mango and papaya, animal proteins and milk were however recorded as not having been consumed in this group of pensioners. They did however consume fruits like bananas on an average of 0.4 days per week. As expected, among those classified in borderline food consumption, consumption of all food groups increased compared to those classified with poor food consumption. Here, the borderline group consumed cereals on 4.59 days, oil on 4 days, and tubers on 1.69 days (Table 4.21). However, consumption of animal proteins, milk, and fruits remained infrequent, at an average of less than 1 day during the prior 7 days. Moreover, among pensioner households classified with an acceptable food consumption score, consumption of all the food groups were higher (Table 4.21).

4.3 Respondent food coping strategy

The surveyed government pensioner households in Kirkos sub-city were asked whether they had faced any food shortage during the last 4 weeks prior to the date of interview. To capture

their household food coping strategies, the respondents were asked what they did when they did not have enough food, or money to buy food, in the month prior to the survey. The answers were a series of behaviours showing how the households manage or “cope” with a shortfall in food consumption. In households with extreme forms of food insecurity and malnutrition, their most important component of household spending will be food, and in some instances accounting for 52% of total household income and 42% of their total expenditures (Djesika, 2014). The research result also revealed that food was the largest household expenditure on average for 93.66% of the households, and their spending on food ranged from ETB 500 to 10,000 per month and an average amount of ETB 3,504.

The respondent households reported a variety of coping strategies over the last four weeks preceding the interview to conditions under which they did not have enough to eat. In principle the more their household had to adapt to coping strategies, the less food secure they are classified. The survey revealed that 77.39% of the government pensioner households in Kirkos experienced food shortage to a considerable degree during the last 4 weeks prior to the survey (Table 4.22).

Table 4.22: Analysis of respondents wealth asset index against food shortage

Wealth Index	Encountered food shortage		
	Yes	No	Total
Wealthiest	18	30	48
Wealthy	32	13	45
Middle	40	5	45
Poor	45	2	47
Poorest	43	2	45
Total	178 (77.39%)	52 (22.61%)	230

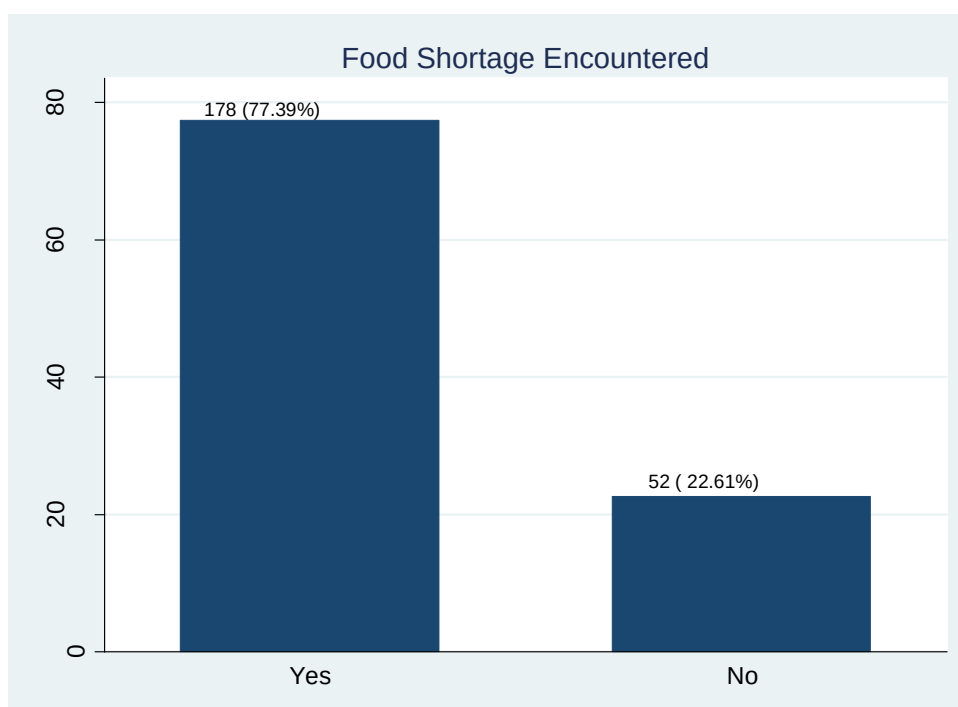


Figure 4.3: Respondents reporting food shortage during the last 4 weeks

The pensioners reported that they had responded to food shortage both in consumption related, as well as asset and assistance based coping strategies to meet their basic needs. As expected, households in the poorest, poor and middle wealth index quartiles, encountered the highest levels of food shortage (Figure 4.4).

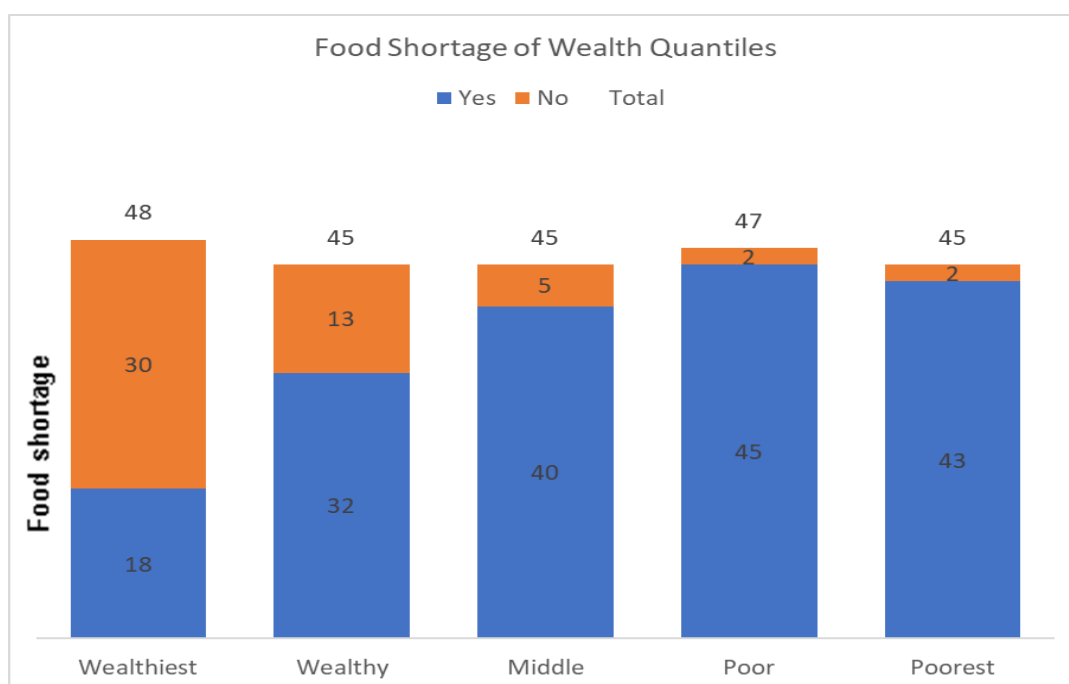


Figure 4.4: Respondents reporting food shortage by wealth quintile

Changes in consumption behaviour were the most common strategy used by the respondents to cope with household food shortages. The survey found the pensioners were moderating their consumption patterns as a means of cost cutting. Among the strategies to change consumption, the most common (63%) was to switch to less preferred or less expensive food, limiting the size of the meals consumed was the second most common coping strategy (33%), followed by using more affordable street food (24%) (Table 4.23). A smaller proportion (3%) of respondents reported reducing the number of meals consumed in a day, (2%) sometimes skipping meals for an entire, and (1%) selling household assets to cope with the discrepancy between high food market prices and their meagre financial means. These latter extreme categories were the most severe of the coping strategies mentioned and was much less frequently practised than the other means. These results reflect similar findings within urban settings in Ethiopia and pensioners groups (Ephrem, 2015; Misgana et al., 2018, Birhane, et. al. 2014; Mesfin et. al., 2021; Yared, 2010; Eden et. al. 2009)

Table 4.23: Respondents consumption related coping strategies

Type of Coping Strategies	Frequency	Percentage
Reduce the number of meals consumed in a day	8	3
Reducing consumption during each meal	75	33
Eat less preferred, lower quality or less expensive foods	146	63
increase consumption of street food (prepared foods)	55	24
Not eating for whole days sometimes	4	2
Selling any household assets	2	1
Total	290	126

*Since respondents could have multiple responses, the total percentage does not add up to 100.

The coping strategies that the pensioner households used in times of food shortages over the prior 30 days to the survey included dietary changes and consuming less preferred, lower quality foods or less expensive food, this was the most common strategy and was practiced in 63% of the surveyed pensioner households (Table 4.23). Staple grains such as wheat, sorghum, millet, and maize were widely substituted instead of the more expensive teff. Some indicated they mixed their teff flour with lower cost grain substitutes and used cheaper alternatives to preparing traditional stew sauces and in extreme cases they simply consumed raw tomatoes instead. Reducing the quantity of food consumed per meal by cutting back on the amount of food that each person in the household eats was the second most common coping strategy, and in terms of severity, is almost equivalent to eating foods that are less

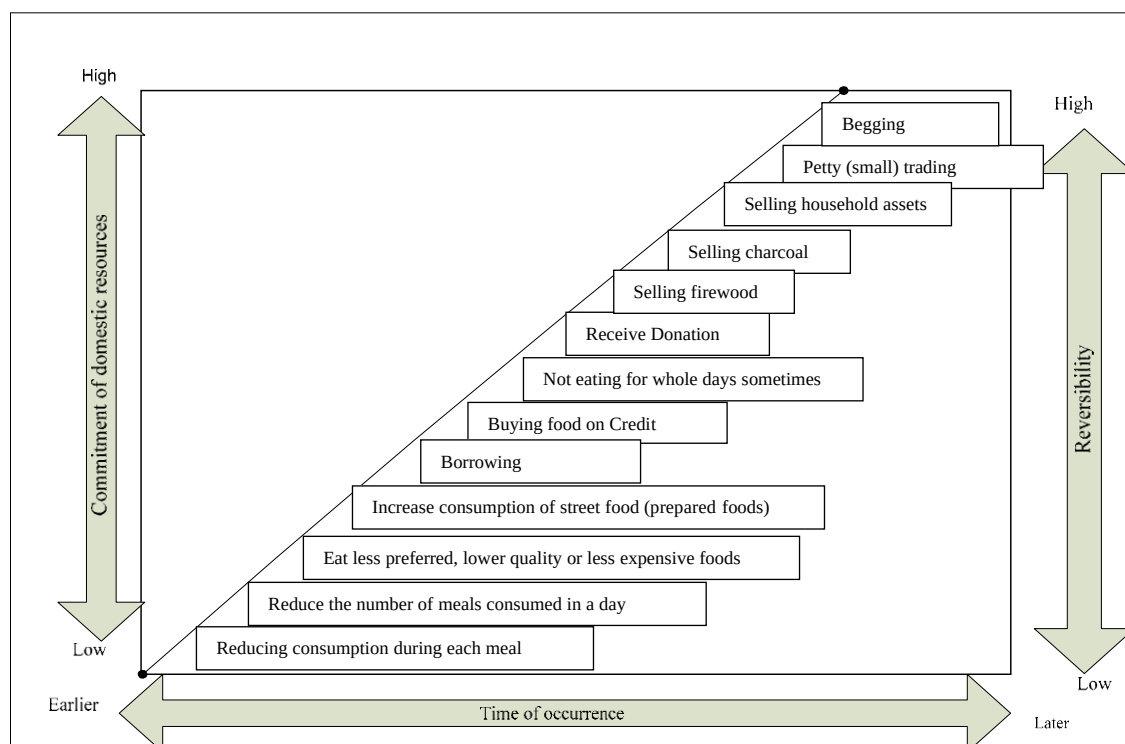
preferred. Street food in urban settings sometimes provides a convenient diet for many people in developing countries (Anandhi et. al, 2015). Deliberate food buffering, by some family members, by deliberately reducing their own food consumption in order to ensure that other more vulnerable family members get enough to eat when food supplies are inadequate was also noted among some pensioner respondents, a similar trend was also observed by McIntyre (2003) among mothers for their children in some lower income households.

In response to the aforementioned food shocks, the pensioner households were asked if they had applied any asset and assistance based coping strategies during the past four weeks prior to the survey. Food shock affected households reported some type of coping strategy. Most often the respondents responded that they had conducted petty or small trading (57%), buying food on credit (31%), borrowing (13%) followed by receiving donations (12%) and in extreme cases a few resorted to begging (2%) (Table 4.24).

Table 4.24: Respondents asset and assistance based coping strategies

Type of Coping Strategy	Frequency	Percentage
Receive donation	27	12
Borrowing	30	13
Buying food on Credit	71	31
Selling household assets	10	4
Petty (small) trading	132	57
Selling firewood	1	0
Selling charcoal	6	3
Send children to work	1	0
Begging	5	2
Total	283	123

*Since respondents could have multiple responses, the total percentage does not add up to 100.



(Source: modified from Messay, 2012)

Figure 4.5: Model of Respondents coping strategies to food insecurity

4.4 Determinants of household food security

This section examines the findings of the ordered logit regression model used to determine the independent variables that had a statistically significant effect on the food security status of the surveyed government pensioner households. Accordingly, the ordered logit regression analysis indicated the following independent variables had a statistically significant effect on the respondent household food security: wealth index ($p=0$), housing ($p=0$), education ($p=0$), family members with chronic disease ($p=0$), market distance ($p=0$), market shopping frequency ($p=0$), credit ($p=0$), savings ($p=0.007$), total income ($p=0.009$), age ($p=0.014$), remittances ($p=0.034$) and additional income source ($p=0.086$) (Table 4.25). However, the monthly pension ($p=0.844$), marital status ($p=0.577$), gender ($p=0.275$), household size ($p=0.203$), and backyard garden ($p=0.197$) variables did not have significant effects on household food security. These results with minor exceptions reflect findings in WFP (2009), Sisay (2012), Tesso (2015), Gebre (2012), Birhane et al. (2014), Tesfay et al. (2014), Yawukal et al. (2018), and Misgana et al. (2018).

Table 4.25: Ordered logit regression analysis of respondents

Marginal effects								
Variables	Food Security				COR	[95% Conf		p-value
	Food Secure	Mildly Food Insecure	Moderately Food Insecure	Severely Food Insecure		Lower	Upper	
Total observation	17	32	95	86				
Age	-0.0048409 (0.0101099)	-0.0045255 (0.0094529)	-0.002214 (0.0047069)	0.0115804 (0.0241543)	1.485 (0.238)	1.085	2.034	0.014**
Gender	-0.0189442 (0.0178196)	-0.027346 (0.0251036)	-0.0184488 (0.0176113)	0.0647391 (0.0588987)	1.320 (0.336)	0.802	2.172	0.275
Marital	-0.0048939 (0.0088418)	-0.0070835 (0.0127098)	-0.0047503 (0.0086122)	0.0167277 (0.0299442)	1.074 (0.138)	0.835	1.381	0.577
Household Size	-0.0049959 (0.0054487)	-0.0046704 (0.0050975)	-0.0022849 (0.0026663)	0.0119512 (0.0129892)	1.118 (0.098)	0.942	1.326	0.203
Education	0.0143108 (0.0107873)	0.0133785 (0.0096338)	0.0065451 (0.0054005)	-0.0342345 (0.0248866)	0.452 (0.076)	0.325	0.63	0***
Monthly Pension	0.0018217 (0.0092787)	0.0026408 (0.0134443)	0.0017538 (0.0088638)	-0.0062163 (0.0315576)	0.974 (0.131)	0.747	1.269	0.844
Total income	0.0316277 (0.0244792)	0.0295673 (0.0232439)	0.0144651 (0.0134694)	-0.0756601 (0.0593741)	0.793 (0.070)	0.667	0.943	0.009***
Chronic disease	0.061506 (0.0188764)	0.0574993 (0.0184391)	0.0281302 (0.0124307)	-0.1471355 (0.0403021)	0.24 (0.069)	0.136	0.423	0***
Wealth index	-0.0305019 (0.0086784)	-0.0285149 (0.0084825)	-0.0139502 (0.0060008)	0.0729671 (0.0181583)	1.956 (0.193)	1.612	2.373	0***
Market Distance	0.0397699 (0.0141729)	0.0371791 (0.0138212)	0.018189 (0.0070131)	-0.095138 (0.0291143)	0.304 (0.069)	0.195	0.473	0***
Market Frequency	-0.0607624 (0.0120826)	-0.0568041 (0.0123263)	-0.02779 (0.0100057)	0.1453564 (0.0194185)	3.565 (0.589)	2.579	4.93	0***
Saving	0.0093038 (0.0038423)	0.0086977 (0.0041946)	0.0042552 (0.0022564)	-0.0222567 (0.0092861)	0.832 (0.057)	0.728	0.95	0.007***
Credit	0.0347579 (0.0168814)	0.0324936 (0.0157948)	0.0158967 (0.0084083)	-0.0831483 (0.0374227)	0.247 (0.067)	0.144	0.422	0***
Additional income	0.0390014 (0.0242359)	0.0560823 (0.0328205)	0.0372633 (0.0240001)	-0.1323471 (0.0759095)	0.565 (0.188)	-1.223	0.081	0.086*
Remittance	-0.0066109 (0.0468479)	-0.0061803 (0.0438136)	-0.0030235 (0.0213787)	0.0158147 (0.1119935)	3.181 (1.734)	1.093	9.257	0.034**
Gardening	0.1732284 (0.1201425)	0.0352111 (0.0395408)	0.0568810 (0.0847406)	-0.2653205 (0.1855099)	0.312 (0.282)	0.053	1.827	0.197
Housing	-0.0651083 (0.0220058)	-0.0608669 (0.0188531)	-0.0297777 (0.0153896)	0.1557529 (0.0478654)	9.657 (2.952)	5.305	17.581	0***

As the independent variables with p values ranging from 0 to < 0.05 in the ordered logit regression analysis were statistically significant predictors of determinant factors associated with the household food insecurity status of the respondents, these particular variables were candidates for further analysis. The MLR analysis showed that for the surveyed government pensioners in Kirkos sub-city: food shopping frequency [AOR 4.195 (95% CI: 2.727-6.453), $p=0$], housing [AOR 3.66 (95% CI: 1.48-9.085), $p=0.005$], wealth [AOR 2.048 (95% CI: 1.432-2.93), $p=0$], savings [AOR 0.811 (95% CI: 0.686- 0.958), $p=0.014$], market distance [AOR 0.437 (95% CI: 0.248-0.768), $p=0.004$], credit [AOR 0.421 (95% CI: 0.21-0.8420), $p=0.014$] and family members with chronic diseases [AOR 0.244 (95% CI: 0.112-0.533), $p=0$] were significant determinant factors for household food security (Table 4.26).

Table 4.26: Average marginal effect MLR of factors affecting food insecurity

Marginal effects									
Variables	Food Security				COR	AOR	[95% Conf		p-value
	Food Secure	Mildly Food Insecure	Moderately Food Insecure	Severely Food Insecure			Lower	Upper	
Total observation	17	32	95	86					
Chronic disease	0.0635849 (0.0190823)	0.0594617 (0.0185273)	0.0271478 (0.0120196)	-0.1501944 (0.0402478)	0.24 (0.069)	0.244 (0.097)	0.112	0.533	0***
Wealth Index	-0.0323072 (0.0089791)	-0.0302123 (0.0085591)	-0.0137937 (0.0059165)	0.0763132 (0.0183059)	1.956 (0.193)	2.048 (0.374)	1.432	2.93	0***
Market Distance	0.0373275 (0.0139267)	0.034907 (0.0134716)	0.0159371 (0.0061097)	-0.0881716 (0.0284717)	0.304 (0.069)	0.437 (0.126)	0.248	0.768	0.004***
Market Frequency	-0.0646192 (0.0121920)	-0.060429 (0.0125432)	-0.0275894 (0.0099592)	0.1526377 (0.0189989)	3.565 (0.589)	4.195 (0.922)	2.727	6.453	0***
Saving	0.0094607 (0.0036409)	0.0088473 (0.0042323)	0.0040393 (0.0020854)	-0.0223473 (0.0089749)	0.832 (0.057)	0.811 (0.069)	0.686	0.958	0.014**
Credit	0.0390028 (0.0168184)	0.0364736 (0.0155696)	0.0166524 (0.0082327)	-0.0921288 (0.0362537)	0.247 (0.067)	0.421 (0.149)	0.21	0.842	0.014**
Housing	-0.0585492 (0.0220129)	-0.0547527 (0.0196383)	-0.0249978 (0.0133588)	0.1382997 (0.0483468)	9.657 (2.952)	3.66 (1.698)	1.48	9.085	0.005***

* p-value is less than 0.05; ** p-value is less than 0.01; ***p-value is less than 0.001

Accordingly, the ordered logit regression findings suggest the: pension, gender, marital status, household size, and backyard garden had no statistically significant association with the household food security of the surveyed government pensioners in Kirkos sub-city.

The marginal effect shows how each of these variables negatively or positively affect food security.

The market shopping frequency of the respondents was significantly associated with household food security, where pensioners who purchased their food supplies more often, seven or more times a month, were 4.195 times more likely to be food insecure than those households that procure their food supplies, once in a month. According to Garrett (2000) urban food insecurity and malnutrition can be affected by several factors. This is because urban residents get their food from markets and their food security depends on their purchasing power or their ability to afford buying food, given their incomes and food prices. Consequently, the urban poor are forced to buy small quantities of food rather than in bulk because of high per-unit costs of food due to inefficient urban food-marketing systems. Since the poor usually buy small quantities of food, their market shopping frequency will be high.

Similarly, the household wealth index was significantly associated with household food security, in which pensioners in the poorest wealth quintile were 2.048 times more likely to be food insecure when compared to those in the wealthiest quintile. The findings show wealth, in terms of household assets, had a significant association with pensioner food security. Households that had more wealth were more likely to be food secure when compared to pensioner households with fewer household assets. This supports the assumption poverty is the root cause of food insecurity (WFP 2019) and that poverty among the elderly is mostly due to unemployment or retirement (Nasreen et. al., 2017). Housing was also significantly associated with household food security, as pensioner households who have their own house were 3.66 more likely to be food secure than those who were renting their homes. The findings for house ownership had a similar result, with households who own their houses being comparatively more food secure than those that live in rented houses. This result is similar to studies conducted by Cambridge University (2021) that show the associations between housing and food insecurity as the housing cost burden potentially limits food access among poor families. Remittances from family abroad to the pensioners had a positive correlation with food security among the surveyed respondents. Households that received remittances were 3.181 times more food secure than households who did not receive any.

This is consistent with findings from Sisay and Edriss (2012), as an increase in remittances would have a positive effect on a household's total income that would relieve financial constraints on their household food expenditure. However, the sustainability of remittances as income source is usually in question and might create a dependency syndrome in the households.

The results reveal access to credit was positively associated to the food security of the surveyed pensioners. These households were slightly more likely (AOR 0.421) to be food secure than households without access to credit. Access to credit provides households with an opportunity to undertake income generating activities or bridge short-term financial shortfalls to cope in times of food insecurity (Aschalew and Ayalneh, 2009; Atimen, 2021). Lack of access to credit services was also associated factors with food insecurity in studies by Szabo (2016) and Motbainor et. al. (2016). The findings also show the absence of chronic health issues among members of the surveyed household had statistically significant association with their food security. This supports recommendations of having a holistic approach that explicitly positions and addresses food insecurity within the broader public policies of urban poverty and intra-urban inequalities (Tacoli, 2019)

Despite the ordered logit regression analyses showing no statistically significant association between household size and food security, pensioners with household sizes with > 7 to 8 family members were found to be highly food insecure when compared to households with fewer or < 3 family members. This is similar in research in other parts of the country (MoLSA, 2007; Gebre, 2012). This indicates pensioners with large households tended to be more food insecure when compared to those with fewer family members. This is mainly due to larger households having greater food needs and greater financial constraints when compared to smaller families with similar levels of low incomes.

There was no statistically significant difference in the household food security situation of different gender pensioners. This result is similar to findings to research conducted by Birhane et. al. (2014) on urban food insecurity in the context of high food prices in Addis Ababa. This may perhaps be due to the food insecurity rate being very prevalent within the sampled government pensioner group. In-depth understanding of food insecurity and gender among the pensioners would require further study, potentially using comparative studies and qualitative approaches.

The surveyed pensioners being elderly, are a group particularly vulnerable to poverty and food insecurity as seen in studies on the elderly by Grobler and Dunga (2019), HelpAge International (2013, 2019) and FAO (2015), this is compounded and entrenched due to their unemployment or retirement (Nasreen et. al, 2017) and lack of stored wealth. Their food insecurity existed despite most of them prioritising and spending most of their expenditure on food purchases, and as Tacoli (2017) notes the largest household expenditure of the income poor urban residents is usually food.

Despite minimum government pensions being raised in 2019 by a substantial 68% from ETB 744 to ETB 1,265, the increase has not translated in the household food security of most of the surveyed pensioners, due to the low base from which the pensions were first set and the high inflation rates over the last two decades showing prices in 2022 were on average over 1,415.9% higher than they were in 2002 (WorldData, 2022). This suggests the severe erosion of the purchasing capability of government pensions in real terms. This dilemma is especially prevalent for poor urban residents who get their food from markets; as their food security depends on their ability to afford buying food, given their incomes and food prices (Garrett, 2000). Furthermore, the low minimum pensions at ETB 1,265 and the low base starting salaries of Addis Ababa public sector employees for grades 1 to 6 employees in 2022, which are below the World Bank poverty line of USD 1.9 per day or ETB 2,800 per month, suggest both working and pensioner low-income civil servants in Ethiopia live in poverty, and the food security of pensioner survivors is even more bleak with almost all, 99%, of them living in poverty (KII 3, 2022)⁷.

The FED theory fits the situation being faced by most of the surveyed pensioners, for the mere presence of food in accessible markets has not entitled them to consume the food, hence their hunger occurs without aggregate availability decline due to a failure in exchange entitlements, as suggested by Sen (1981). Therefore, to attain food security for most of the surveyed government pensioners, steps that address their economic or financial access component of food security, in terms of developing their purchasing power to buy adequate food would have the greatest immediate impact. A holistic approach that explicitly positions

⁷ PSSSA Head of Planning and Strategy

and addresses food and nutrition insecurity within the broader context of urban poverty and intra-urban inequalities is also required (Tacoli, 2019)

Despite being covered by a national social insurance scheme that reduces relative income poverty and manages vulnerability, most of the surveyed respondents were unable to ensure an acceptable standard of living or food security. Consequently, their rights to food affirmed in the 1948 UN Universal Declaration, 1952 ILO Convention (102), Ethiopian Constitution and 2014 NSPP, are not being entirely fulfilled, and hence measures should be taken to remedy this. Although the Ethiopian NSPP prioritises vulnerable groups like the elderly living under difficult circumstances, however there are perceptions of policy incoherence and uncoordinated implementation as it does not present social protection as a right of citizens nor as an obligation of the state (Melisew and Cochrane, 2019). Furthermore, the constitution is vague about rights and responsibilities due to the precondition of support ‘within available means’ (Art 41.5) and ‘to the extent the country’s resources permit’ (Art 41.7) given Ethiopia’s relatively low economic capacity due to its present stage of economic development and very high unmet needs on many national priorities and basic services (Melisew and Cochrane, 2019). Dejene et. al. (2019) nevertheless argues Ethiopia could achieve universal social protection coverage for the elderly, orphaned and disabled with 3.47% of national GDP.

CHAPTER FIVE: SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

The aim of the study was to examine the household food security situation of government pensioners in the Kirkos sub-city of Addis Ababa. Data was collected through household surveys from the selected 230 households and key informant interviews with staff at the PSSSA and MoWSA. The pensioner food security status was assessed based of HFIAS, FCS and CSI. Socio-economic and demographic data was also gathered. Ethiopia currently has 4.90% or 5.894 million of its inhabitants above the age of 60, and this segment of the population is expected to rise to 9% by 2050.

The average pension of the surveyed sample was ETB 1,854.14 or USD 1.19 per day, significantly less than the World Bank international poverty line of USD 1.90, but slightly higher than the Kirkos sub-city pension of ETB 1,652.43 (KII 2, 2022)⁸. The research on the household food security among government pensioners shows; 92.61% of the pensioner households were food insecure, and out of these 77.39% experienced significant food shortages. Nearly all the pensioners (96.09%) claimed their pensions were insufficient to meet their basic household needs, and consequently most of them (83.48%) supplemented their pensions with other incomes. Food was the largest household expenditure for the majority of pensioners surveyed (93.66%) and most of them did not save any money (57%).

When faced with food shortages the pensioners resorted to: consumption change coping strategies of switching to less preferred cheaper food (63%) and limiting meal sizes (33%); or assistance coping strategies of petty trading (57%) or buying food on credit (31%). Statistically significant predictors of determinant factors associated with their household food insecurity were wealth, housing, food shopping frequency, savings, market distance, credit and family members with chronic disease.

The study concludes poverty was the underlying determining factor of food insecurity among the surveyed government pensioner households through a failure to access sufficient and quality food that meets minimum dietary needs. This also erodes or nullifies their rights to food and social security enshrined in UN Declarations and Ethiopian Constitution despite being encompassed by a social protection mechanism. Although social protection can play a

⁸ Kirkos sub-city PSSSA

key role in the realization of the right to adequate food for the elderly who are vulnerable to higher-than-average poverty rates, the research findings show the surveyed government pensioners are still subject to high prevalent rates of food insecurity.

Therefore, this research recommends a holistic approach that strengthens urban food security within broader poverty reduction strategies, that explicitly positions and addresses food insecurity within broader public policies of urban poverty reduction and intra-urban inequalities, is required to tackle the symptoms of poverty among low-income government pensioners.

Accordingly:

- Ethiopian government policy should facilitate individual wealth creation and retention, by encouraging government employees have the means of long-term financial stability. This policy should encourage public sector employees consider having long-term positive cashflows through suitable personal investments and becoming involved in some long-term income generating activities.
- The government should continue providing public assisted low-cost housing; however, the monthly instalment payments should take into consideration the salaries of public sector employees. In order not to leave behind low-income personnel, the government could organize programs for their employees to access public assisted low-cost housing.
- The government should also work towards attaining quality education for citizens in general, and tailored skills training for their employees, as education is key to escaping poverty. Quality education should start from kindergarten to colleges and universities, as it is very important for individuals to secure better job opportunities, progress with sustainable livelihoods, and have a healthy lifestyle. Higher quality education should ensure greater population competency in job markets either within the country or abroad. Furthermore, the country could generate higher remittance rates if citizens access job opportunities abroad.
- The government could also make functional the implementation of Social Health Insurance (SHI) to the government employees and pensioners for both preventive and curative subsidised medical care to prevent or manage chronic diseases.

- The government should facilitate financial inclusion of pensioners through microcredit institutions and banks that offer different products with high-yielding savings account and low interest rates for borrowers. This would encourage higher household savings and household investments in appropriate livelihood opportunities.
- The government should also facilitate small scale livelihood opportunities to improve household incomes in poor neighbourhoods and consider the requirements of pensioner households.
- Market stabilizing mechanisms that the government is currently undertaking should be further strengthened; particularly subsidization of staple food commodities is important to improve food access for the urban poor. The introduction of mechanisms that target the most vulnerable households through subsidised sales of basic food commodities, like cooking oil, flour, or bread, can further benefit low-income households.
- In terms of national macroeconomic policies, these should enhance market efficiency and maintain constant prices, as price increases, devaluation in the currency exchange rate, and the removal of key consumer or producer subsidies like fuel can all lead to high rates of inflation that ultimately impact the food security of the urban poor.
- Local government and city planners should also incorporate urban farming systems in their plans and encourage fruit and vegetable home gardening and the rearing of small farm animals and ensure commodity food markets are adequately regulated to suppress price volatility.
- Given the limited research on the food security of urban government pensioners in Ethiopia, this research will contribute to understanding the food insecurity encountered by low-income government pensioners in Kirkos sub-city. However, a more in-depth understanding of food insecurity on government pensioners in Ethiopia is still needed.

References

- Abnet Gezahegn Berhe, Dawit Benti Erena, Imam Mahmoud Hassen, Tsion Lemma Mamaru, Yonas Alemayehu Soressa, Social Inclusion and Energy Managment
- Aboderin I., Decline in Material Family Support for Older People in Urban Ghana, Africa: Understanding Processes and Causes of Change, 2004
- Abraham Tadesse Tantu, Tsegaye Demissie Gamebo, Berhanu Kuma Sheno and Mulugeta Yohannis Kabalo, Household food insecurity and associated factors among households in Wolaita Sodo town, 2017
- Addis Negarit Gazeta, 2022
- Alebel B. Weldesilassie; Eline Boelee; Pay Drechsel; Stephan Dabbert, Wastewater use in crop production in peri-urban areas of Addis Ababa: impacts on health in farm households, 2011
- Alem-meta Assefa Agidew and K. N. Singh Determinants of food insecurity in the rural farm households in South Wollo Zone of Ethiopia: the case of the Teleyayen sub-watershed, 2018
- Allen, M., The sage encyclopedia of communication research methods (Vols. 1-4), 2017
- Anderson SA. Core indicators of nutritional state for difficult-to-sample populations. J Nutr. 1990;120(11s):1557–600.
- Arega Bazezew Berlie, The Invisible Crisis of Urban Food Security in Amhara Regional State, Ethiopia, 2020
- Armando B. and Daniele M.,, Social assistance and inclusive growth, 2020
- Armando Barrientos and David Hulme, Social Protection for the Poor and Poorest Concepts, Policies and Politics, 2008
- Aschalew F. and Ayalneh B. Determinants and Dimensions of Household Food Insecurity in Dire Dawa Town, Ethiopia, 2009
- Asian Development Bank (ADB) and the Role of Human Rights in the Pursuit of Just and Sustainable Development in the Asia-Pacific Region: An Advocacy Role for Australia, 2012
- Atimen D, Hailemichael B, Awoke K, Ayechew A, Metadel A, Food insecurity status and determinants among Urban Productive Safety Net Program beneficiary households in Addis Ababa, Ethiopia: September 27, 2021
- Ayenew Negesse, Dube Jara, Habtamu Temesgen, Getenet Dessie, Henok Mulugeta, Zeleke Abebaw, Tesfahun Taddege, Fasil Wagnew, Yilkal Negesse and Temesgen Getaneh,

- The impact of being of the female gender for household head on the prevalence of food insecurity in Ethiopia: a systematic-review and meta-analysis, 2020
- Azeb K., Housing for the Poor in Addis Ababa, 2007
- Ballard T., Coates J., Swindale A., Deitchler M., Household Hunger Scale: Indicator Definition and Measurement Guide, 2011
- Bashir M. K., Schilizzi S., Pandit R., The Determinants of Rural Household Food Security for Landless Households of the Punjab, Pakistan, 2012
- Benjamin Saunders, Julius Sim, Tom Kingstone, Shula Baker, Jackie Waterfield, Bernadette Bartlam, Heather Burroughs, and Clare Jinks, Saturation in qualitative research: exploring its conceptualization and operationalization, 2018
- Bezawit Adugna and Bahru, Manfred Zeller, Gauging the impact of Ethiopia's productive safety net programme on agriculture: Application of targeted maximum likelihood estimation approach, 2021
- Birhane T, Shiferaw S, Hagos S, Mohindra KS. Urban food insecurity in the context of high food prices : a community based cross sectional study in Addis Ababa , Ethiopia. 2014;14(1):1–8.
- Cambridge University Press, Food insecurity and housing affordability among low-income families: does housing assistance reduce food insecurity?, 2021
- Central Statistics Agency (CSA), 2022
- Coates J., Swindale A., Bilinsky P. Household Food Insecurity Access Scale (HFIAS) for Measurement of Food Access: Indicator Guide: Version 3, August 2007
- Cohen, L., Manion, L. and Morrison, K. Research Methods in Education. 5th Edition, 2000
- Concern Worldwide, 11 Top Causes of Global Poverty, 2020
- Cumming E. and Henry W., Growing Old: The Process of Disengagement. Basic Books, New York, 1961
- Daniel M. and Richard C., The Coping Strategies Index, 2008.
- Debebe, H., Food security: A brief review of concepts and indicators. Proceedings of the Inaugural and First Annual Conference of the Agricultural Economic Society of Ethiopia, Addis Ababa, Ethiopia, 8-9 June 1995.
- Degefa Tolossa, Famine and its Causes in the Perspective of the Modern Geographical Thoughts, 2006
- Degefa Tolossa. Rural Livelihoods, Poverty and Food Insecurity in Ethiopia: A Case Study at Erenssa and Garbi Communities in Oromiya Zone, Amhara National Regional State. Doctoral Theses at NTNU. 2005

DeRose LF, Messer E, Millman S. Who's Hungry? And How Do We Know? Food Shortage, Poverty, and Deprivation. New York, NY: United Nations University; 1998.

Devereux S., Social Protection for Enhanced Food Security in Sub-Saharan Africa, 2012

Eden M, Nigatu R, Ansha Y. Analysis of Household level determinants and coping mechanisms of food insecure households in Southern Ethiopia. DCG Report No. 55; 2009.

Ephrem Tegegne. Livelihoods and Food Security In The Small Urban Centres Of Ethiopia; The Case Of Durame, Wolenchiti And Debre Sina Towns, a PhD unpublished thesis, Department of Geography and Environmental Studies, Addis Ababa University, Addis Ababa, Ethiopia, 2015

ESS, Population Size by Sex, Region, Zone and Wereda, 2021

Ethiopia Food and Nutrition Policy, 2018

Ethiopian News Agency | ENA, 2022

FANTA, Food Security Indicators and Framework for Use in the Monitoring and Evaluation of Food Aid Programs, 1999

FAO IAW, Food Insecurity in the World Meeting the 2015 international hunger targets: taking stock of uneven progress FOOD, 2015

FAO IAW. Food Insecurity in the World Meeting the 2015 international hunger targets: taking stock of uneven progress FOOD. 2015.

FAO, A fundamental human right, undated

FAO. Local Economy-Wide Impact Evaluation (LEWIE) of Ethiopia's Social Cash Transfer Pilot Programme; FAO: Rome, Italy, 2014

FAO. Regional Overview of Food Insecurity Africa. 2015

FAO. Rome Declaration on World Food Security and World Food Summit Plan of Action. Rome (Italy): 2002.

FAO. The State of Food and Agriculture 2012. 2012.

FAO, Family Farming Knowledge Platform, 2022

Fews Net, Food Assistance Outlook Brief, May 2022

for Informal Urban Settlements, City Profile, Addis Ababa, 2017"

Gain, Ethiopia: Food Inflation Stands High in Ethiopia despite Policy Measures to Stabilize Prices, March 10, 2022

Galhena D. H., Freed R. and Maredia K. M., Home gardens: a promising approach to enhance household food security and wellbeing, 2013

Garrett J. L., Achieving Urban Food and nutrition Security in the Developing World, 2000

- Gebre GG. Determinants Of Food Insecurity Among Households In Addis Ababa City , Ethiopia. 2012;10(2):159–73.
- Grobler, Wynand Carel Johannes and Dunga, Steve, Analysis of Food security Status Among the Elderly In South Africa, 2019
- Habitat for Humanity, <https://www.habitatforhumanity.org.uk/blog/2017/11/slum-housing-ethiopia-modernise/>
- Hamelin AM., Habicht J., Beaudry M., Characterization of household food insecurity in Quebec: food and feelings, 2002
- Havighurst R. J., Successful Aging, 1961
- HelpAge International, Vulnerability of Older People in Ethiopia: The Case of Oromia, Amhara and SNNP Regional States, 2013
- HelpAge International, A study of older people’s livelihoods in Ethiopia, 2011
- HelpAge International; Coverage of older people in Ethiopia’s social protection system , 2019
- Hermine I. B. and Edward H. G., Trial Design, Measurement and Analysis of Clinical Investigations, 2011
- Hoddinott J., Ahmed A., and Roy S., Reducing chronic undernutrition through nutrition sensitive social protection: Evidence from Bangladesh, lessons for Ethiopia, 2019
- Hu Y and Stewart F., Pension Coverage and Informal Sector Workers. Pensions, 2009
- Ilcheong Yi, Social Protection, Social Security and Social Service in a Development, 2010
- Ilker Etikan, Rukayya Alkassim and Sulaiman Abubakar, Comparison of Snowball Sampling and Sequential Sampling Technique, 2015
- ILO -World Social Protection Report 2020-22, 2020
- ILO, Actuarial Valuation of the Civil Service Pension Fund, 2021
- ILO, Mapping of the national social protection system in Ethiopia, including social health protection, 2021
- ILO, The ILO Social Protection Floors Recommendation, 2012 (No. 202), Undated
- IWH, Cross-sectional vs. longitudinal studies, 2015
- Jason F., What you need to know about the purchasing power of money and how it changes, 2022
- Jensen C. A., Gregory C. A., Singh A, Household Food Security in the United States in 2013, 2013
- Jensen C. A., Rabbitt M. P., Gregory C. A., Singh A., Statistical Supplement to Household Food Security in the United States in 2017, 2017

- Kabir S. M, S., Method of Data Collection, 2016
- King C., Informal assistance to urban families and the risk of household food insecurity, 2017
- Lefort, R. The theory and practice of Meles Zenawi: A response to Alex de Waal. *Afr. Aff.* 2013, 112, 460–470.
- Leroux J., Morrison K., Rosenberg M., Prevalence and Predictors of Food Insecurity among Older People in Canada, 2018
- Luísa Álvares, Teresa F. Amaral, Food Insecurity and Associated Factors in the Portuguese Population, 22, 2014
- Machili T., Financial inclusion and food security nexus Evidence from the Southern African Development Community, 2021
- Malla Shone, Tsegaye Demissie, Bereket Yohannes and Mulugeta Yohannis, Household food insecurity and associated factors in West Abaya district, Southern Ethiopia, 2015
- Mariana Chilton, PhD, MPH, and Donald Rose, PhD, MPH, A Rights-Based Approach to Food Insecurity in the United States, 2009
- Maslow. A, A Theory of Human Motivation, 1943
- Matuschke I, Rapid Urbanization and Food Security: Using Food Density Maps to Identify Future Food Security Hotspots, 2009
- Maxwell, Daniel (1996). “Measuring Food Insecurity: The Frequency and Severity of ‘Coping Strategies.’” *Food Policy* 21(3): 291–303
- Maxwell, S. and Frankenberger TR. Household food security: Concepts, Indicators, measurements. A technical review. New York and Rome: UNICEF/ International Fund for Agricultural Development, 1992
- McIntyre, Lynn & Glanville, Theresa & Raine, Kim & Dayle, Jutta & Anderson, Bonnie & Battaglia, Noreen. Do low-income lone mothers compromise their nutrition to feed their children? *Canadian Medical Association journal*, 2003
- Melis U. Guven and Phillippe G. Leite, Benefits and Costs of Social Pensions in Sub-Saharan Africa, 2016
- Melisew, Dejene Lemma and Cochrane, Logan, Policy Coherence and Social Protection in Ethiopia: Ensuring No One Is Left Behind, 2019
- Menendez, A. Does money empower the elderly? Evidence from the Agincourt demographic surveillance site, South Africa. *Scand. J. Public Health* 2007, 35, 157–164
- Mesfin Melese, Minyahel Tilahun & Mebratu Alemu. Household food insecurity and coping strategies in Southern Ethiopia, 2021

- Meskerem Abi and Degefa Tolossa, Household Food Security Status and its determinants in Girar Jarso Woreda, north Shewa Zone of Oromia Region, Ethiopia, 2015
- Messay Mulugeta, Concepts and Theories of Food Security, Unpublished
- Messay Mulugeta, Resettlement and Food Security Nexus in Ethiopia: A Case from Nonno Resettlement Sites, Central Ethiopia, 2012
- Miles, M. B., and Huberman, A. M., Qualitative data analysis: An expanded sourcebook, 2nd ed, 1994
- Misgana Assef Kisi, Dessalegn Tamiru, Melese Sinaga Teshome, Meseret Tamiru, and Garumma Tolu Feyissa. Household food insecurity and coping strategies among pensioners in Jimma Town, Southwest Ethiopia, 2018
- MoLSA, National Social Protection Policy of Ethiopia, 2012
- Motbainor A, Worku A, Kumie A. Level and determinants of food insecurity in East and West Gojjam zones of Amhara Region, Ethiopia: a community based comparative cross-sectional study. BMC Public Health [Internet]. BMC Public Health; 2016;1–13. Available from: <http://dx.doi.org/10.1186/s12889-016-3186-7>
- MoUDHC, City Profile Addis Ababa, 2015
- Mutisya M., Ngware M., Kabiru C. W., Kandala N. B., The effect of education on household food security in two informal urban settlements in Kenya: a longitudinal analysis, 2016
- Naing, et al., Practical Issues in Calculating the Sample Size for Prevalence Studies. Archives of Orofacial Sciences, 2006,.1, 9-14.
- Nasreen Khan, Shereen Khan, Olivia Tan Swee Leng, Tan Booi Chen and Rossane Gale Vergara, Explore the Factors that Influence Elderly Poverty, 2017
- NCOA, Food assistance for older adults, 2022,
- Nigussie Abadi, Ataklti Techane, Girmay Tesfay, Daniel Maxwell and Bapu Vaitla, The impact of remittances on household food security A micro perspective from Tigray, Ethiopia, 2018
- NMA, 2022 <http://www.ethiomet.gov.et/>
- OAU, African Charter on Rights and Welfare of the Child, 1999
- OAU. The African Charter on Human and Peoples' Rights; The Organization of African Union: Addis Ababa, Ethiopia, 1981.
- OECD. Better Policies for Sustainable Development 2016: A New Framework for Policy Coherence; OECD Publishing: Paris, France, 2016.

- Public Private Infrastructure Advisory Facility IBIS Transport Consultants Ltd, Study of urban public transport conditions in Addis Ababa, Ethiopia, 2005
- Samwel N. K., Socio-economic Factors Affecting Food Security in Households of Elderly Persons in Imenti Central Sub Country, Meru Country, Kenya, 2014
- Sen A. Poverty and Famine: An Essay on Entitlement and Deprivation, Claredon Press. 1981
- Sen, Amartya. "Famines as Failures of Exchange Entitlements." *Economic and Political Weekly* 11, no. 31/33 (1976): 1273–80.
- Senait Nigussie, Li Liu, Kumelachew Yeshitela. Towards improving food security in urban and peri-urban areas in Ethiopia through map analysis for planning, 2021
- Sharkey JR, Johnson CM, Dean WR. Relationship of household food insecurity to health-related quality of life in a large sample of rural and urban women. *Women Health*. 2011;51(5):442-60.
- Shrestha B. P., Millonig A., Hounsell N. B. and McDonald M., Review of Public Transport Needs of Older People in European Context, 2016
- Singh, K, Quantitative Social Research Methods, 2007
- Sisay E, and Edriss A. Determinants of Food Insecurity in Addis Ababa City, Ethiopia. 2012;3(3):8–16.
- Smith SM and M. Household Food Security: A Conceptual Review. 1992.
- Social Security Programs Throughout the World: Africa, 2017
- Statista, Life expectancy at birth in Ethiopia 2019, 2019
- Statista, Most expensive cities to live in Africa as of 2022, 2022
- Svinicki, M. D., A guidebook on conceptual frameworks for research in engineering education. *Rigorous Research in Engineering Education*, 2010
- Szabo S. Urbanization and Food Insecurity Risks: Assessing the Role of Human Development. *Oxford Dev Stud*. Routledge; 2016;44(1):28–48.
- Tacoli C., The urbanization of food insecurity and malnutrition, 2019
- Tesfay Birhane, Solomon Shiferaw, Seifu Hagos and Katia Sarla Mohindra, Urban food insecurity in the context of high food prices: a community based cross sectional study in Addis Ababa, Ethiopia, 2014
- Tesso G. Why the Urban Households remain Foods Insecure in Developing Countries? Empirical Evidence from Nekemte Town of Ethiopia. 2015;3(10):108–17.
- UN Convention on the Elimination of all forms of Discrimination Against Women, 1995
- UN Convention on the Rights of the Child; United Nations: Geneva, Switzerland, 1989
- UN Habitat, 2008

UN Human Rights Office of the High Commissioner, About the right to food and human rights, 2022

UN OHCHR. Poverty: the right to food and social protection, 2022, <https://www.ohchr.org/en/topic/poverty-right-food-and-social-protection>

UN Population Division, Department of Economic and Social Affairs, World Population Prospects 2022, 2022

UNEP, Annual Report, 2014

United Nations. The Universal Declaration of Human Rights. 1948. Available at: <http://www.un.org/>

Vhurumuku, E., 2014. Food security Indicators. In Integrating Nutrition & Food Security Programming for Emergency Response Workshop. Nairobi, 2014. FAO.

WFP and CSA, Comprehensive Food security and vulnerability analysis, 2019

WFP VAM, Technical Guidance Sheet for Food Consumption Analysis, 2008

WFP, Summary of food security and vulnerability in selected urban centers of Ethiopia, 2009

WFP, A Global Food Crisis, 2022

WFP, Comprehensive Food security and vulnerable assessment (CFSVA), 2019

WFP, Creation of a Wealth Index, 2017

World Bank, Annual Report, 2022

World Bank, Ethiopia Urbanization Review: Urban Institutions for a Middle-Income Ethiopia. 2015

World Bank, Urban population (% of total population) - Ethiopia, 2021

World Population Review, 2022 <https://worldpopulationreview.com/>

WorldData, 2022 <https://www.worlddata.info/>

Worldometer, 2022 <https://www.worldometers.info/>

Yamane T., Statistics: An Introductory Analysis, 2nd Edition, New York: Harper and Row, 1967.

Yared Amare, A Case Study of Lideta Sub-city in Addis Ababa, 2010

Yawukal Chane, Getachew Hailu and Gemechu Kumera, Pension beneficiaries' household food insecurity and associated factors in Debre Markos town, Northwest Ethiopia, 2018

Yohannes Haile-Selassie, Stephanie M. Melillo, Antonino Vazzana, Stefano Benazzi and Timothy M. Ryan, A 3.8-million-year-old hominin cranium from Woranso-Mille, Ethiopia, 2021

Annex

Addis Ababa
University
(Since 1950)



ADDIS ABEBA UNIVERSITY
COLLEGE OF DEVELOPMENT STUDIES
CENTER FOR FOOD SECURITY STUDIES

Questionnaire developed to assess the household food security situation among government pensioners in Kirkos sub-city, Addis Ababa.

Respondents verbal consent form

Greeting

Dear respondent, my name is _____. I am working as a data collector for the study being conducted by **Elizabeth Tariku**, a post graduate student in Addis Ababa University, on the **Household Food Security Situation Among Government Pensioners in Kirkos Sub-city, Addis Ababa**. Accordingly, could you kindly spare some of your time for an interview on this issue. This questionnaire will be conducted only if you give your consent to take part in the study. In addition, your sincere and candid responses will contribute to the success of the study and help us better understand the issues. The questionnaire contains seven parts and will take about 45 minutes. The information in this questionnaire will be kept strictly confidential and will not be disclosed to anyone as only the researcher will have access to the information you give. Moreover, your name and address will not be recorded or identified by the researcher.

So, would you like to participate in the study?

Thank you for your cooperation!

Yes/agree _____ No/disagree _____

I. Socio-demographic characteristics of the Respondents

1.Relationship of the respondents with household	1.Head 2. Spouse 3. Son/ daughter 4. Other relative 5. Non- relatives	
2. Are you the head of the household?		
3. Age of pensioner		
4. Gender of pensioner	1.Male 2.Female	
5. Marital status of pensioner	1. Single/never married 2. Married 3. Divorced/separated 4. widowed	
7. Educational status		
8.Occupational status	Previous career Current occupation	
9.Is the head capable to work/ economically active	1.Yes 2.No	
10. If inactive, why?	1.Sick 2.Aged 3.Disable 4.Others specify	
11. Is there any family member who has chronic disease?	1.Yes 2.No	
11.1 If yes for Q11, what is the estimated medical cost you pay monthly?	ETB	
12.Number of permanent household members at the time of survey	1. Male 2. Female 3. N° of family members < 15yrs 4. N° of family members > 64yrs	
13.Type of occupation of household head	Primary occupation	Secondary occupation
14. What is nature of household head employment?	1. Contract 2. Worked on daily or weekly basis 3. Permanent 4. Others specify	
15. If unemployed, how do you get your means of livelihood?	1. Remittance from abroad 2. Support from relatives (dependent) 3. Rent part of house 4. Others specify	
16. What is your total net monthly pension income (ETB)?		
17. Do you have additional source of income or support?	1. Yes 2. No	
17.1. If yes, specify the source and amount for each resource	ETB Source	

17.2 Do you receive remittance from family members abroad?	1. Yes 2. No
17.2.1 If yes, how often do you receive it and how much?	
18. Do you get support from relatives?	1. Yes 2. No
18.1 If yes, are they supporting you in kind or money?	
19. Who is the owner of the house you live in? If owned, skip to question 19.1	1.It is our private house 2.Gifted from government /relatives/ 3.Kebele/ kiray betoch rent 4.Rent from private owner
19.1. If your house is rent, how much you paid monthly?	ETB
20. Does your house have a backyard	1. Yes 2. No
20.1 If yes, what are you using it for? Vegetable gardening, poultry, sheep, goat, cow	
20.2 How do you use the produce from your backyard?	
21. Estimate distance of market from where you purchase for food	km
21.1 How often do you go to the food market in a month?	
21.2 How much do you spend for transport?	ETB
22. Do you receive any other support from Government social services or associations or support groups?	Yes No
22.1 If yes, kindly specify	
23. Do you have a bank account?	Yes No
23.1. If yes, how often do you save?	
24. Where do you live	Rental Own

II. Asset ownership

Information pertaining to household wealth			
	Asset	Response	Nº of asset
1	Does your household have electricity/ running water and toilet?	Yes.....1 No.....2	
2	A mobile telephone?	Yes.....1 No.....2	
3	A bed with cotton/sponge/spring mattress	Yes.....1 No.....2	
4	Chair	Yes.....1 No.....2	
5	Sofa	Yes.....1 No.....2	
6	Table	Yes.....1 No.....2	
7	Television/ Functioning Flat screen Television	Yes.....1 No.....2	
8	Radio/Functioning CD player	Yes.....1 No.....2	
9	Refrigerator (fridge)	Yes.....1 No.....2	
10	Gas Stove/Cylinder	Yes.....1 No.....2	
11	Electric stove	Yes.....1 No.....2	
12	Washing machine	Yes.....1 No.....2	
13	Chest drawer/ buffet/ comedino	Yes.....1 No.....2	
14	Bicycle	Yes.....1 No.....2	
15	Motorcycle/Bajaj	Yes.....1 No.....2	
16	Video camera/ Digital Camera	Yes.....1 No.....2	
17	Car	Yes.....1 No.....2	

III. Household Food Insecurity Access Scale (HFIAS)

No.	Questionnaires	Response option	Code
1	In the past four weeks, did you worry that your HH would not have enough food?	0 = No 1 =Yes	If no, skip to Q2
1a	How often did this happen?	1 = Rarely (once or twice in the last 4 weeks) 2 = Sometimes (3-10 times) 3 = Often (more than ten times)	
2	In the past four weeks, were you or any HH member not able to eat the kinds of foods you preferred because of a lack of resources?	0 = No 1 = Yes	If no, skip to Q3

2a	How often did this happen?	1 = Rarely (once or twice) 2 = Sometimes (3-10 times) 3 = Often (more than ten times)	
3	In the past four weeks, did you or any HH member have to eat a limited variety of foods due to a lack of resources?	0 = No 1 = Yes	If no, skip to Q4
3a	How often did this happen?	1 = Rarely (once or twice) 2 = Sometimes (3-10 times) 3 = Often (more than ten times)	
4	In the past four weeks, did you or any HH members have to eat some foods that you really did not want to eat because of a lack of resources to obtain other types of food?	0 = NO 1 = Yes	If no, skip to Q5
4a	How often did this happen?	1 = Rarely (once or twice) 2 = Sometimes (3-10 times) 3 = Often (more than ten times)	
5	In the past four weeks, did you or any HH member have to eat a smaller meal than you felt you needed because there was not enough food?	0 = No 1 = Yes	If no, skip Q6
5a	How often did this happen?	1 = Rarely (once or twice) 2 = Sometimes (3-10 times) 3 = Often (more than ten times)	
6	In the past four weeks, did you or any other HH member have to eat fewer meals in a day because there was not enough food?	0 = No 1 = Yes	If no, skip to Q7
6a	How often did this happen?	1 = Rarely (once or twice) 2 = Sometimes (3-10 times) 3 = Often (more than ten times)	
7	In the past four weeks, was there ever no food to eat of any kind in your HH because of lack of resources to get food?	0 = No 1 = Yes	If no, skip Q8
7a	How often did this happen?	1 = Rarely (once or twice) 2 = Sometimes (3-10 times) 3 = Often (more than ten times)	

8	In the past four weeks, did you or any HH member go to sleep at night hungry because there was not enough food?	0 = No 1 = Yes	If no, skip to Q9
8a	How often did this happen?	1 = Rarely (once or twice) 2 = Sometimes (3-10 times) 3 = Often (more than ten times)	
9	In the past four weeks, did you or any HH member go a whole day and night without eating anything because there was not enough food?	0 = No 1 = Yes	
9a	How often did this happen?	1 = Rarely (once or twice) 2 = Sometimes (3-10 times) 3 = Often (more than ten times)	

IV. Food consumption Questions

In the last 7 days, how many days did you (or household members) eat the following:

Food Groups	Food Items	Response of the Households in number of days
1	Teff, Maize, maize porridge, rice, sorghum, millet pasta, bread and other cereals and tubers	
2	Cassava, potatoes and sweet potatoes	
3	Beans. Peas, groundnuts and cashew nuts Pulses	
4	Vegetables and leaves Vegetables	
5	Fruits	
6	Beef, goat, poultry, pork, eggs, and fish Meat and fish	
7	Milk yogurt and another dairy Milk w/o butter	
8	Sugar and sugar products Sugar	
9	Oils, fats and butter Oils	
10	Condiments	

V. Questionnaires Coping Strategies, In case of Food Insecurity.

1. Did you encounter food shortage in the last four weeks	1. Yes 2. No
2. If yes, what are the livelihood coping mechanisms that your household applied during food shortage (decline in food availability or income insecurity)?	
I. Coping strategies	1. Yes 2. No
a. Migrate household member to the nearby town for wage labor	
b. Receiving donation from relatives or friends	
c. Borrowing money to buy food	
d. Buy food on credit basis	
e. Selling household assets	
f. Selling household livestock	
g. Petty trading	
h. Selling wood	
i. Selling charcoal	
j. Send children to work	
k. Begging	
l. Others specify	

VI. Which of the following types of consumption related coping strategy did you use during food shortage?

I. Strategies	1. Yes 2. No
1. Reduce the number of meals consumed in a day	
2. Reducing consumption during each meal	
3. Eat less preferred, lower quality or less expensive foods	
4. Increase consumption of street food (e.g., prepared foods)	
5. Not eating for whole days sometimes	
6. Selling any household assets	
7. Others (specify)_____	

VII. Access to Credit

1. Have you (any member of your household) received credit in the last four weeks?				0. No 1. Yes	
2. If your answer to the above question is yes, please give the following information?					
a. Source of credit	b. Used For	c. Amount in		Code: Source:	Code: Used
		cash	Kind		
				1= Banks 2= Saving and loan cooperative 3= Friend, Relative 4= Town trader, 5= Neighbor, 6= Private lender 7= Other, Specify	1= Start or expand a business 2= Buy land or housing 3=Household furniture 4=School fees 5=Repair the house 6=Loan repayment, 7=Healthcare costs 8=Family events 9= Others, specify

INTERVIEW GUIDE FOR KEY INFORMANTS

This section is meant to capture more information from of key people including: the Public Servants Social Security Agency (PSSSA) and Ministry of Women and social Affairs (MoWSA)

How do government pensioners in Kirkos sub-city make their livelihood?

What is your opinion about the food security for the government pensioners within the Kirkos sub-city?

What is the impact of socio-economic changes on food security towards the lives of the government pensioners within the Kirkos sub-city? (Consider these factors- education, gender, unemployment, health, poverty; Education, Gender; Health, Unemployment, Poverty.

Is there any relationship between government pensioners and food security status? If yes, please explain.

Under your position, what action have you taken to promote food security within the households for the government pensioners?

Are there food security measures set in place specifically to support the welfare of the government pensioners in the Kirkos sub-city particularly in terms of food security? If yes, please specify.

What recommendations would you give towards improving the welfare for the government pensioners within the area especially in improving their food security status?

How often the government pension amount increased?