



COLLEGE OF DEVELOPMENT STUDIES

CENTER FOR FOOD SECURITY STUDIES

**THE CORRELATE OF MICROFINANCE SERVICES AND FOOD
SECURITY IN JIGJIGA TOWN, FAFAN ZONE, SOMALI REGION,
ETHIOPIA**

**Thesis Submitted to Center for Food Security Studies, College of Development
Studies, Addis Ababa University in Partial Fulfillment of Master of Science in
Food Security and Development Studies**

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DECLARATION

I, Ahmed Bade Haji, do here by declare to Addis Ababa University School of Graduate Studies that this thesis is a product of my original research work, and it has not been submitted to any other university for any academic degree. Materials and information other than my own are dually acknowledged.

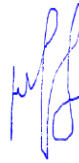
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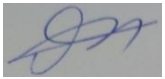
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ACRONYM

ADLI	Agricultural Development Led Industrialization
BMI	Body Mass Index
CSA	Central Statistics Agency
FAO	Food and Agriculture Organization
FGD	Focus Group Discussion
GDP	Growth Domestic Production
HFIAS	Household Food Insecurity Access Scale
HRM	Human Resource Management
JCCWB	Jigjiga City Council Water Bureau
JJU	Jigjiga University
KII	Key Informant Interview
MFIS C	Microfinance Institute Share Company
NBE	National Bank of Ethiopia
NBE	National Bank of Ethiopia
NCD	Non-Communicable Disease
NGO	Non-Governmental Organization
SMFISC	Somali Microfinance Institute Share Company

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Abstract

*The study was conducted at Jigjiga town of Fafan Zone, Somali regional state, Ethiopia with the objective of the study of assessing the correlate of microfinance and food security. The study employed a cross sectional design. Jigjiga town has 20 kebeles and two branches of microfinance institute, then the researcher selected the main office of microfinance institute by purposive sampling because the office offers trainings for the participants quarterly like; short and long term training related to way of receiving, saving loans and credit services and how to repay based on the signed agreement of the participants. Random sampling technique was used to select 100 households. Both primary and secondary data sources were used. Correlation analysis was used to identify associate degree between microfinance services and food security status of participants in the study area. Repayment of loan have statistically significant negative correlation ($r=-.275^{**}$, $P= 0.01$) that expressed as repayment of loan received by the participant of microfinance service increases also their food security status decrease. Regarding to time for repayment fitness by the participants has statistically significant positive relation to their food security status($r=.221^{*}$, $p=0.05$) that indicated as time to repay the loan increases also the food security status of the participants increased at 95% of level of confidence which show that as one of these variable increase or decrease via-versa. According to the descriptive statistic of the stud, it revealed that 47 (47.0%) of the respondents were male and 53(53%) were female so this findings revealed that microfinance services participated more women than male in the study area. According to age of household respondents, 52 (52.0%) of the 100% of the participants were the age between 30-35 which means that microfinance service practitioners targeted on the productive age of the poor active participants in Jigjiga town to secure their future food accessibility.*

Key words: Food security, Loan, Micro saving, Micro credit, Micro insurance, Jigjiga.

CHAPTER ONE

1. INTRODUCTION

1.1 Background of the study

Microfinance institutes system offer financial services to the poor active client those have limited resources availability from conventional financial services in the world and low income clients look for capitals to solve their basic needs or for expansion of small businesses. This lending creative job opportunity constantly grow which brought in 2018 around 916 microfinance institutions for the estimation United States Dollar 124 billion gross loan portfolio, and resulted in 140 million active borrowers in the world wide, were 80% are women and 65% are rural borrowers(Hassan , 2011).

Microfinance is normally viewed as an economic development strategy, and it is crucial approach relevant in a country where there are disadvantage groups those do not benefit from formal economy of the country and most of the developing nations, microenterprises sector is estimated to account for 20% to 70% of employment strategies as illustrating the importance of the informal economy in the subsistence of impoverished population throughout the world (Wilson, 2001; Waters, 2001).

Microfinance is the way of providing of insurance, saving, small loans and other financial services to the active poor households in the remote areas and place where there is not bank system to act as bank in order to generate income opportunities, build assets base, stabilize consumption and protect themselves against risks of food shortages(Hamill, 2008).

Most of the world science scholars and development practitioners believed that microfinance, in 1980s, has involved as an economic development approach which intended to provide food consumption opportunities to low-income women and men as the microfinance serves itself is named, the provision of financial services to low-income clients including self-employed, insurance of live assets (Ledger Wood, 1999).

Generally, studies done in Africa have examined the relationship between microfinance institute services and food insecurity status (hunger) and found that it has significant positive relation on food and nutrition security of microfinance services participants especially accessing

microfinance loans have positive association on food security status of participants (Imai, K, 2010).

Microfinance institution can be mentioned by saying it is any type of entity that offers financial services to dis-advantaged sectors of urban and rural communities that are unable to access these services from formal or commercial banks to assist the populations in the areas to get services including savings, remittances or money transfers and micro-insurance to access food but there are factors affecting repayment of loan to sustain the institute by the participants which are low financial capacity of clients, weak loan collection system of the client, weak personal selection system of trading center, lack of willingness from clients to pay their loan (Muluken and Mesfin, 2014).

Insufficiency of socio-economic services to the residents such as lack of infrastructures and high human growth with scarce of resources generally causes many pastoral households to become food insecure in the study area, the drought, the influx of both political and environmental refugees from outside and inside of the country and change of the land use patterns have caused environmental degradation particularly which can be the risk factors of becoming food insecurity (CSA, 2001).

Agricultural Development Led Industrialization (ADLI) motivates on ensuring the national food self-sufficiency and the food security strategy of Ethiopia largely improves on increasing the availability of food through domestic production and ensures access of food for food deficit households so, all these strategies are important aspects of pastoralists to make them food secured and one of the most important strategies used to increase food production at household level is providing microfinance services to poor household heads (Getahun and Kejela, 2001).

The international agencies such as UNICEF and FAO used food and nutrition security terms as comprehensive framework for action and define the frameworks, food and nutrition security as condition in which all people, at all the times, have physical, social and economic access to sufficient, safe, and nutritious food which meets their dietary needs and food preference for active and health life (Weingärtner, 2010).

Micro finance services increases the income generation of low income household heads by creating job opportunities then that community members may get greater access on their health and nutrition of poor household members and microfinance can again preserves self-employment, raises income in the short term, introduces smooth consumption health services and can be used as insurance during emergencies (Getahun, 2001; Kejela, 2001).

The common activates of microfinance is to facilitate access to inputs for the household heads and other community members both urban and rural to raise their local food production and minimums critical bridge between the household food security and the local production of households so, the correlate of microfinance and household food opportunities are interrelated because it helps the transfer of resources from urban areas to rural areas and give sufficient combatable advantage to the household head and members of family (Getahun, 2002; Kejela, 2001).

Somali microfinance institute share company although, began providing financial services to the poor active household in the region, in December 2011, the institution has been giving the services by opining 24 branches and prepared amount of distribution of 1,828,552,415.38 birr to nearly 48,500 active poor households which 34,413 are active poor clients and over 23,227 of whom are poor women and 11,186 are men and the total amount of outstanding loan is 1,053,829,599.62 birr but, still there is food insecurity problem in the region especially Jigjiga town (HRM, 2019).

Somali microfinance share company is a privately funded by the Somali regional government and other shareholders and it was established in January 2011 and provides financial access to the people of Ethiopia especially poor active household in Somali region those are food insecure and most of the time provides loans to small enterprises, beginner entrepreneurs and small business owners ,transfers money, saving money, offering credit and savings services to the active poor both in rural & urban areas and supports self -employment and income generating activities poor household in region (HRM, 2019).

The region is currently going to the target population plotted in the second region of the country to increases and re-cop the infrastructure of the these risk population, Somali microfinance provides them the services which has 29 branches (including Addis Ababa and Dire Dawa) and

40 satellites situated in every zone of region and serving more than half of regional woreda as regards the hello cash service, the coverage is everywhere under mobile service coverage more than 140 towns in the region(HRM, 2019).

1.2 Statement of the Problem

Microfinance is normally viewed as an economic development strategy, and it is crucial approach relevant in a country where disadvantage groups do not benefit from formal economy of the country and most of the developing nations, microenterprises sector is estimated to account for 20% to 70% of employment strategies as illustrating the importance of the informal economy in the subsistence of impoverished population throughout the world to fight against, food scarcity (Wilson, 2001; Waters, 2001).

Somali region is one of the ten regions of Ethiopia which its people are severing food insecure and most of the populations are pastoral and agro-pastoral practitioners are prone to the impact of natural and manmade hazards (droughts, social conflict...) Because of these hazards, some of the community members are food insecure and their life dependents on food assistance on regularly to survive and government success is low according to the condition and food item accessibility and availability (Devereux, 2006).

Most of the time, pastoral and agro pastorals are prone to drought and famines so, financial services can be used to improve diversifying household assets to alleviate food insecurity because sufficient incomes are not able in the pastoral areas especially Somali region, Ethiopia (Mohammed, 2006).

The research conducted in Ethiopia shows that the Pearson correlation analysis indicated that there is strong positive linear relationships between number of participants and amount of loans extended and the total number of poor active customers of microfinance institution in Ethiopia that reached over 2.4 million customers in 2011 whereas the total credit extended by all microfinance institutions amounted to Birr 6.9 billion (Ebisa et, al. 2013).

The maximum repayment period of loan extended by microfinance shall be 15 years housing loans and 5 years of all other loans and advance based on loan cycle and lining with article 16 of microfinance business proclamation no 626/2009 which says that microfinance institution must extend loans to group or individuals and loan must be made without collateral but secured by

group or individuals guarantees as appropriate and as discretion of the institute poor active household heads should receive to stabilize his/her food scarcity condition (NBE, 2016) .

The regional governments re-allocate and transfer resources to poor household's members to achieve their long-term food security status in order to improve their productive capacities through the provision of micro financial services which is one aspect of overcoming, overwhelming food insecurity in Somali region especially in Jigjiga town (Richard, 2002).

Regarding to the microfinance services participants, especially in Jigjiga town residents are food insecure because there is a great problems related to loan distribution, time of repayments of loan, interest rate and way of selection of active poor household for corruption issue and attitude of the participants towards the microfinance services that is what made the microfinance services participants to be food insecure in the study area.

Interventions of urban finance service and rural finance services on active poor household have shown direct correlate on their food security status in house hold level because when active poor households receives loans may increase their incomes diversification and this income is deposited and exchange to other food items which increase household food items and this directly enhance households overall livelihoods.

Rather than the well progressing of the organization related to distribution of loans, insurance, credit and saving deposition, there was limed research done related to microfinance services especially there was a research done in Dolo Ado district which was the role of microfinance institute enhancing the food security status in household level of microfinance participants and non-participants but no correlation was examined and not done in Jigjiga town, fafan, zone. Therefore, what makes this research unique was to assess the correlate of microfinance services and household food security of microfinance services participants in Jigjiga town.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of the study was to assess the correlate of microfinance services and food security of microfinance service participants in Jigjiga town.

1.3.2 Specific objectives

The specific objectives of the study were:

- Assess microfinance services contribution on household food security in the study area.
- Examine the correlation of microfinance services and household food security.

1.4 Research question

- What is the food security status of microfinance services participants in Jigjiga town?
- What is the correlation between microfinance services and food security status of participants in Jigjiga town?
- What is the nutrition security of microfinance service participants in the study area?

1.5. Scope and Limitation of the Study

1.5.1. Scope of the Study

The research was conducted only in Jigjiga town which is located 636 km away from Addis Ababa. This town was selected because it is one of the towns where household food security was not fully attended or achieved (more from rural to urban).

The study focused only on the correlate of microfinance services and household food security of microfinance services participants at main branch office in Jigjiga town.

1.5.2 Limitation of the Study

The research was limited to deal with the correlate of microfinance services and household food security with specific to microfinance services participants of only Jigjiga town residents, and microfinance institution, “main office” due to the respondent’s availability, limited resources, financial related issues, time and covid-19 impact constraints which forced the researcher to limit the sample size and the scope of the research. The researcher focused only to see the

correlate of microfinance services and the household food security of the (clients) in Jigjiga town (active poor household heads who are the participants of microfinance services).

1.6. Significance of the Study

The contribution of this study is to examine the associate of microfinance services on household food security status of microfinance participants in Jigjiga town. The most advantages that the study has are; helping the upcoming development studies students to use as baseline data/secondary data to do new research for the coming years in Jigjig town, Somali state, Ethiopia.

The significance of the study is finding of the degree of association of the microfinance service and food security status of the participants which can also help the offices workers of the firm by adding information on existing knowledge of microfinance contributions for the improvement of the household food security status in the study area.

The findings of the research can provide multipurpose information to different users, including practitioners in microfinance, donors, policy planners, academicians for further research writing in the future for other researchers in the study rear for further related researches.

1.7. Definition of key terms

1.7.1. Food security is defined a condition that exist when all the people, at all the times, have physical, social and economic access to sufficient, safe and nutritious food that meet their dietary needs and food preferences for active and health life (FAO,2002).

1.7.2. Nutrition security emerged with recognition of the necessity to include nutritional aspects into food security and adds the aspects of health services, health environment and caring practices so a person can be nutritionally secure when he/she has a nutritionally adequate diet and the food consumed is biologically utilized because adequate performance is maintained in growth, resistance disease for risk groups (infants, children, lactating, pregnant and physically dis able people(Frankenberg et al. 1997).

1.7.3. Loan is a debt (a sum of money), that provided to the participants of commercial banks or informal financial services (microfinance institutions) to repay it to the firm later with definite condition with an interest (Neil H. and Raymond, I947).

1.7.4. Micro saving is small fraction of income of the poor active households that is safely kept by the financial institutions mostly microfinance institutes and related to the financial collection in small amounts mostly by poor with aims of meeting family needs and build up or expends income generation and has benefit for both micro borrowers and microfinance institutions (Olu, 2009).

1.7.5. Microcredit is part of microfinance which provides wide ranges of financial services especially savings accounts to the poor and widely used in developing countries to use as tool for poverty alleviation and commonly defined a form of microfinance that involves an extremely small loan given to individuals to assist them to be self-employee to grow small business (Bateman, 2010).

1.7.6. Micro-insurance is prevention of low poor active households in the community against the specific hazards in the exchange for the usually premium payments proportional to the livelihood and cost of the risks involvements and it is accessed by also low income populations but run in accordance with generally accepted insurance practice rules and guidance (Churchill C, 2006).

1.8. Organization of the thesis

This thesis was organized into five chapters. The first chapter dealt with the introduction parts which contain the backgrounds of the study, statement of the problem of the study, basic research questions, objectives of the study, significant of the study, scope of the study, limitation of the study, and definition of key words and organization of the thesis. Chapter two of the study reviews the literatures that convey the development of conceptual framework. Chapter three deals with the method of the study, sources of the data, variables and method of data analysis of the study are expressed. Chapter four contains the result and discussion. Chapter five deal with the conclusion and recommendation of the study.

1.9 Ethical considerations

Permission of official letter was written from Addis-Ababa University, center for food security which concerns administrative bodies and microfinance branch leaders to get permission. In the letter, the objective and benefits of the study were explained in detail to the respondents and the respondents were interviewed only after when they agreed the verbal consent and told that responses of the question are the rights of termination of the interview at any time and taking of informed consent was kept confidentiality.

CHAPTER TWO

2. LITERATURE REVIEW

2.1 THEORETICAL LITERATURE REVIEW

2.1.1 Concept and Definition of Microfinance Services

Microfinance is defined as the delivery of loan services, savings services, insurance grantee and other financial services to the poor active households to support them to generate income opportunities, building assets bases, and stable consumption and protect themselves from the risk of the droughts (Hammill, 2008).

Microfinance services were started with the aim of filling the space left by banks in giving credit to individuals, micro, small and medium enterprises which were on the rise during this period and financial services generally include savings and credit; however some finance provides insurance and payment services and in addition to financial intermediation(Ogindo, 2006).

Microfinance is agency that gives social intermediation services to community members like; group information, development self-confidence and training in financial literacy and management ability among the member of active households (Ledger wood, 1999).

Microfinance services are generally small loans to active household for working capital, informal approval of borrowers and investments, collateral substitutes such as a group guarantee or compulsory savings, access to re-gain and sufficient loans based on repayment criteria, loan distribution, monitoring and security of saving and deposition products (Khan, 2008).

The services provided by microfinance to clients can be categorized into four different categories which are financial intermediation, provision of financial products and services such as savings, credit, insurance, credit cards and payment system which do require ongoing subsidies (Khan, 2008).

2.1.2 Micro Savings

Micro saving is thought of saving made by low-income or poor people s small amounts of saving in institute specialize in micro savings and people who save small amounts are known micro currency savers and they are not only micro-entrepreneurs but also poor people who are relying on remittances, pension and other forms of financial supports (Rutherford, 2000).

Micro saving is small fraction of income of the poor active households that is safely kept by the financial institutions mostly microfinance institutes and related to the financial collection in small amounts mostly by poor with aims of meeting family needs and build up or expends income generation and has benefit for both micro borrowers and microfinance institutions (Olu, 2009).

Financial services like: microcredit, saving and repayment services are the main tools of microfinance institutions those really have ability to assist developing countries in their battle against poverty and advance families' wellbeing so, the birth of microcredit was in 1970 when the professor Mohamed Yunus who is the Bangladeshi banker introduced credit services in the bank. The crucial reason behind popularity of microcredit in the money lenders in the market belongs to its objective of serving active poor households and preventing them from poverty while other money lenders are motivated by profit (Haile, et. al., 2012).

The concept of microcredit is referred to the small amount of credit given to active poor people especially women at reasonable interest for generates income through self-employment and then the goals of microcredit can be interpreted from vary angles so, it can be seen from empowerment angle as a human right because it empowers the most vulnerable people especially women through enabling them to get job and generate income to battle food insecurity conditions from household level to national level in Ethiopia (Haile, et. al., 2012).

2.1.3 Micro Insurance

The term micro insurance is composed of two parts which are “micro” which means “Affordable of poor” and “Insurance” which means “risk pool to compensate individual and group” so, micro insurance is a concept in the related to micro finance, helps reducing vulnerability of micro finance clients and rescue them from disaster risk (Ayandev Sahu, 2012).

Study done in hindia has reveals that micro insurance is at infant stage and is expected grow so, the positive social benefit and the potential profitability of this business are reason enough to encourage the growth of these operations and the growth of micro insurance or can suffocate its growth by the way the public policies regarding risk awareness and personal finance management can contribute to micro insurance business development (Ayandev Sahu, 2012).

Different Studies had explained that micro insurance is affordable to the rural and urban poor and to enable micro insurance to be an integral part of the country's wider insurance system so, the main thrust of micro insurance regulation is protection of low income people with affordable with insurance to help them cope with and recover from common risks with standardized popular insurance products adhering to certain levels of cover, premium and benefit standards (Preethi Dixit, 2015).

Studies in Kenya had revealed that micro insurance is one possible instrument to mitigate risks and to reduce the vulnerability of poor and low income households, particularly of the informal economy micro insurance is not conceptualized as a mechanism that competes with or replaces public social protection systems, but it is most effective when put into comprehensive social protection framework that is above the public social protection measure and includes informal, private, and other public risk management strategic of preventing measure, mitigation and suitable coping strategies(Gaby Ramm and Mayur Ankolekar, 2001).

Micro Insurance is also a component of microfinance services which is a provision of insurance to households especially households which are vulnerable to risk both in the form of natural climates changes impacts or other social conflicts. Microfinance Institutions (MFIs) has great an active role in reduction or protecting the poor households against vulnerability and this is done by providing credit for increasing income generating opportunities and on the other hand, the terms micro credit and microfinance are often used interchangeably (Toon Bullens, 2006).

Insurance essentially for provision of added coping mechanism to better deal with risk events so to be serviced efficiently and effectively, insurance provision must be affordable, simple, timely and relevant to their specific risks (Toon Bullens, 2006).

The strategic instrument which is different development agendas of micro insurance (pro – poor finance, agriculture and rural development, social security development, mitigation of climate change and micro-insurer are informal incomes, informality, high vulnerability to disaster, low financial and actual literacy, higher risk environment and the experience of exposure to mis-information and abuse, lack of trust of large and formal institutions they do not define their insurance as “small” in their mind(Bamako 2000).

Micro-insurance is crucial because it plays an important role for risk management, poverty alleviation and women empowerment or insurance is capacity to transfer risks to another parts in a predictable and organized path for persons to live their lives with more certainty like: Low-income individuals, households, and businesses are susceptible to the most common risks associated with their well-being, such as death, illness, injury, natural disasters, and theft (Bamako 2000).

Firstly, life cycle risk, such as education, are those which are more probable and are six risks that low-income individuals face, much like any other individual, but the financial cost to a household is not as devastating as other types of events like; death is more unpredictable than education, but the cost to a household is even more uncertain (Bamako 2000).

Mass risks relate (Education, financial, health, death, drought, famine) with natural disasters or major events that cause damage to the population at large can be mitigated by providing micro-insurance suitable for low-income individuals, households, and businesses (Bamako 2000).

2.1.4 Micro credit

Micro credit is potential finance services extend from few lends to very poor active populations for self-employment plan that create income and allowing them to care for themselves and other community members and microfinance is appropriate financial place where NGOs and MFIs supplement the loans to the needy for financial services such as savings and insurance therefore, microcredit is a part of microfinance services which involves the provision of credit to the active poor, whilst microfinance add on non-credit financial services such as saving insurance, pensions and payment services (Ayertey, 2008).

The common utilization of micro-credit dates back to as earlier as 1700s and can be traced to Irish loan fund system which was planned to give small loans to rural active poor people with no collateral to alter and secure their food availability and the concept of micro-finance spread to Latin America, then to Asia and later to Africa but the modern usage of the expression micro-financing has its roots in the 1970s after when organizations, such as Grameen Bank of Bangladesh with the microfinance pioneer Mohammad Yunus, started and shaped the modern industry of micro-financing service to change the live style of active poor household in to better life (Yunus, 2007; Wahid, 1994).

The poorest of the poor has to be provided with subsidies, advisory services, skill development etc. these non-financial service are called credit plus services and micro credit involves high administrative costs associated with small loans; they either need to be heavily subsidized or charge relatively high interest rates to cover overhead and transaction costs(Bank of India, 2009).

This cost has to be accurately calculated when large members of small loans are given to the poor, spread in large geographical area, borrowers are more likely to default, and allocation of loan installments is made more labour intensive due to these facts, comparatively, MFIs have to set the correct, appropriate rate of interest to avoid interest rate risk (Bank of India, 2009).

Ethiopia populations are agrarian society which means more than 85% of the population performs farming activities and agriculture products of the country deliver to more than 80% means half of growth national product (GDP) to dominate country's economy sector in the country and the country is common for being known as subsistence agrarian economy society. Therefore the food productive and food security assessment in the country presents subsistence agrarian economy operating because of ecological degraded environment, variables climate and poor production techniques(Giorgis, 1989).

The idea of national food security in Ethiopia was initiated by the famine of the 1970s and the beginning of this strategies had aims which were attainment of national food self-sufficiency which from the world market and the drive to promote self- reliant development and directed towards stabilizing domestic food supply through stock piling and time of crops sudden falls in national production financial compensation in case of crop failure generated by uncontrollable adverse events) and compensation of the health care expenses in case of illness, childbirth and/or physical injuries is dominated by microfinance services of microfinance participants household in the country(micro-insurance)(Giorgis, 1989).

2.2 Microfinance services and Food Security

Food insecurity is directly related to poverty at global, regional, national and local levels. FAO's recently most estimation indicated that globally, 842 million people were food insecure, 12% of the global population were unable to meet their dietary energy requirements. Thus, around one in eight people in the world is likely to have suffered from chronic hunger, not having enough food for an active and healthy life. The vast majority of hungry people 827 million of them live in

developing regions, where the prevalence of undernourishment is now estimated at 14.3% in 2011–2013(FAO, 2010).

Poverty exists with food insecurity and is the leading cause of hunger, malnutrition, low income, illiteracy, homelessness, inadequate housing, and social discrimination. India is the largest populated country of hungry people which is around 194.6 million (15.2%) of the population while microfinance service combat with poverty and food insecurity condition(FAO *et al.*, 2019). The total number of undernourished people was 172.4 million in 1990-92, which increased to 237.7 million in 2005-07, i.e., nearly 38% increase in undernourished people. More than 820 million people all over the world were still hungry in 2018 (World Health Organization. 2018).

2.3 Empirical Review

2.3.1 Microfinance services and household food security status

Microfinance institutions services assist needy people to meet all actual operating expense, and adjust for inflation and subsidies, create financial aspects through its financial services operations and it often operates in highly inflationary environments and /or receives significant support from third parties as governments or donors in the form of implicit subsidies in addition to that microfinance institution wants to reach and benefit truly large numbers that should be consciously working toward institution self-sufficiency (Berger, et.al, 1997).

Commonly microfinance is called giving a wide range of financial services like; credit, insurance, saving, depositing and payment services to active poor and low-income households who were excluded from conventional financial services for lacking of collateral (Johnson et. al, 1997).

Microfinance services combats poverty to reduce(food insecurity) and while arguing said that the record of MFIs in microfinance is “generally indicating that is below the expectation” he concedes that microfinance has some positive impacts to poverty reduction but according to the a study of a MFIs, he states that findings show that consumption smoothing effects, signs of redistribution of wealth and influence within the household can definitely be one of the most common impact of MFI programs in the world (Ditcher, 2006).

Food insecure households both people live in urban and rural (herders and farmers), are normally suffer short of cash to buy inputs for both market and garden sites to increase the availability and accessibility of food assets in household in order to increase the local production of food. They need access to adequate credit, but the fact is that institutional credit is not available to most of rural area residents and no more microfinance institution in the urban even to give loans and extending credit to smallholders which can be the way to promote food production and household food security herders and smallholders have difficulties in gaining access to microfinance services. The rural poor, living in remote areas and often illiterate, have trouble in understanding complicated lending formalities according to the study done by (Devereux and Maxwell, 2001).

The most important services and crucial of microfinance institution is reducing means to fight against poverty and sustain the lives of the poorest households so, it is actually clear that microfinance service/institution solving and benefiting substantial numbers of the poorest clients in their areas of country can be at or near operational self-sufficiency and making progress toward both the needy people to get experienced for the trade which is between working the poorest and institutional self-sufficiency financial sustainability, MFI's thus has much liberty in setting interest rates before they would be out of the price by giving standardized criteria (Berhanu, D & Thomas, Y, 2002).

2.3.2 Microfinance services and household assets building

Assets are used by traditional financial institutions as physical collateral security which can be loans taken by individuals, households or organizations and the absence of assets among the poor makes it tough for them to access credit as argued by scientists that microfinance can provide a number of pathways to reduce vulnerability among poor people and these are included the empowering, and setting up of assets and then the vulnerability will be reduced through sale of assets for consumption smoothing and to react emergencies for rescuing from sickness or death(s) in the family (Adjei et al., 2009).

Assets are (human, social, financial, physical and natural 'capitals') important because they can bring security, especially in times of hardship or economic stress, such as unemployment, illness, or family breakup and assets also increase power and control and most of the community

members use income for day to day basic need recovers; by contrast, assets often bring income, power, and independence of community members (Adjei et al., 2009).

2.3.2.1 Human Capital

Human capital refers to labor resources that households have and represents skills, knowledge, ability to labor and good health that enable people to achieve positive livelihood outcomes and the quality of household labor is improved through education and skills development and also the health status of household members but empirical results on the impact of microfinance show that there is a positive relationship between microfinance participation of school going students found that the number of school going children increased with participation in microfinance programs. On the other side, they discovered that the girls attending to the school increase when women attend microfinance services also increase (DFID, 1999).

2.3.2.2 Social capital

Social capital is expressed as the rules, norms, obligations, reciprocity and trust embedded in social relations, social structure and society's institutional arrangements, which allow its members to achieve their individual and community goals so, social interaction needs to be strengthened through persistent relations and note that social capital may breakdown because of repeated shocks (such as drought, social conflict, famine..) and economic crisis or physical insecurity (such as violence and crime) but increases as income generation participation in creases (Rakodi, 2002).

2.3.2.3 Physical capital

Physical capital refers to productive and household assets that include tools, equipment, housing and other producer goods and it also involves basic infrastructure such as transport, shelter, water, energy, communication, school buildings, raw way building and dams buildings means accessing physical capitals to help people to have long sustainable livelihoods/ services settings like rural micro-enterprises for instance need access to affordable transportation, secure shelter, adequate water supply and sanitation, affordable energy and further states that the ability to invest in production equipment may directly generate income and enhance labor productivity (Meena and O'Keefe, 2007).

2.3.2.4 Financial Capital

Finance or economic capital refers to financial resources that are available to people which provide them with different livelihood options included cash, credit/debt, savings, remittances, pensions and other economic assets and the domain of microfinance argues that economically incorporates with household building as well as stocks prevention/reduction (Kolmar and Juli, 2002).

2.3.2.5 Natural capital

This term is used to explain natural resource stocks, biodiversity and the environment and the components of natural capital include water, soil (land), air, and weather so the variations in the environment may pose challenges to the efforts of poor people to execute their coping strategies but notes that there is a very close relationship between the vulnerability context and natural capita that mainly causes shocks that destroy natural capital but microfinance contribution may mitigate and adopt for destruction of natural capitals (DFID, 1999).

2.5 Conceptual Framework

Conceptual frame work is constructive Diagram that reveals the interaction of the concepts of the correlate of micro finance services and participants household food security status in the study area which means forwarding to better way for better improvement of food security for the beneficiary or clients of microfinance service that is found in the town through institutional credit, saving and generating job opportunities, education opportunities, nutritional facilities and can be seen in such away below figure:

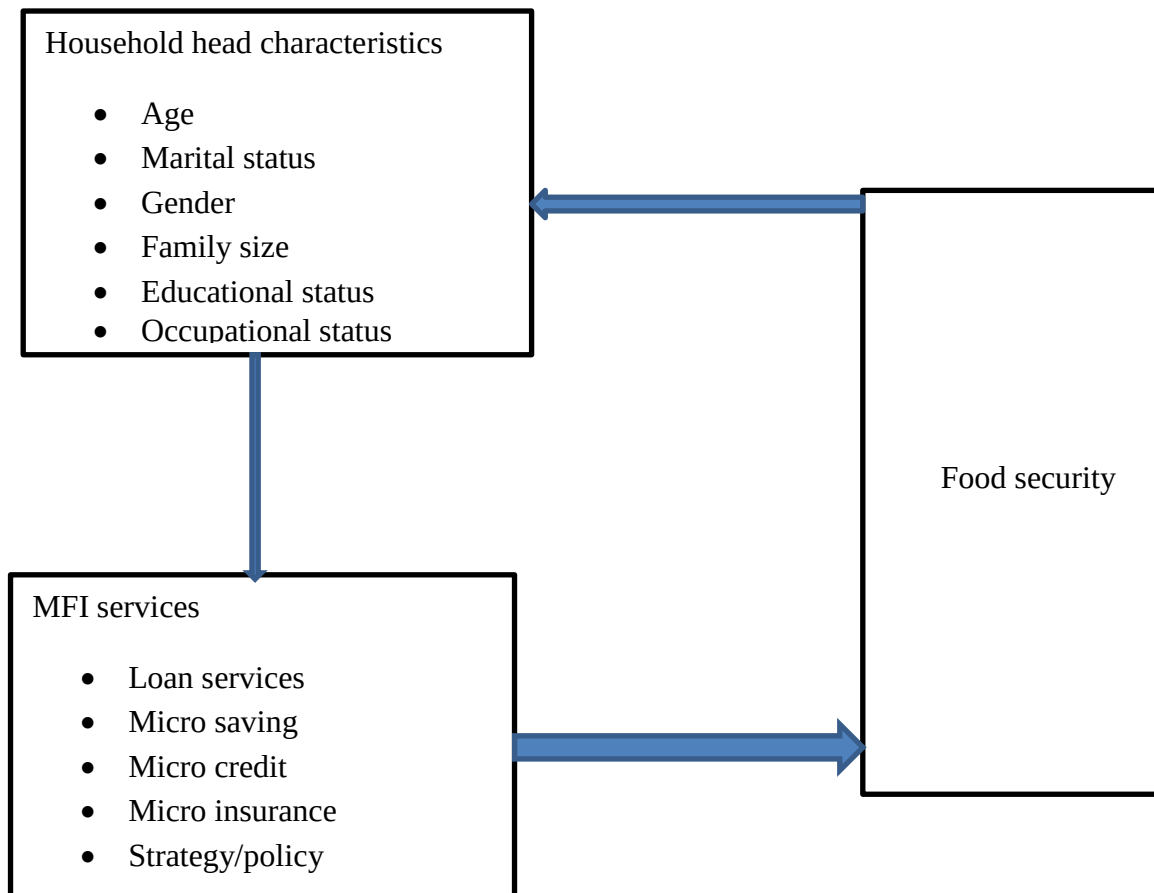


Figure 1 Conceptual Framework, Source: own framework, 2021

CHAPTER THTEEE

3. RESEARCH DESIGN AND METHODOLOGY

This chapter presents the description of the study area, research design and approach, sampling technique and methods of data collection, types of data and their sources, and methods of data analysis.

3.1. Description of the Study Areas

Location: Jigjiga town is administrative city of Somali regional state and the study was conducted at Jigjiga town, which is located eastern party of the country at a distance of 636km away from Addis Ababa, the capital city of the Ethiopia and the location of the town lies N 9° 16' 30" to 9° 24' 30" N latitude and 42° 44' 0" E to 42° 51' 0" E longitude as shown below figure 2.

Population: According to the Central Statistical Agency in 2007, Jigjiga town has an estimated total population of 277,560 of whom 149292 are men and 128268 are women and the current population of this city is 797,509 (JCCWB , 2012 E.C) and also the town has 20 kebeles and three health center, one regional hospital and one referral hospital.

Climate: Jigjiga town is located on a flat land with gentle slopes and the existing built up and expansion areas are much suitable for urban development and it is agro-ecological zone with the temperature ranging from 12.27°C in January to 27°C in February to 26.5 °C in September. The minimum and maximum rainfall lying between 400mm and 800mm with the annual mean of 712mm is known to Jigjiga town.

3.1.1 Socio-economic conditions

The current new policy of local government (Ethio-Somali Region) dedicated that jigjiga town and surrounding are agro-pastoral community and the currently infrastructures of Jigjiga is developing better and better like roads, health, and education, banking services(private and governmental),informal financial services(microfinance institute), telephone and postal services specially health and education coverage's in Jigjiga is going better and better because most of the health center and educational facilities are fully operational utilized due to the current new policy of the government which increasing well trained health manpower and equipment's in health and education center services.

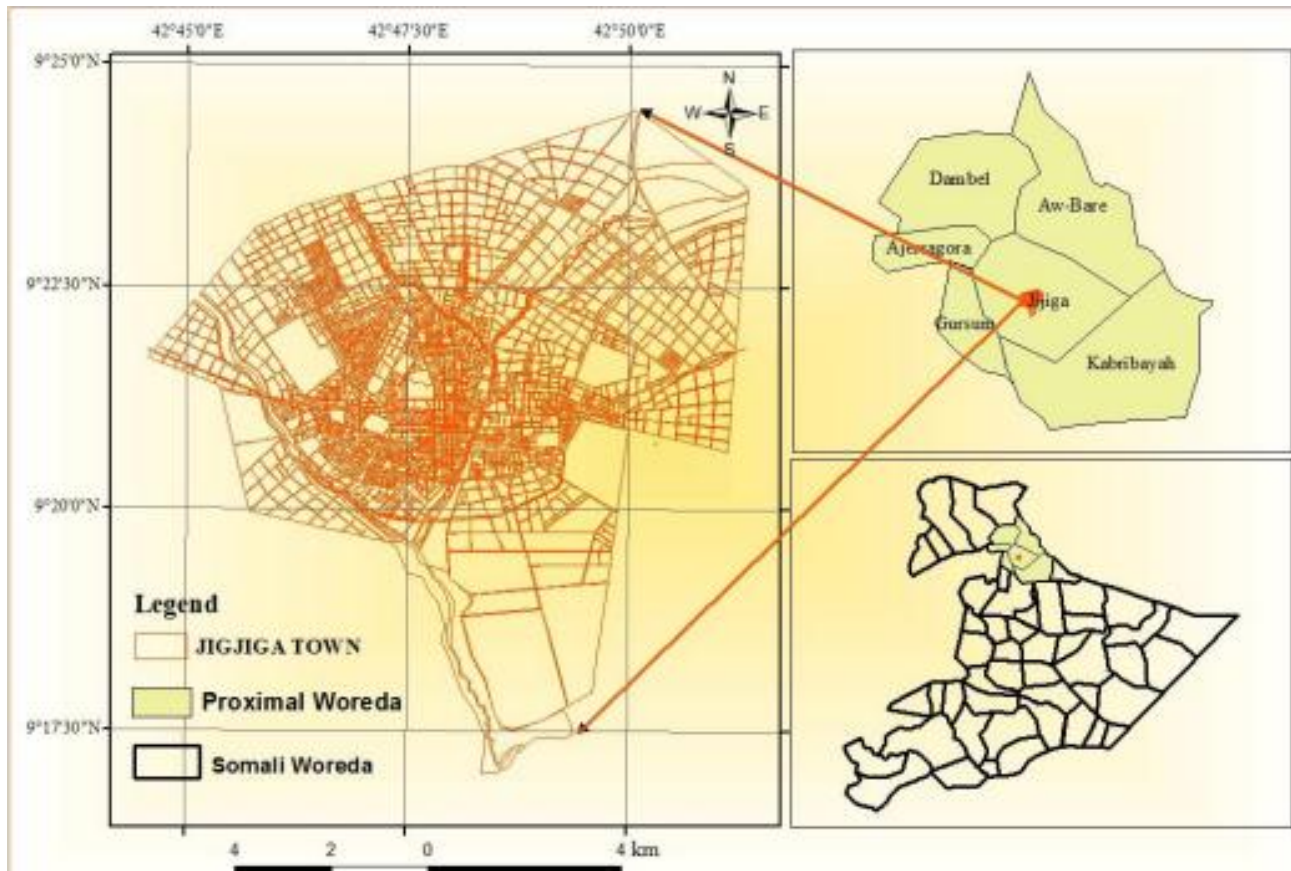


Figure 2: Study Area Map

Sources: Somali Design Agency, 2013,

3.2. Research Design and Approaches

Cross-sectional design was conducted among participants of microfinance services to get the required number of sample units. Jigjiga has a total number of 20 kebeles and two branches of microfinance institutes. The cross-sectional design was used, because the researcher selected the main office of microfinance branch in Jigjiga town by purposively because the office offers short and long term training to the participants related to how to save, deposit and increases income and repayment of the loans to the office.

The participants are avail in the days of trains, then the sample size of 100 households were selected random sampling technique because of participants availability, time, manpower, money and covid-19 impact contrarians in Jigjiga town.

3.3. Sample Population

The sample population was the main microfinance office participants those live in Jigjiga town.

3.4. Sample Size Determination

The sample size was determined by using simplified formula of Yamane which was formulated in 1967 and researcher used because the sample population is finite or known and to determine the required sample size by considering the reduction of the sample size of the participants, the researcher used 10% level of precision at 95% confident level, 0.05 degree level of variability.

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

Where n is sample size

N is Target population

E is margin error/precision level

$$n = \frac{76,3509}{1 + (76,3509 \cdot (0.01)^2)} = \frac{76,3509}{7635.9} = 100$$

The sample size of the study was 100 households in the town and this sample population was distributed among the participants of the main office of microfinance institute services in Jigjiga town.

3.5 Sampling techniques/procedure

Out of 20 kebeles in Jigjiga town, there are two branches of microfinance institute and then the researcher selected the main office of microfinance institute by using purposive sampling to identify microfinance services on household food security status of the participants in in Jigjiga town and the list of the participants of the MFI service was found from the offices and they were present at that time because they have been training on the microfinances services related issues in Jigjiga town main office.

3.6. Inclusion and Exclusion Criteria

All participants of microfinance service in Jigjiga town at main microfinance office.

The residents in Jigjiga town but not have chance to practice microfinance service are excluded from the study.

3.7 Data Sources

This study used both primary and secondary data. The primary data was collected from a sample of household's heads in the study area through a questionnaire, focus group discussion, and key informant interview prepared for the study by the researcher.

Secondary data was collected from available sources of information in the offices of the microfinance institute which are avail in office. This includes data extracted from publications and annual reports of the main office like: books, vouchers recipients saving recipients of the organizations.

3.8 Data Collection Procedures

Quantitative data was collected by using structured questionnaire and this structured questionnaire was employed to collect the data and determine informants of micro-finance participants related to food security while the qualitative data was collected by using KII and FGD and the questionnaire was initially prepared in English and translated into Somali language, and then the final version of the questionnaire was again translated into English to check the consistency. The questionnaire was pre-tested using the other branch participants & the necessary arrangements and corrections were made to standardize and ensure its validity.

Focus Group Discussion (FGD) was used to get more in-depth information to support surveys which was, to interview at least four participants of microfinance services.

Key Informant Interview (KII) was done by interviewing expert from microfinance institute to get free flow information to support the survey findings. .

3.9 Data processing and analysis

The quantitative data was analyzed by using descriptive analysis for frequency, mean, variance, standard deviation, and percentage and qualitative data was used triangulation of the result for each object of the research.

For the description of microfinance services contribution on household food security in the study area was analyzed by using nutrition security technique known as Anthropometry index (BMI) which is weight of the participants divided by his/her height square (W/H^2 or Kg/m^2) to determine nutritional status of the household heads and household food insecurity access scale to determine food security status (HFIAS) because this technique is fit for assessment of poor active households considering by income accessibility and the nine generic question and occurrence question.

Addressing of the research object of examining the correlation between microfinance service and household food security was analyzed by using Pearson correlation coefficient model. Correlation coefficient represents the value of 'r' if r nearer to +1 or -1 indicates high degree of correlation between the two variables which are contentious variables (food security and microfinances services) but the correlation does not tell us that one variable is the cause and the other is the effect (Kothari, 2003). Pearson correlation coefficient formula is the most common formula used for linear dependency between two variables as shown below:

$$r = \frac{n(\sum xy) - (\sum x)(\sum y)}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$

Where n = Quantity of Information

$\sum x$ = Total of the First Variable Value

$\sum y$ = Total of the Second Variable Value

$\sum xy$ = Sum of the Product of first & Second Value

$\sum x^2$ = Sum of the Squares of the First Value

$\sum y^2$ = Sum of the Squares of the Second Value

After the completion of the data collection, the responses were coded and data was entered, cleaned and missing value modification was considered as necessitate and then entered into SPSS software version 20 for further analysis. The characteristics of the study participants were analyzed 95% confident level and P value <0.05 were considered as statistical significances.

3.10 Data quality management

Before stating the data collection, pre-test data collection was conducted the participants of another branches to ensure the validity of the survey tool & to standardize the questionnaire by team leader to make the data collectors aware to make frequent checks on the data collection process to ensure the completeness & consistency of the gathered information. Any error found during the process was re-corrected at that time and the completed questionnaire self-administered was analyzed.

CHAPTER FOUR

4. RESULTS AND DISCUSSION

This part presents findings of the study obtained from the study area and the discussions of the findings.

4.1 Demographic characteristics of households in the study area

Demographic characteristics those related to household head character like: sex, marital status, level of education, age, family size, and religion, household members in terms of age, household member in terms of gender, ethnicity and others were analyzed by using descriptive statistics.

The distribution of sample respondents based on their demographic characteristics was tabulated in Table 4.1 below:

Table 4.1: Description of Demographic Characteristics of the Respondents

Variable		N=100	%
Sex of household head	Male	47	47.0
	Female	53	53.0
	Total	100	100.0
Age of household head	<30	6	6.0
	30-40	52	52.0
	>40	42	42.0
	Total	100	100.0
Marital status of household head	Married	68	68.0
	Single	6	6.0
	Divorced	18	18.0
	Widowed	3	3.0
	Polygamy	5	5.0
	Total	100	100.0
Religion of household head	Islam	88	88.0
	Catholic	3	3.0
	Orthodox	7	7.0
	Protestant	2	2.0
	Total	100	100.0
Ethnicity of household head	Somali	84	84.0
	Oromo	5	5.0
	Amhara	8	8.0
	Tigray	2	2.0
	Other	1	1.0
	Total	100	100.0
Family size	<3	11	11.0
	3-5	17	17.0

Household members in terms of age	>5	72	72.0
	Total	100	100.0
	<18	34	34.0
	>18	66	66.0
Educational status of household head	Total	100	100.0
	Illiterate	18	18.0
	Literate	20	20.0
	primary school	3	3.0
	Secondary school	15	15.0
	Diploma	26	26.0
	First degree	12	12.0
	Above first degree	6	6.0
	Total	100	100.0

Source: Survey result, Jigjiga town, 2021, N=number, %=percentage

Table 4.1 revealed that about 47 (47.0%) of the respondents were male whereas 53(53%) were female so this findings revealed that the participants of microfinance services were women in the study area. According to age of household respondents 6(6%) <30, 52 (52.0%) were 30-35, 42 (42.0%) >40 so, this result of the survey revealed that the age between 30-35 of the respondents were more than other two age cycle because this age is the productive age in which the microfinance services focuses on, so this study shown that micro finance services support poor active households as indicated the research done in Ethiopia (Bamako, 2000).

Regarding to marital status of household head, 68 (68.0%) were married, 6(6.0%) were single, 18(18.0%) were divorced, 3(3.0%) were widowed, 5(5.0) were polygamy so this study revealed that this microfinance services focuses on low household income special married person having children but productive age.

Religion of household head 88(88.0) were Islam, 3(3.0) were Catholic, 7(7.0) were Orthodox, 2(2.0) were protestants. Ethnicity of household head 84(84.0) were Somali, 5(5.0) were Oromo, 8(8.0) were Amhara, 2(2.0) were Tigre, 1(1.0) was others.

Family size of household 11(11.0) were <3, 17(17.0) were 3-5, 72(72.0) were >5 this study revealed that micro finance services focuses on poor active house hold having more children than those have less children in the study area. Household members in terms of age 34(34.0) were <18, 66(66.0) were >18. Educational status of household head 3(3.0) were primary school, 15(15.0) were secondary school, 26(26.0) were Diploma, 12(12.0) were first degree, 6(6.0) were above first degree so lastly this study shown that the participants of this program are literate.

Table4.2: Actual and expected sample of respondent's occupational Status

Variable		N=100	%
Occupational status of household head	Herding	1	1.0
	Farming	4	4.0
	Laborer	1	1.0
	entrepreneur	77	77.0
	Civil servant	12	12.0
	Unemployed	3	3.0
	Others	2	2.0
	Total	100	100.0

Survey, Jigjiga town, 2021, others means jobless, N=number, %=percentage

Table 4.2 shown that the participants of microfinance service according to occupational status, 1(1.0) was herding, 4(4.0) were farmers, 1(1.0) was laborer, 77(77.0) were self-employed, 12(12.0) were civil servants, 3(3.0) were unemployed, 2(2.0) were others this study revealed that microfinance service targeted on small, Medium entrepreneurs or in other way it supports directly self-employed person in the study area to empower their moral of income generation to increases the income accessibility in the household level to avail their power of purchasing.

Table4.1: Source of income and expenditure of respondents on food and non-food items

Variables		N=100	%
Income sources of household head	Government worker	12	12.0
	Non-government worker	7	7.0
	Trader	80	80.0
	Other	1	1.0
	Total	100	100.0
Monthly income of household head	<5000	25	25.0
	5000-10000	68	68.0
	>10000	7	7.0
	Total	100	100.0
Monthly expenditure on food of household head	<4000	28	28.0
	4000-5000	45	45.0
	>5000	27	27.0
	Total	100	100.0
Monthly expenditure non food	<2000	21	21.0
	2000-3000	60	60.0
	>3000	19	19.0
	Total	100	100.0

Source: Survey result, Jigjiga Town, 2021

Table 4.3 shows that the income sources of household head 12(12.0%) were government workers, 7 (7.0%) were non-government workers, Monthly income of household head 25(25.0) was <5000, 68(68.0) was between 5000-10000, 7(7.0) was >1000, Monthly expenditure on food of household head income 28(28.0) was<4000, 45(45.0) was 4000-5000, 27(27.0) was>5000. Monthly expenditure non-food 21(21.0) was<2000, 60(60.0) was 2000-3000, 19(19.0) was>3000 the above table reveals that the monthly income of household head depends on his/her daily activities from loan created job.

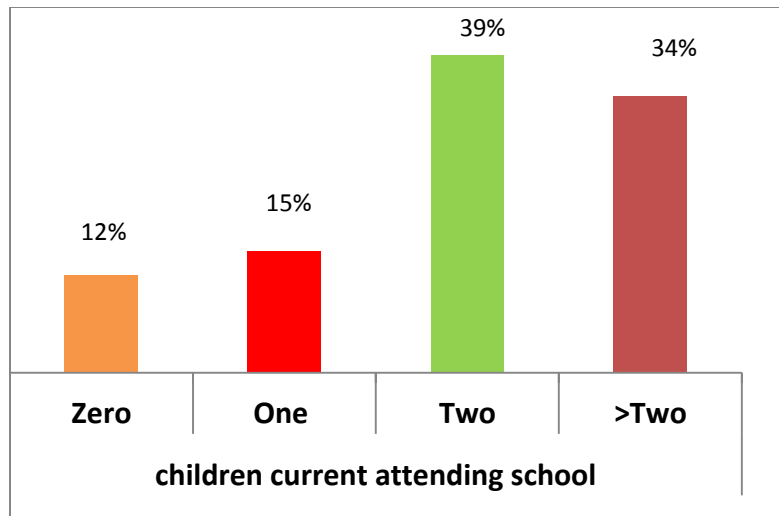


Figure 3: Children current attending school with grade and expense

Source: Survey result, Jigjiga town, 2021

As figure 3 indicated that household heads those having no children attending school were 12%, those having one child were 15%, those having two were 39%, those having greater than two children were 34%. In this case, the above figure revealed that most of the participants have more children indicated that these households expend the monthly income to meet their basic need recovery as shown (Table 4.3) above.

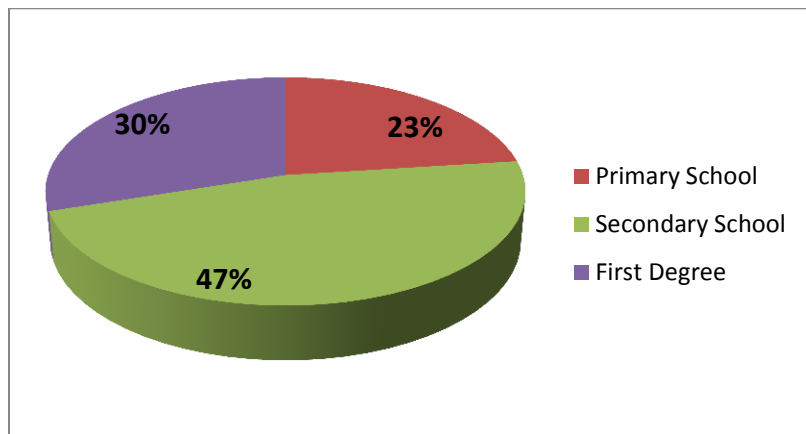


Figure 4: Highest Grade completion of household's children in the study area

Source: Survey result, Jigjiga town, 2021

As figure 4 revealed that the household heads having children attending primary school were 23%, those having secondary school attending were 47%, those having first degree were 30%

So, this figure reveals that microfinance focuses on middle level population in the community to motivate them to complete their education in different level because family whose members are educated can generate more income than those illiterate to access food in household level according to the research in the literature revealed that there is a positive relationship between microfinance participation of household heads and school going students which means as increased participation of microfinance programs in household level by the household heads then students going to school increase(DFID, 1999).

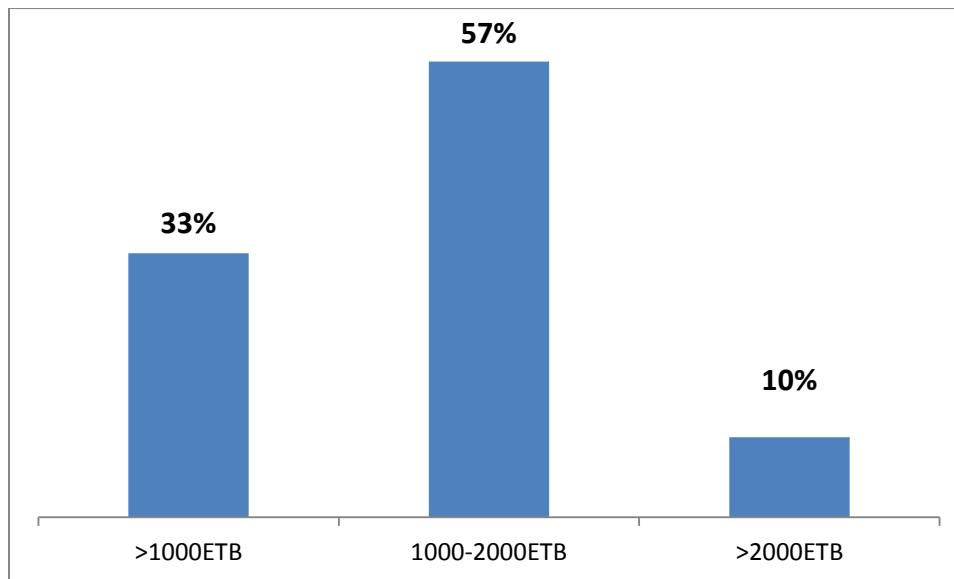


Figure 5: School expense for children paid by the household heads

Source: Survey result, Jigjiga town, 2021

As figure 5 revealed that the household heads who expends on school<1000 were 33%, those expend on between1000-2000 were 57%, those expend >2000 were 10% this means that most of the received money paid on school expenses.

The above figure shows that most of the family having more children expend their money more in educating their children as shown the study done Ethiopia (Bamako, 2000) which said that micro finance service is strategic instrument which is used different development agendas like; empowering target groups(women, children...) to succeed from the risks so the researcher of this thesis concluded that children of microfinance participants have more opportunities of education level/completion than other poor household in the study area.

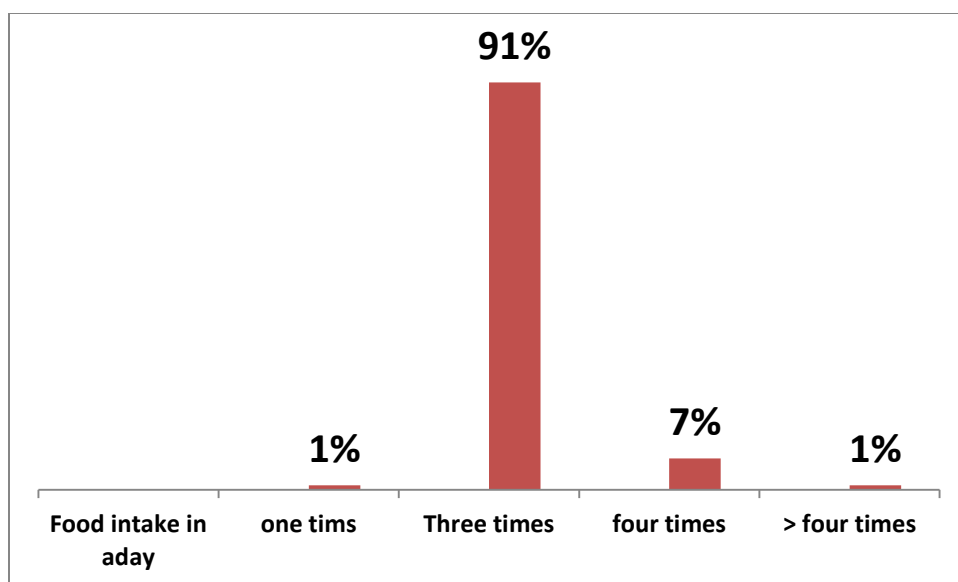


Figure 6: Times of food intake for household heads in the study area

Source: Survey result, Jigjiga town, 2021

As figure 6 revealed that times of food intake with 24 hours of the respondents/ household heads reveals that who take diet three times with 24 hour were 91%, who take one time were 1%, who take four times were 7% and who take greater than four times were 1%. This means that 91% of 100 participants of microfinance services get three meal intakes within 24 houses in a day that means most of the participants get what to eat with in a day.

Table 4.5: Actual concepts of types and meal intake of respondents

Variables		N=100	%
Diet intake awareness on health	Yes	99	99.0
	No	1	1.0
	Total	100	100.0
Breakfast intake	Spaghetti	5	5.0
	Ingera	39	39.0
	Bread	22	22.0
	Other(rice)	34	34.0
	Total	100	100.0
Lunch intake	Spaghetti	55	55.0
	Ingera	8	8.0
	Rice	34	34.0
	Macaroni	2	2.0
	Other(rye)	1	1.0
	Total	100	100.0
Dinner intake	Spaghetti	14	14.0
	Ingera	4	4.0

Rice	5	5.0
Bread	16	16.0
Meat	1	1.0
Macaroni	56	56.0
Other(rye)	4	4.0
Total	100	100.0

Source: Survey result, Jigjiga town, 2021, other=rice, rye=number, %=percentage

As the table 4.5 indicated that the food concepts of the respondents, 99(99.0) said yes while one respondent said no 1(1.0). This indicating that there was great community awareness creation towards food concepts related to health and future effect of food consumption. Diet intake of the respondents was vary from one household head to other household, however for most of the time those who consume breakfast Spaghetti 5(5.0), Ingera39 (39.0), Bread 22(22.0), other 34(34.0). Lunch intake, spaghetti 55(55.0), Ingera 8(8.0), Rice 34(34.0), Macaroni 2(2.0), other 1(1.0).Dinner intake, Spaghetti 14(14.0), Ingera4(4.0), Rice 5(5.0), Bread 16(16.0), Meat 1(1.0), Macaroni 56(56.0), Other 4(4.0), (other means here Sorghum, Corn, Rye...) This means that 99% of the households consume carbohydrates contents food but less protein and fat contents of food and can be affected by Diabetes, though they find sufficient amount of energy yielding sources of food they are on the boat of becoming over malnutrition as mentioned (Table4.9) which indicated that 41% of the participants are overweight and still corresponding that some of the participants are food insecure because of food type consumption per day by the residents.

Table 4.6: Beverage and water consumption status of household head respondent

Variable		N=100	%
Beverage consumption per day	Tea	61	61.0
	Milk	25	23.0
	Coffee	8	8.0
	Soft drink	2	2.0
	Other	4	4.0
	Total	100	100.0
Water consumption per day	5 Liter	65	65.0
	1.5 Liter	2	2.0
	3 Liter	31	31.0
	None	2	2.0
	Total	100	100.0

Source: Survey result, Jigjiga town, 2021, others, rainwater, N=number, %=percentage

As table 4.6 indicated that the consumption of beverage and water of the respondents per day indicating that, 61(61.0) drunk tea, 25(25.0) drunk milk, 8(8.0) drunk coffee, 2(2.0) drunk soft drink, 4(4.0) drunk others. This study revealed that most of the study participants drink tea but

no other fruit and vegetable juices which are richer in vitamins and minerals those having great role for immunity strength in the body while tea contains more anti-nutrients which hurts nutrients absorption in the body and lead NCD so that is way some of the participants are food insecure.

Regarding to water consumption, 65 (65.0) used 5liters per day, 2(2.0) used 1.5 liter, 31(31.0) used 3 liters this means that water avail in that area and the most of the participants could get water which was enough energy preparation, household hygiene, personal consumption and sanity which take parts the human metabolic system to keep the osmosis of their bodies and keep their health status in the study area.

Table4.7: Types of saving account and loan of household head responses

Variables		N=100	%
Saving account in microfinance institute	Yes	94	94.0
	No	6	6.0
	Total	100	100.0
Types of saving account	Monetary saving	97	97.0
	Grain saving	1	1.0
	Other	2	2.0
	Total	100	100.0
	<500	37	37.0
saving amounts	500-1500	38	38.0
	>1500	25	25.0
	Total	100	100.0
Time to participate in microfinance	6 Months	1	1.0
	One year	3	3.0
	>one year	96	96.0
	Total	100	100.0
Access to credit before the program	Yes	50	50.0
	No	50	50.0
	Total	100	100.0
Amount of loan received by the household head	<100000	4	4.0
	100000-200000	42	42.0
	>200000	54	54.0
	Total	100	100.0
Repayment of loan paid by respondents	Yes	21	21.0
	No	1	1.0
	Partially	78	78.0
	Total	100	100.0

Source: Survey result, Jigjiga town, 2021, other=privet bank account number

As table4.7 revealed that participants having saving account 94(94.0) said yes while 6(6.0) said no. This study revealed that most participants of microfinance services have saving account in microfinance institute which indicates that participants should open first account in institute then deposited, 97(97.0) had Monetary saving, 1(1.0), Grain saving, 2(2.0) other (commercial bank account and private account serves).

Regarding to saving amounts 37(37.0) saved <500, 38(38.0) saved 500-1500, 25(25.0) saved >1500. Time to participate in microfinance services 1(1.0) was 6 Months, 3(3.0) was One year, 96(96.0) were >one year.

Access to credit before the program indicating that, 50(50.0) said Yes, 50(50.0) said No. Amount of loan received by the household head 4(4.0) received < 100000, 42(42.0) received between 100000-200000, 54(54.0) received>200000. Regarding to the repayment of loan paid by respondents shown that 21(21.0) said yes, 1(1.0) said no, 78(78.0) paid partially. This means that the time that the household head participated was greater than one year and monetary account should be opened first before loan received over this entire portion shown that saving account should be opened first before receiving loan.

According to the repayment of loan, the research revealed that 78% of the participants paid partially and this indicating that there are factors affect the repayment of loan to the institute to keep the sustainability of microfinance institute to offer other services with respected disadvantage groups as revealed by the research done (Muluken A and Mesfin, 2014) which expressed that low financial capacity of clients, weak loan collection system of the client, weak client selection system of trading center, lack of willingness from clients to pay their loan most common factors affect repayment of loan in the study area.

Table 4.8: Participants / household heads and loan received status

Variables		N=100	%
Interest to pay on loan	High	55	55.0
	Normal	45	45.0
	Total	100	100.0
Sufficiency of loan to participants	Yes	42	95.0
	No	58	5.0
	Total	100	100.0
Time for repayment fitness	Yes	92	92.0
	No	8	8.0
	Total	100	100.0

Source: Survey result, Jigjiga town, 2021, N=number, %=percentage

Table 4.8 shows that the participants, 55% said it is high the interest of loan received while 45(45.0) participants believed that loan interest is normal that indicated that the most of the participants were not satisfied the interest of loan which means that the interest of loan is high according to the ability to repay the loan it needs improvement. Regarding to the sufficiency of loan to participants to implement their purpose was about 95(95.0) and they said yes and 5(5.0%) said no which means that the aim loan receiving and amount of loan given to participant are fit to each other. Regarding to the time for repayment about 42(42.0) said yes while 58(58.0) said no which means time allotted to be repaid is not fit for the participants to pay back the loans.

The researcher concluded that maximizing time for repayment and making free interest of this program can alleviate the food insecurity condition of the participants with short period of time.

Table 4.9: Food and nutrition security status of household head respondent

Variable		N=100	%
food security status	improved	77	77.0
	No improved	29	29.0
	Total	100	100.0
Nutritional status of participants	Improved	97	97.0
	No change	2	2.0
	Worsened	1	1.0
	Total	100	100.0
BMI	<18	9	9.0
	18-25	50	50.0
	>25	41	41.0
	Total	100	100.0
Place to go at time of financial problems	Private institution	39	39.0
	Public institution	60	60.0
	Traditional healer	1	1.0
	Total	100	100.0

Source: Survey result, Jigjiga town, 2021, N=number, %=percentage

As table 4.9 shows about, food security status of the participants 77(98.0) said improved while 29(29.0) not improved that means after joining of microfinance serves, the livelihood of the participants improved according to their responds. Regarding to the nutritional status of participants, 97(97.0) improved, 2(2.0) no change, 1(1.0) worsened so this corresponded that there is a positive correlation between food security and nutrition security of participants as revealed (Table4.16).

BMI 9(9.0) were <18, 50(50.0) were 18-25, 41(41.0) were >25. Regarding to the place to go at time of financial problem, 39(39.0) went to Private institution, 60(60.0) went to public institution, 1(1.0) went to traditional healers this indicating that availability and accessibility of food types are possible and most of the household head were nourished because their BMI was between 30 and 20 according to the cut off points of BMI of the participants. The researcher conclude that most of the microfinance services participants are moderately nutritious as shown research done in Kenya that micro insurance is one possible instrument to mitigate risks and reduce the vulnerability of poor and low income households or replaces public social protection systems and it is most effective when put into comprehensive social protection framework that is above the public social protection measure and includes informal, private, and other public risk management strategic of preventing measure, mitigation and suitable coping strategies for securing their food status in the country (Gaby Ramm, 2001).

Ibrahim Yusuf is one of the main microfinance office workers, branch manager; during the key informant interview he narrated that:

.....After the establishment of the institute in 2011 G.C the objectives of the institute is to reduce the poverty for serving and working as banking system to provide financial service for the community of remote areas in the region where there is no private and governmental banking system to help NGOs and other stakeholders of the institute those fight against food insecurity problems and by establishing relevant program fund to the residents (occupation) of the region like; loans and credits to increase the income household by creating job opportunity.

He mentioned that the cycle time participants sequences of loan is started from 12 months/year of 4000, 7000, 10, 000, 15000,.....By following the agreement and the requirements which are: residential, citizenship, collateral, time to repay and how to pay back the money to the organization to keep the sustainability of the organization and the policy implementation of the microfinance institute is to ensure the food security of residents of the region by serving as bank for the stockholders of food security programs both governmental and non-governmental agencies to alleviate food scarcity in the region as well as in the country.....

4.2 Household Food security status classification by using HFIAS

In this study, household food insecurity access scale was used to identify degree of food insecurity in the household level of microfinance service participants in Jigjiga town for the last four weeks. The responses of a data collected from the participants were coded yes and no corresponding to the occurrence of the nine generic question (if Q1=(No)=0 then Q1a=0, but if Q1=(Yes), then Q1a could be either 1(rare), 2(sometimes) or 3(often)). The household food insecurity score is ranged from 0 to 27 and the maximum score is 27 (the household responded was coded “yes”, to the frequency of occurrence all nine generic questions which could be either Q1a= 1(rare), 2(sometimes) or 3(often)”) and the minimum score is 0 (the household responded was coded “no” to all corresponding occurrence question which Q1a= zero. The mean food insecurity score of this study is 7.25. This event was good because the lower the score is the higher food security status or the lower the score, the less food insecurity household head is experienced.

Table 4.10: Categories of food security status of microfinance participants in jigjiga town

S/N	Categories of food security status	Criteria
1	Food secured	If Q1a=0 or Q1a=1 while others Q2a-Q9a=0.
2	Mildly food insecure	If Q1a=2 or 3, Q2a=1, 2, 3 or Q3a=1 or Q4a=1 while others Q5a-Q9a=0.
3	Moderately food insecure	If Q3a=2 or 3, Q4a=2, 3 or Q5a=1, 2 or Q6a=1, 2 while others Q7a-Q9a=0.
4	Severely food insecure	If Q5a=3 or Q6a=3 or Q7a=1, 2, 3 or Q8a=1, 2, 3 and Q9a=1, 2, 3.

Survey, Jigjiga town, 2021 Rare=1 Sometimes=2 Often=3.

Table 4.11: Household food insecurity access scale /Generic questions

Variables			N=100	%
Q1	Worry about food	Yes	58	58.0
		No	42	42.0
		Total	100	100.0
Q1a	How often did this happen	Rare	58	100
		Total	58	100.0
		Total	100	100.0
Q2	Unable to eat preferable foods	Yes	52	52.0
		No	48	48.0
		Total	100	100.0
Q2a	How often did this happen	Rare	50	96.2
		Someti mes	2	3.8
		Total	52	100.0
Q3	Eat just a few kinds of foods	Yes	38	38.0
		No	62	62.0
		Total	100	100.0
Q3a	How often did this happen	Rare	35	92.1
		Someti mes	3	7.9
		Total	38	100.0
Q4	Eat foods they really do not want to eat	Yes	30	30.0
		No	70	70.0
		Total	100	100.0
Q4a	How often did this happen	Rare	30	100.0
		Total	30	100.0

Source survey result Jigjiga town 2021, Q=question, N=number, %=percentage

As shown on table 4.11, Question 1, 58 (58.0) of the household heads responded yes for the question “Worry about food” whereas 42% of the household heads responded no which revealed that 58% of the households were not sure whether they get enough food or not but rarely that means they have resource of food but face this condition rarely in this study area. On the same table for the respondent who answered yes for the Question 1a raised that how often this happens of 58(100%) of the household heads responded rare which indicated that or this finding shown that worrying about having enough food in household is not frequently happen in this study area but it happens rarely so practicing this program could assisted securing the food consumption of the participants.

For the Question 2 of the same table, 52(52%) of the household heads responded yes for the question “Unable to eat preferable foods” where as 48(48%) of the household heads responded no which shown that 52% of this finding revealed that household were not able to prefer what they wanted to eat which means that they don't have more income to buy and cover their wants but only basic needs in the this study area.

The Question 2a on the same table for the respondent who answered yes for the Q2 question, raised how often this happens of 50(96.2%) of the household responded that it happens rare whereas 2(3.8%) of the household heads responded that it happen sometime which indicated that this finding shown those household were not able to eat preferable food is not frequently happened in this study area since 96.2% of the household response it rare.

For Question 3 the same table, 38 (38%) of the household responded yes for the question “Any household member just eat kind of food day after day” whereas 62(62%) of the household responded no which shown that above half of the household to eat just eat kind of food day after day in this study area.

The Q3 of the same table for the respondents who answered yes for Question 3a raised that how often this happen 35(92.1%) of the household responses were rare whereas 3(7.9%) of the household responded happened sometime which indicated that this finding expressed that household members just eat kind of food day after day most of the time.

For Question 4 of the same table 30 (30%) of the household responses were yes for the question “any household member eat food prefer not to eat” whereas 70(70%) of the household head responded no that expressed the above half of the household eat food prefer not to eat because there is scarcity of income accessibility in the study area.

For the Question 4 of the same table for the respondents who answered yes for Question 4a raised that how often this happens, 30(30%) of the household response were rare which indicated that this finding shown that any household member eat food prefer not to eat is not frequently happen in this study area because the food is avail but power of purchasing is limit.

Table4.12: Household food insecurity access scale /Generic questions...

Variables			N=100	%
Q5	Eat a smaller meal	Yes	25	25.0
		No	75	75.0
		Total	100	100.0
Q5a	How often did this happen	Rare	23	92
		Sometimes	2	8
		Total	25	100.0
Q6	Eat fewer meals in the a day	Yes	20	20.0
		No	80	80.0
		Total	100	100.0
Q6a	How often did this happen	Rare	20	100
		Total	20	100.0

Survey, Jigjiga town, 2021, Q=question, N=number, %=percentage

As shown on the above table 4.12, Q5, 25(25%) of the household responded yes for the question “any household eat smaller meal” whereas 75% of the household responded no which shown that above half of the household member not eat smaller meal because this finding shown that most household do have enough food in this study area.

For the same table for the respondent who answered yes for Q5a raised that “how often this happen how often”23(92%) of the household responded that it happened rarely where 2(8) of household heads responded sometimes which indicated that finding of the results shown that any household eat smaller meal is not frequently happen in the study area but they face rarely.

At same table Q6, 20(20%) of the household heads responded yes for question “Eat fewer meals in the day” while 80(80%) of the household heads responded no which again shown that most of the microfinance participants not eat fewer meal in the day because they have enough sources of income to access food accessibility.

For the same table for the respondent who answered yes for Q6a raised that “how often this happen of 20(8%) of the household responded that it happened rarely for eating fewer meal in the study areas so, that the findings of the results shown that any household eat smaller meal is not frequently happen or often in the study area but they face rarely.

Table 4.13: Household food insecurity access scale /Generic questions...

Variables			N=100	%
Q7	No food of any kind in the households	Yes	4	4.0
		No	96	96.0
		Total	100	100.0
Q7a	How often did this happen	Rare	4	100
		Total	4	100.0

Survey, Jigjiga town, 2021, Q=question, N=number, %=percentage

For the above table 4.13, Q7, 12(12%) of the household responded yes for the question “was there ever no food at all in your household” whereas 88(88%) of the household responded no which shown that 88% of 100 participants of microfinance services do not face lack of food consumption and this finding shown that household were able to eat at least some basic of the food items. For the same table for the respondents who answered yes for the Q7a raised that “how often this happens” 12(100%)of the household responded that it happened rarely which indicated that this finding resulted that any household member eat smaller meal is not frequently happens the study area while 88% of the respondents eat in enough amounts.

Table4.14: Household food insecurity access scale /Generic questions

Variables			N=100	%
Q8	Go to sleep hungry	Yes	3	3.0
		No	97	97.0
		Total	100	100.0
Q8a	How often did this happen	Rare	3	100
		Total	3	100.0
Q9	Go a whole day and night without eating	Yes	2	2.0
		No	98	98.0
		Total	100	100.0
Q9a	How often did this happen	Rare	2	100
		Total	2	100.0

Survey, Jigjiga town, 2021, Q=question, N=number, %=percentage

As shown the above table 4.14, Q8, 7(7%) of the household response yes for the question” Any household member go to sleep at night hungry” whereas 93(93%) of the household responded no which shown that 93% of the household did not sleep without eating some food which means that most of the participants of microfinance service become moderate food insecurity according to their responds of 93% of the participants were able to go sleeping after consuming enough food.

For the same table, the respondent who answered yes Q8a, raised that “how often this happens” 7(100%) of the household responses were rare which indicated that the finding of this research shown that any household sleep at night hungry is not frequently happened in the study area but most of the people get food before they go to sleep at night.

. Q9, 3(3%) of the household response yes for the question “Any household member go whole day without eating” whereas 97(97%) of the household responded no which shown that 97% of the household did not go whole day without eating some food which means that most of jigjiga residents especially those participated microfinance service got good livelihood.

For the same table, the respondent who answered yes Q9a, raised that “how often this happens” 3(3%) of the household responses were rare which indicated that the finding of this research shown that this event does not frequently happen in the study area but most of the people get food to eat and perform their daily activities.

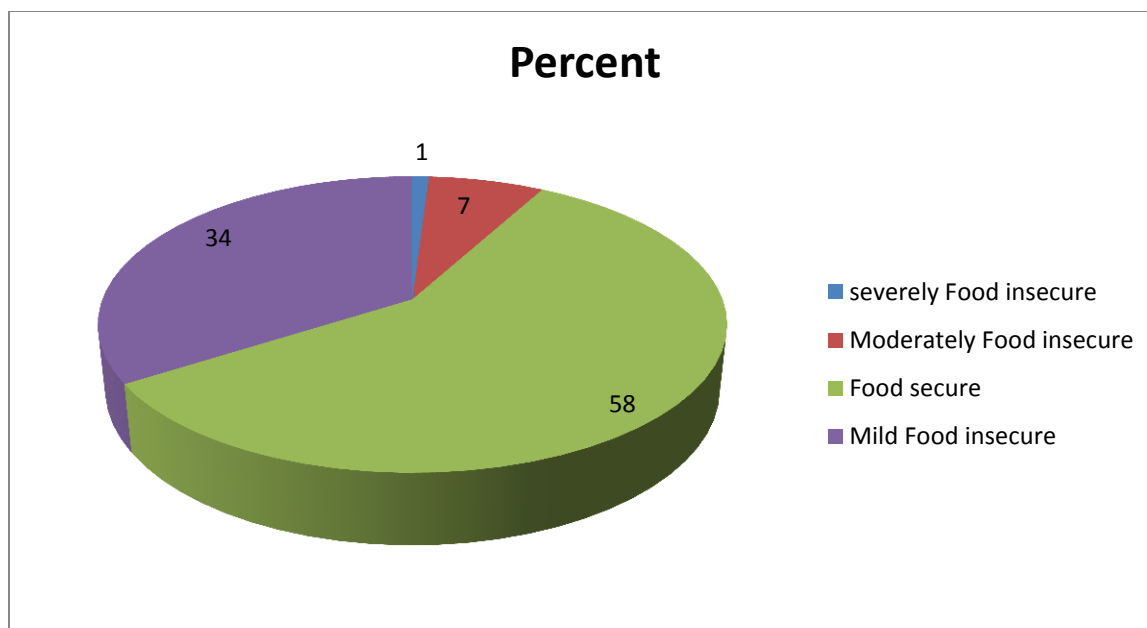


Figure 7: The four level of food security status of microfinance participants in Jigjiga town by using household food insecurity access scale (HFIAS)

Source: Survey result, Jigjiga town, 2021

As shown figure7 58 of the house hold heads were food secured, 34(34.0) of the house hold heads were mildly food insecurity, 7 of the household heads were moderately food insecure and 1(1.0) of the household heads were severely food insecure.

4.3 Correlation analysis matrix of household, microfinance, food security and other related issues

Table 4.15: Correlation matrix with between microfinance services and food security of household heads (n=100)

Variables	1	2	3
Repayment of loan	1.000		
Time for repayment fitness	-.116	1.000	
food security status	-.275**	.221*	1.000

Survey, Jigjiga town, 2021

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

* Correlation is significant at the 0.05 level (2-tailed)

As it is presented in the above correlation table between food security status and micro finance service, it indicated that the repayment of loans has statistically significant negative correlation with food security status of micro finance service participants($r = -.275^{**}$, $P < 0.01$) that expressed as repayment of loan received by the participant of microfinance service increases in amounts also their food security status of the participants decreases. Regarding to the time for repayment of loan by the participants has statistically significant positive relation to their food security status($r = .221^{*}$, $p < 0.05$) that indicated as time interval to repay the loan increases also the food security status of the participants increased that is indicting allowing more time to repay the loan to the office for enough time for lenders may allow to have chance to regenerate income one or two times by their received money in the working sites which allows them to access power of purchasing food item to secure their household food security in the study area.

Table 4.16: Correlation Matrix Within and between household characteristics and food security Variables (n=100)

Variables	1	2	3	4	5	6
Occupational status of household head (1)	1.000					
Educational status of household head (2)	.246*	1.000				
Monthly expenditure non-food of household head (3)	.235*	.153	1.000			
School expense paid by household head (4)	.241*	.131	.375**	1.000		
Trend of nutrition status of household heads(5)	.437**	.068	.202*	.062	1.000	
food security status (6)	.297**	.171	.231*	.170	.272**	1.000

Survey, Jigjiga town, 2021

*. Correlation is significant at the 0.05 level (2-tailed).

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

As it is presented in the above table 4.16 the correlation between food security status and household characteristics indicated that occupation status of microfinance participants have statistically significant positive correlation on their food security status ($r=.297^{**}$, $p<0.01$ level) this condition pointed out that as occupational status of participant increased also the food security of that household also increased as “Ibrahim Yusuf indicated who was the main microfinance office manager, 2021 G.C”, Occupational could be one pillar to be participants of microfinance services to access food in the household level so according to this correlation, the researcher can conclude that that occupation status and food security have positive significant statistic correlation but their correlation is not strong since their correlation is less than $\pm .90$.

Interview

Mahamud Jama, Nasra abdi, Lidia Taman are kebele manager, household head and MFI expert respectively, during data collection as focus group discussion,

.....They expressed that after participation of the organization, the life of the most of the participants in the resident area change from moderate food security to mild food security because loans are provided according to rule and regulations of the institute (occupational, collateral,...)and no money cashly received by the participants but based on their business plan ,the related sector officer visits and observe the area then after buy all the necessary material and handover to the needy and daily monitoring is there, so per-month their lives changes from worse to better side by side accessing all requirements of livelihood assets.

Table4.17: Correlation between Household Characteristics and microfinance services related Issues (n=100)

Variables	1	2	3	4	5	6	7	8
Interest to pay on loan	1							
saving amounts	-.145	1						
Time to participate in microfinance services	.019	.119	1					
Family size	.195	-.146	-.054	1				
School expense on student	.077	-.141	.179	.169	1			
Income sources of household	.191	-.011	-.084	-.037	-.188	1		
Water consumption	.343**	-.316**	-.090	.130	.009	.065	1	
Educational status	-.105	.199*	.193	-.057	.131	-.028	-.417**	1

Survey, Jigjiga town, 2021

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

*. Correlation is significant at the 0.05 level (2-tailed)

As the result of the correlation analysis presented in table 4.17 revealed that there are 5 variables under household characteristics. Household characteristics variables have significant positive association with microfinance services; such as saving amount, ($r = 0.199^*$, $p < 0.01$) has positive statistical significant correlation with educational status of household which indicating that as the saving amounts of household increases again the educational status of household increases. According to the interest to pay on the loan received has negative statistically significant correlation with educational status of household($r = -.105$, $p < 0.05$) which indicating that as the interest paid on the loan increases again the educational status of household members decreases.

CHAPTER FIVE

5. SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 SUMMARY

The result of descriptive statistics in the dimension of household characteristics shown that the frequency and percentage of sample household heads below;

The age of most microfinance services participants of 53(53%) were female and 88(88.0) of the participants were Islam. According to food security categories of microfinance services participants in Jigjiga town, 58(58%) of the 100 participants are food secure while 42(42%) of the participants are food insecure because of limited resources like income sources to increase the food accessibility in household level.

The correlation analysis identified that there was association between food security status and micro finance service like; food security and repayment time of loan which have statistically significant negative correlation ($r=-.275^{**}$, $P < 0.01$) that expressed as repayment of loan received time by the participant of microfinance service increases also their food security status of the participants decreases.

The correlation analysis identified that there was association between microfinance services and household characteristics like; saving amount, ($r= 0.199^{*}$, $p<0.01$) has positive statistical significant correlation with educational status of household which indicating that as the saving amount of household increases again the educational status of household also increases.

The correlation analysis identified that there was association between food security and household head like; occupation status of household has statistically significant positive correlation ($r=.297^{**}$, $p<0.01$) which pointed out that as occupational status of participant expressed (residential) then the household head can participate microfinance services in the study area to access loan to create job opportunity to generate income for accessing food items in household level.

Trend of nutrition status of participants has positive correlation with food security($r=.437^{**}$, $p<0.01$) that mean as food security of household members increases also the nutritional status of household increases so the research of the paper concluded that as participants of microfinances increases the income generation also the food security of the household increases finally the nutritional status of household is secured.

5.2 Conclusion

The results of the study found that most of microfinance services participants were female rather than male and the age that the program targeted was reproductive age 30-35 of age cycles.

The result of the study revealed that there are factors which commonly have direct association on food security status of microfinance service participants in the study area which were repayment of loan and interest rate of loan that they pay back because 78% of household heads paid partially the loan received and 55 participants of 100 household heads were not satisfied with the interest rate, which have negative and positive correlate to their food security status respectively so, to access the food items in the household level of the participants those factors required consideration.

According to the household food insecurity access scale result, most of the participants were food secure because of income access from the microfinance service job creative and other salary opportunities that they get from outside these services and most of the participants had normal weight according to their body mass index which enabled to the researcher to conclude that most of the participants were nutritionally secure.

The income accessibility of the participants was normal according to the expenses that most of the participants spend on the recovery of household basic need and amount of income that they receive because most of them expended the income on their generated income on daily life to save their lives and the life of household members because most of the them were educated.

5.3 Recommendation

In order to improve the household's microfinance service participation in the study area and keep the institute sustainability, the researcher proposed the following suggestions:

- ❖ To improve and enhance the income generation/ job creation opportunity for participants ,the main office top management, workers, and other stakeholders(NGOs) should jointly move shoulder to shoulder to introduce a new technology to facilitate the needed services to residents of town and other woredas of remote sense area.
- ❖ To eradicate or reduce the prevalence of worse attitudes of participants towards repayment loans to keep microfinance services sustain, the main office should create community awareness by holding and increasing the short and long term training and develop research and training center in the study area.
- ❖ Time for repayment of loan and repayment of loan have statistically significance positive and negative correlation with food security of the participants in the study area respectively so, there should be re-improving of agreement parts related to articles of microfinance institute. .
- ❖ Strengthening microfinance services mechanism in a better structured way would enable to the participants to better link the aptitude improvement.

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Appendices

APPENDIX1

Information sheet

My name is_____ from Addis Ababa University, Department of food security and development post graduate program. I need to conduct post graduate research in The correlate between microfinance institution services and household food security in Jigjiga town, Fafan Zone, Somali Region, Ethiopia and the purpose of this study is to assess the correlate between microfinance services and household food security of microfinance services participants in jigjiga town. So your involvement is important for the success of this study.

RISK

You do not get any risk by involving this study.

Benefits

You have the right to know the finding of this study and you will also get awareness the correlate between microfinance services and household food security status of microfinance services participants in jigjiga town. Please tell me if you agree to participate in the study or not?

Informed consent

I am well informed all about the above points and understand that it is voluntary participation and I am willing to participate in the study.

Participant	Data collector
Code No:-----	Name:-----
Date:-----	Date:-----
Signature:-----	Signature:-----

Thank you for your willingness to participate in this study.

Structured Questionnaire of the beneficiaries of microfinance services on household head food security in jigjiga town

1	Sex of household head	A. Male B. Female
2	Age of household head	A.<30 B.30-40 C.>40
3	Marital Status of household head	A. Married B. Single C. Divorced D. Widowed E. Polygamy
4	Religion type	A. Islam B. Catholic C. Orthodox D. protestant
5	Ethnicity	A. Somali B. Oromo C. Amhara D. Tigre E. Afar F. Other
6	What is the family size of household members?	A.<3 B.3-5 C.>5
7	What are the compositions of household members in term s of age?	A. < 18 B. > 18 years
8	What is the educational status of the household head?	A. Not read and write

		B. Only read and write C. Completed primary school D. Completed secondary school E. Completed Diploma G. Completed First Degree H. Second Degree
9	What is the current occupational status of household head?	A. Herding B. Farming C. Wage laborer D. Self-employed (run micro enterprise) E. Civil servant F. Unemployed G. Student H. Other specify
10	What are the major sources of your household income other than microfinance job creation?	A. Government worker B. Non- Government worker C. Farm products D. Trader E. Other (specify)
11	What is the total monthly income of the household head from created opportunity?	A.<5000 Birr B.5000-10000 Birr C.>10000 Birr
12	What is your average household head monthly expenditure on food items?	A.<4000 Birr B.4000-5000 Birr C. C.>5000 Birr
13	What is your household head monthly expenditure on non-food items?	A.<4000 Birr B.4000-5000 Birr C. C.>5000 Birr
14	How many children in your household are at school	A. male_____

	age?	B. Female_____ C. Total_____
15	How many of these children are currently attending school?	A. Male_____ B. Female_____ C. Total _____
16	What is the highest grade level (number of years) the older male/female Completed?	_____
17	Currently how much Ethiopian Birr do you spend on student's school operation?	_____
18	Do you believe that dietary intake is good for health of household members?	A. Yes B. No
19	How many times do you take the food with in a day (within 24 hours)?	A. one times a day B. Three times a day C. Four time a day D. More than four times
20	What kind of food do you take at breakfast to get energy for daily performance?	A. Spaghetti B. Ingera C. Rice D. Bread E. Meat F. Macaroni G. Other
21	What kind of food do you take for lunch?	A. Spaghetti B. Ingera C. Rice D. Bread E. Meat F. Macaroni G. Other
22	What kind of food do you take at dinner time?	A. Spaghetti

		B. Ingera C. Rice D. Bread E. Meat F. Macaroni G. Other
23	What kind of beverage do you drink during day?	A. Tea B. Milk C. Coffee D. Soft drink E. Other
24	How much normal water do you drink every day to keep boy osmosis?	A.5 liter B.1.5 liter C.3 liters D.1 liter E. None
25	What is type of the Micro Finance Institution that you participate?	A. Government organization B. Local Non-Government organization C. Private Initiative
26	Do you have savings account at microfinance institute in Jigjiga branch?	A. Yes B. No
27	If yes in 26, what type of savings do you have in this branch?	A. Monetary saving B. Jewelry saving C. Grain saving
28	If you have monetary savings, how much is your savings account in Ethiopian birr per month in this account?	_____
29	Did you get any access credit from microfinance	A. Yes B. No

	institute before joining program in this branch?	
30	How much loan did you receive the allotted time up to now?	_____
31	Have you re-paid the total loan received up to now?	A. Yes B. No C. Partially
32	How many times have you received loans from Jigjiga microfinance institution?	A. 6 month B. One year C. > one year
33	How do you see the interest of received loans you pay back to the microfinance institute?	A. High B. Normal C. Low
34	Was the loan sufficient to implement your purpose of loan receiving up to now?	A. Yes B. No
35	Has the loan re-payment been suitable for time allotted to be paid by you to the microfinance institute up to now?	A. Yes B. No
36	Has there been any improvement (change) in your food security status at household level since your Participation in this microfinance services?	A. Yes B. No
37	For determinant of nutrition status of household heads, measure the • Weight • Height • BMI	-----kg , If BMI <18 is underweight condition -----M , If BMI between 18 and 25 is normal condition -----kg/m ² , If BMI >25 is overweight, over malnutrition condition
38	What have been the trends of nutrition in your household members after participating of microfinance services?	A. Improved B. Stayed the same condition C. Worsened than the earlier

39	Where do your household members go when they face health problems?	A. Private health institution services B. Public health institution services C. Traditional healers practice D. Others (specify)

2. Household Food Insecurity Access Scale (HFIAS) for household's food security status

S/N	Household Food Insecurity Access Scale Generic Questions	
1	In the past four weeks, did you worry that your household would not have enough food?	
<u>1a</u>	How often did this happen?	A. Rarely(once or twice in the past 30 days) B. Some Times (three to ten times in the last 30 days) C. Often (more than ten times in the last 30 days)
2	In the past four weeks, were you or any household member not able to eat kinds of foods preferred because of a lack of resources?	
<u>2a</u>	How often did this happen?	A. Rarely(once or twice in the past 30 days) B. Some Times (three to ten times in the last 30 days) C. Often (more than ten times in the last 30 days)
3	In the past four weeks, did you or any household members just eat kinds of food day after day due to lack of resources?	
<u>3a</u>	How often did this happen?	A. Rarely(once or twice in the past 30 days) B. Some Times (three to ten times in the last 30 days) C. Often (more than ten times in the last 30

		days)
4.	In the past four weeks, did you or any household members eat food that you prefer not to eat due to lack of resources to obtain other types of food?	
<u>4a</u>	How often did this happen?	A. Rarely(once or twice in the past 30 days) B. Some Times (three to ten times in the last 30 days) C. Often (more than ten times in the last 30 days)
5	In the past four weeks, did you or any household members eat smaller meal than you felt you needed because there was not enough food?	
<u>5a</u>	How often did this happen?	A. Rarely(once or twice in the past 30 days) B. Some Times (three to ten times in the last 30 days) C. Often (more than ten times in the last 30 days)
6	In the past four weeks, did you or any other household members eat fewer meals in day because there was not enough food?	
<u>6a</u>	How often did this happen?	A. Rarely(once or twice in the past 30 days) B. Some Times (three to ten times in the last 30 days) C. Often (more than ten times in the last 30 days)
7	In the past four weeks, was there ever no food at all in your household because there were not resources to get food?	
<u>7a</u>	How often did this happen?	A. Rarely(once or twice in the past 30 days) B. Some Times (three to ten times in the last 30 days) C. Often (more than ten times in the last 30 days)

8	In the past four weeks, did any household member go to sleep at night hungry because there was not enough food?	
<u>8a</u>	How often did this happen?	A. Rarely(once or twice in the past 30 days) B. Some Times (three to ten times in the last 30 days) C. Often (more than ten times in the last 30 days)
9	In the past four weeks, did any household member go whole day without eating anything because there was not enough food?	
<u>9a</u>	How often did this happen?	A. Rarely(once or twice in the past 30 days) B. Some Times (three to ten times in the last 30 days) C. Often (more than ten times in the last 30 days)

APPENDIX2

Non-structured Questions for the experts Focus Group Discussion (FGD)

Organizational contact

No	Name of the organization (if applicable)	Respondents'			
		Name	Position	Woreda	Telephone
1					
2					
3					
4					
5					
6					

1. Type of the Micro Finance Institution_____

2. When was this microfinance program started? _____

3. What were the major objectives of microfinance institute that was started in the study area?

4. What are the main targets of the microfinance institute services to provide in this area?

5. How this program contribute food security pillars (Accessibility, Availability..) of the participants to have stable livelihood?

6. How Microfinance institute helps the participant's food access (income generation)?

7. What are the relations between microfinance services and food access of participants according to the way you receive/ perform from/to institute/participants respectively?

8. How the credit is provided to the participants of microfinance services in this area?

9. What is the loan size provide to participants of this microfinance services?

10. What are the best criteria used to select the target groups from other residents in this area (clients) of MFI?

11. Which group among the poor does the microfinance service reaches/targets to reduce the risks that they are severing?

Non-structured Questions for the experts/participants as key informant interview (KII)

Organizational contact

No	Name of the organization	Respondents'			
		Name	Position	Woreda	Telephone
1					

1. Type of the Micro Finance Institution_____

2. When was this microfinance program started? _____

3. What were the major objectives of microfinance institute that was started in the study area?

4. What are the main targets of the microfinance institute services to provide in this area?

5. How these programs contribute food security pillars (Accessibility, Availability...) of the participants to have stable livelihood?

6. How Microfinance institute helps the participant's food access (income generation)?

7. What kind of supports other than microfinance services does MFI provide to participants?

8. What is the importance of forming groups in microfinance services participants at time of loan distribution to support them?

9. How do you facilitate credit re-payment of the microfinance services participants to keep the sustainability of the institute to offer other needy people?

10. How do you collect savings of the microfinance service participants to increase their deposition in the institute to keep their income diversification?

11. What mechanisms do you use to deal with the loan interest that the participants re-pay?

12. How do you maintain the sustainability of the program during paying credit in this area?
